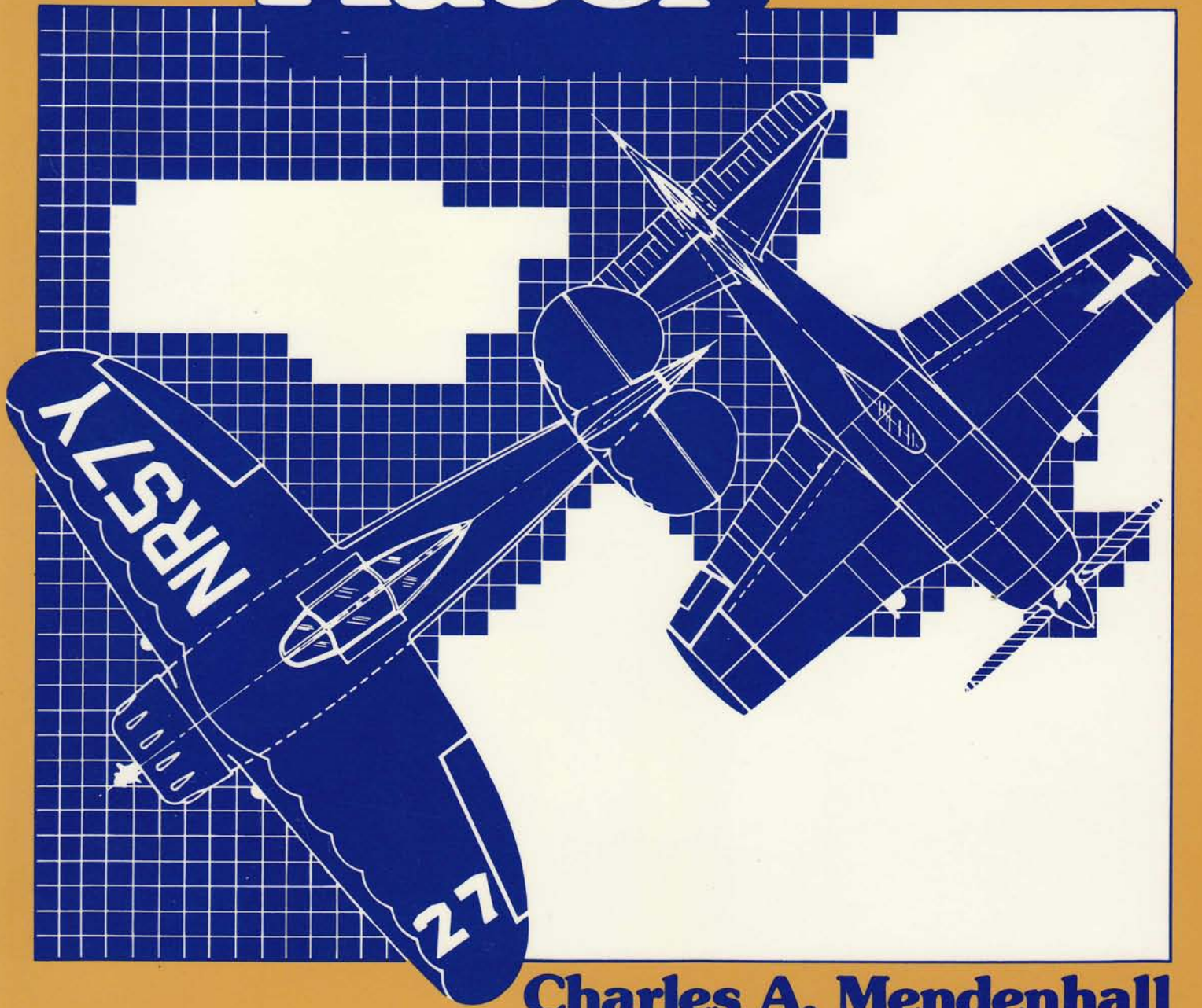


# The Air Racer



**Charles A. Mendenhall**

# **The Air Racer**

**Charles A. Mendenhall**

**SPECIALTY PRESS**

To Diane—my ever patient wife, always ready to encourage  
when this project seemed hopeless.

Copyright 1971 by Diane Publishing Company  
1975 and 1976 by Pylon Publications  
1979 by Charles A. Mendenhall  
All rights reserved. Printed in the United States of America

First printing—March 1979  
Revised—October 1994

ISBN 0-933424-01-9  
LC # 79-4715

**Library of Congress Cataloging in Publication Data**

Mendenhall, Charles A.  
The air racer.

“Material in this book was previously published in three volumes by Pylon Publications under the titles: The early air racers in three views, 1909-29; The national air racers in three views, 1929-49; and The modern air racers in three views, 1949-1975.”

Bibliography: p. 184

1. Airplanes, Racing—Drawings. I. Title.  
TL685.6. M44 629.133 '343 79-4715  
ISBN 0-933424-01-9

Published by: Specialty Press Publishers and Wholesalers  
North Branch, MN 55056

# INTRODUCTION

Rheims, France situated in the middle of Europe's champagne country is widely known for its beautiful cathedral. For the air racing enthusiast, this city has an added significance for it was here in 1909 that Glenn Curtiss fluttered around a race course at 47.65 miles per hour in his "Golden Flyer" to win the world's first air race. That race, for the James Gordon Bennett Cup, was to herald the coming of a motor sport that would eventually evolve into the fastest and most demanding competition in history.

The Rheims event, less than six years after the Wright's first heavier than air flight at Kitty Hawk, was inevitable as history shows whenever man invents a new transportation contrivance, it is soon thereafter that his competitive spirit demands that he engage in a test of speed with others of the same bent. Thus, aircraft racing, auto racing, clipper ship racing, chariot racing, and undoubtedly dug-out canoe racing, has occurred. This is all to the good because air racing, aside from the exciting and thrill charged atmosphere of the races themselves, has served an important purpose in the development of the airplane as we know it today. As one settles into a comfortable seat to be whisked across oceans at supersonic speed or marvels at the agility and performance of first line fighter planes, it is well to remember that a great deal of the evolution of today's fine aircraft lies vested in those racing machines of yesteryear.

Before World War I, the quest for greater speed and reliability in racing aircraft brought forth the monoplane Deperdussin and Nieuport racers which, for example, were significant advances over the stick and wire "Baby Wright" and Curtiss "Golden Flyer" machines. These aircraft could, in fact, be considered prototypes of the early fighters of World War I. While major aeronautical advances occurred during World War I and World War II, equally great achievements also occurred during peacetime because of air racing.

After Rheims the Gordon Bennett races continued as an annual event thru 1920 with the exception of the war years. While the Bennett race was only for land planes another event, the Schneider Trophy Race, began in 1913 for seaplanes and this series continued thru 1931 with speeds of racers developed solely for the contest exceeding four hundred miles per hour.

The military became enamoured of air racing in the twenties and competed in a series of Pulitzer Trophy Races with the Curtiss design team fielding the greatest number of winners. Their efforts culminated eventually in the beautiful P-6E Hawk fighters.

By 1929, the races again became the domain of civilians as Doug Davis expertly piloted the Travel Air "Mystery Ship" around the pylons in the Thompson Cup Race to win out over the best equipment the military people could field. With this, the Army and Navy gave up racing and the time of the ingenious, gutsy little guy began — the Golden Age of

air racing. As the most colorful and dramatic period of air racing history, the time span between 1929 and 1939 shows the greatest amount of aeronautical ingenuity on the part of individuals of any era. Racing aircraft of these years still stand as monuments to such greats as the Granville Brothers, Ben Howard, Matty Laird, Gordon Israel, Clayton Folkerts and Jimmy Wedell, to name a few of many. The designer/flyers of the thirties came up with such then spectacular items as retractable landing gears, landing flaps and controllable pitch propellers as well as new lighter and stronger methods of airframe construction.

With the advent of World War II all racing activity was suspended and the airplane, based on the secrets learned in racing, leaped ahead a quantum jump in performance under the input of thousands of people and millions of dollars. By 1946, however, with the War behind us, air racing once more returned to Cleveland where modified fighter planes soldiered on in the pylon contests till 1949. Since fielding a modified fighter was extremely expensive, the Goodyear Trophy race was created to allow those of less means to compete. This race, of course, centered around home built midget racers that later became the Formula Ones raced today. Perhaps the public had become jaded for the post war races never equalled the ones of the Golden Age in entertainment and thrills. With the tragic crash of round the world flyer Bill Odom's "Beguine" into a Cleveland apartment house in 1949 the sport of air racing seemingly had come to an end.

True, the Continental Motors Race was carried on in Miami and Detroit but this was a rather half-hearted effort when compared to the mighty Bendix and Thompson Trophy Races of earlier years. Under the auspices of the Professional Race Pilots Association the midgets continued to dust the pylons at such places as Dansville, Niagara Falls, Fort Wayne, Oshkosh and Springfield during the fifties. These turned out to be mostly local interest events, however, with little if any coverage by the national press.

In 1964 the Reno National Air Races was established. These races featured not only the midgets but marked the return of the mighty unlimiteds to the racing scene. As this is written, still another year of Reno racing has transpired, the fourteenth, and no end is yet in sight.

The book, is an effort to draw together, under one cover, the intriguing story of the air racer by means of plan-type illustrations. The drawings contain information on over two hundred of the most interesting of these specialty aircraft. It was surprising to learn during research for this book that in some cases, no formal plans had ever been drawn. A few of the older planes continue to exist in museums around the world but most have been reduced to rubble either in accidents or by the ravages of time.

The drawings in this book, perhaps arbitrarily, cover the

air racers from 1909 thru 1975. 1975 was chosen as a cut-off date, for the period 1909-1975 seems to realistically encompass all the major developments of these colorful, fascinating aircraft. To continue past that date simply means another "Mustang" drawing with a different paint scheme or another "Formula I" with a slightly different shaped wing or fuselage.

Scale squares are provided on the illustrations for ease of scaling up for model aircraft plans. It is hoped that as much enjoyment is encountered by the reader in studying the advancement of aircraft design, as presented here, as was obtained by the author in preparing this book.

Rochester, New York  
December, 1978

# TABLE OF CONTENTS

Curtiss "Golden Flyer" .....	10	Howard "Pete" DGA-3 .....	60
Wright .....	11	Israel "Redhead" .....	61
Latham "Antoinette" .....	12	Gee Bee Model Y .....	62
Bleriot XI .....	13	Gee Bee Model Z .....	63
Baby Wright .....	14	Gee Bee R-1 .....	64
Hanriot .....	15	Gee Bee R-2 and I.F. (R-1/R-2) .....	65
Nieuport .....	16	Hall "Bulldog" .....	66
Nieuport Floatplane .....	17	Wedell-Williams "44" and "92" .....	67
Deperdussin .....	18	Wedell-Williams "57" .....	68
Deperdussin Floatplane .....	19	Howard "Mike" DGA-4 and "Ike" DGA-5 .....	69
Sopwith "Tabloid" .....	20	Rider R-1 — "San Francisco I" — "Suzy" .....	70
Ponnier .....	21	Rider R-2 — "San Francisco II" — "Bumblebee"- Bushey-McGrew B7M1 .....	71
Dayton-Wright .....	22	Chester "Jeep" .....	72
Verville-Packard R-1 .....	23	Cessna CR-2 and CR-3 .....	73
Curtiss-Cox "Texas Wildcat" Monoplane .....	24	Miles and Atwood Special .....	74
Curtiss-Cox "Texas Wildcat" Biplane .....	25	DeHavilland "Comet" .....	75
Curtiss-Cox "Cactus Kitten" Triplane .....	26	Macchi-Castoldi M-72 .....	76
Nieuport Sesquiplane .....	27	Gee Bee "Q.E.D." R6H .....	77
Curtiss CR-1 .....	28	Howard "Mr. Mulligan" DGA-6 .....	78
Curtiss CR-2 .....	29	Percival "Mew Gull" .....	79
Navy-Wright NW-1 .....	30	Miles Racer .....	80
Navy-Wright NW-2 .....	31	Wittman "Chief Oshkosh" .....	81
Navy "Bee Line" BR-1 and BR-2 .....	32	Brown B-1 .....	82
Curtiss CR-3 .....	33	Brown B-2 "Miss Los Angeles" .....	83
Curtiss R-6 .....	34	Wittman "Bonzo" D-12 .....	84
Verville-Sperry R-3 .....	35	Caudron C-460 .....	85
Curtiss R2C-1 & -2 .....	36	Folkert SK-2 "Toots" .....	86
Wright F2W-1 .....	37	Hughes H-1 .....	87
Wright F2W-2 .....	38	Crosby Special CR-3 and CR-4 .....	88
Curtiss R3C-1 & -2 .....	39	Rider R-4 "Firecracker", R-5 "Jackrabbit", Elmendorf Special .....	89
Supermarine S-4 .....	40	Rider R-3 and Marcoux-Bromberg Special .....	90
Gloster III .....	41	Folkerts SK-3 "Jupiter" and SK-4 .....	91
Macchi M-39 .....	42	Laird-Turner LTR-14 "Meteor" .....	92
Gloster IV B .....	43	Military Aircraft HM-1 and "Time Flies" .....	93
Short Crusader .....	44	Rider R-6 "8-Ball" .....	94
Kirkham-Williams .....	45	Bellanca Tri-Motor 28-92 .....	95
Supermarine S-5 .....	46	Chester "Goon" .....	96
Macchi M-52 .....	47	Chambers "Chambermaid" .....	97
Gloster VI .....	48	Pearson-Williams "Mr. Smoothie" .....	98
Navy Curtiss F6C-3 Hawk .....	49	Heinkel He 100 V-8 .....	99
Fiat C-29 .....	50	Messerschmitt ME209 V-1 (Bf109R) .....	100
Supermarine S-6 .....	51	High Speed Spitfire .....	101
Macchi M-67 .....	52	Heston Racer .....	102
Savoia S-65 .....	53	Bell P-39Q "Aircobra" .....	103
American Mercury .....	54	North American P-51 "Mustang" .....	104
Supermarine S-6B .....	55	Goodyear F2G-1 "Corsair" .....	105
Travel Air Model R .....	56	Hawker "Sea Fury" #0, "Miss Merced" .....	106
Page-Curtiss XF6C-6 .....	57	Lockheed P-38L "Lightning"; #38 .....	107
Laird "Solution" LC-DW-300 .....	58		
Laird "Super Solution" LC-DW-500 .....	59		

North American P-51D "Mustang"; "Miss America"	108	Miller "Little Gem"	130
North American P-51D "Mustang"; "Miss Van Nuys"	109	"Little Gem" and "Ole Tiger"	131
North American P-51D "Mustang"; "Miss R.J." & "Roto Finish"	110	Owl OR-65-2 "Pogo"	132
North American P-51D "Mustang"; "RB-51 Red Baron", "Miss Foxy Lady"	111	Owl OR-70-1 "Fang"	133
Grumman F8F-2 "Bearcat"; "Smimoff"; "Conquest I", "American Jet" #1	112	Owl OR-71-1 "Lil Quickie"	134
Grumman F8F-2 "Bearcat"; "Able Cat", U.S. Thrift"	113	Falck's Special "Rivets"	135
Chester "Swee Pea I & II" — "Skybaby"	114	Williams W-17 "Stinger"	136
Wittman "Buster" — "Bonzo"	115	Mace R-2 "Shark"	137
Cosmic Wind "Minnow", "Ballerina", "Little Toni"	116	Rollason "Beta"; "Blue Chip", "Forerunner"	138
Long "Midget Mustang" LA-1	117	WH-1 "Thunderchicken" and "Sump'n Else"	139
Wittman "Bonzo"	118	"Shoestring"	140
Foss "Jinny" and "Little Mike"	119	"Yellow Jacket", "Rickey Rat"	141
Cosmic Wind "Little Toni", "Ballerina"	120	Miller JM-2 "Texas Gem"	142
Loving-Wayne WR-1 "Lovings Love"	121	North American AT-6 (SNJ) "Texan"; #7, #25	143
Cassutt Model 2	122	Pitts Special #21	144
Cassutt "Boo Ray"	123	Pitts Special; "Sulu", "Chance IV"	145
"Idjets Midget" and "Moonshiner"	124	Starduster; #0, #1	146
Mace R-1 "Mr. B"	125	Imperial Knight Twister #5	147
"Shushonic" and "Deja Vu"	126	Smith DSA "Miniplane"; "Flighty", #4	148
001 Baker Special "Aquarius"	127	Forbes Special (DSA) "Olympia Swallow"	149
"Frenzer Special" and "El Bandito"	128	Speed F8F "Beercat"	150
Minges Special M-30 "Ol Blue"	129	Warwick W-4 "Hot Canary"	151
		Christian "Mongster"	152
		Boland "Gone Mong"	153
		Mahoney "Sorceress"	154
		WC-1 "Sundancer"	155

## APPENDICES

I	Wedell-Williams "22"	156
	Wedell-Williams "45"	
	Livingston Monocoupe	
	Heath "Baby Bullet"	
II	Alden-Brown Racer	157
	Folkerts SK-1 (Whittenbeck Special)	
	Delgado "Maid"	
	Delgado "Flash"	
III	Lockheed Vega "Winnie Mae"	158
	Lockheed "Air Express"	
	Lockheed "Altair"	
	Lockheed "Orion"	
IV	Northrup "Gamma"	159
	Beechcraft C-17	
	Seversky SEV-S2	
	Sundorph A-1	
V	Tilbury-Fundy "Flash"	160
	Hostler "Fury"	
	Pobjoy Flagship	
	Haines "Mystery" H-3	
VI	Lockheed P-38L-5 "Lightning"	161
	Bell P-63F "Kingcobra"	
	Lockheed P-80A-1 "Shooting Star"	
	North American F-86A "Sabre"	

VII	Howard DGA-3 "Pete" (1947) .....	162
	"Cosmic Wind" Minnow (1949)	
	Falck "Rivets" (1949)	
	"Shoestring" (1949)	
VIII	North American SNJ-5 "Texan" .....	163
	"Gotcha"	
	North American AT-6C "Texan"	
	"Miss Behavin"	
	North American SNJ-4 "Texan"	
	North American "Harvard Mk.II"	
IX	North American P-51D "Mustang" .....	164
	"Rockwell International"	
	North American P-51D "Mustang"	
	"Miss Suzie Q"	
	North American P-51D "Mustang"	
	"Miss Candace"	
	North American P-51D "Mustang"	
	"Bardahl II"	
X	Bell P-39Q "Airacobra" .....	165
	"Mr. Mennon"	
	Bell P-63C "King Cobra"	
	"Topsy Miss"	
	Republic P-47D "Thunderbolt"	
	Vought F4U-7 "Corsair"	
	"Blue Max"	
XI	Canadair T-33 "Silver Star" .....	166
	Canadair CL-13B (F-86) "Sabre"	
	Hawker "Sea Fury II"	
	Grumman F8F-2 "Bearcat"	
	"Miss Priss"	
XII	Fischer "Super Mong" .....	167
	Nagel "Mong Goose"	
	RK-3 Jungster III "Jonathan Livingston Seagull"	
	Hoffman "Suzie Bee"	
XIII	Owl OR-65 "Yellow Peril" .....	168
	"Shoestring IV", "Wagner Solution"	
	"Shoestring V", "Nobigthing"	
	Prosch "Loki"	
XIV	Cassutt "Scarab" .....	169
	Cassutt "Mother Holliday"	
	Cassutt "Snoopy", ("Dixie Rebel")	
	Cassutt "Plum Crazy"	
	Field Layout — 1932 National Air Races — Cleveland .....	170
	Racing Flags & Their Meaning & 1975 Reno Race Course .....	171
	Table of Major Air Race Entries and Results .....	172
	Bibliography .....	179
	Table of World Speed Records for Aircraft .....	180



FUSELAGE CONSTRUCTION: BAMBOO LONGERONS WITH SPRUCE BRACES, MUSIC WIRE 'X' BRACING. CENTRAL KEEL OF CRAFT & MOTOR MOUNTS WERE ALSO SPRUCE. WING CONSTRUCTION: SPRUCE LEADING EDGE, SPAR AND RIBS. COVERING WAS BALDWIN RUBBERIZED BALLOON SILK. TAIL & FORWARD CONTROL SURFACES CONSTRUCTION: ALL SPRUCE FRAMEWORK COVERED WITH BALDWIN RUBBERIZED BALLOON SILK.

COLOR SCHEME: NATURAL BAMBOO AND VARNISHED WOOD. COVERING MATERIAL WAS GOLDEN YELLOW.

SCALE:  $\frac{5}{32}'' = 1'$

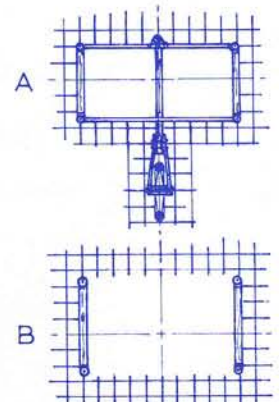
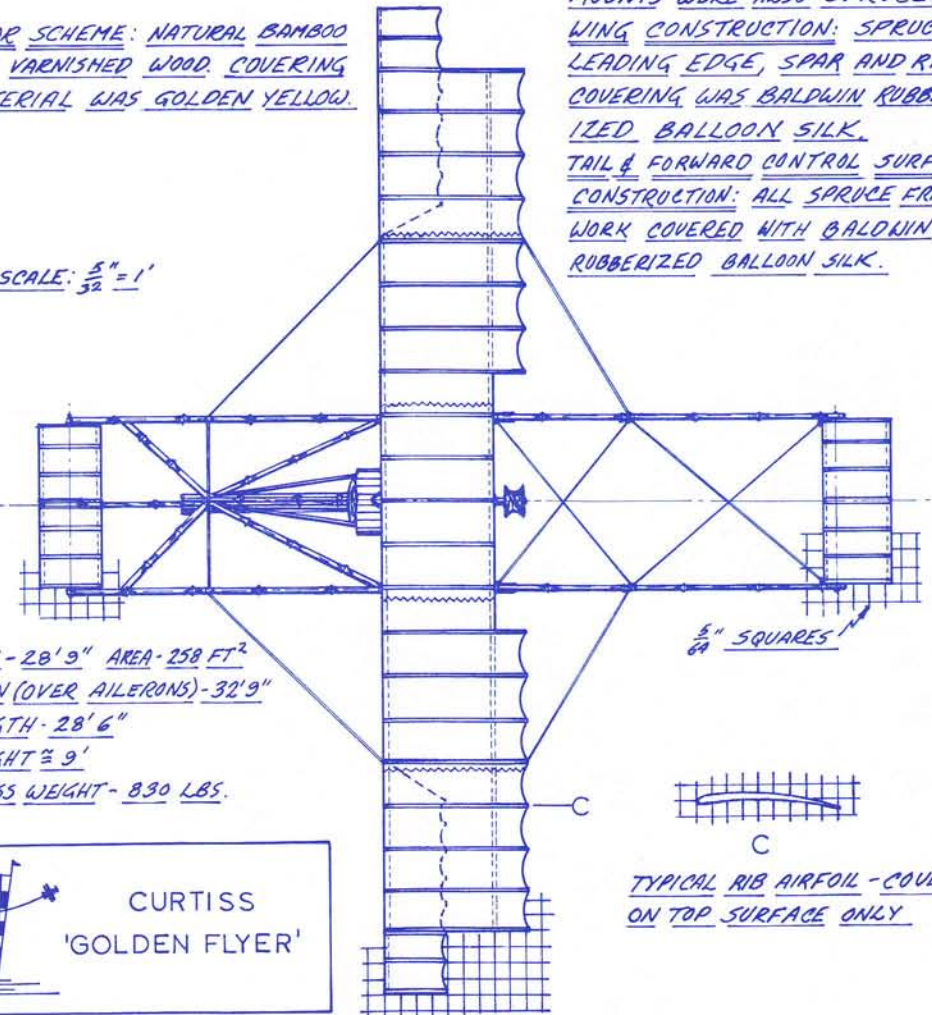
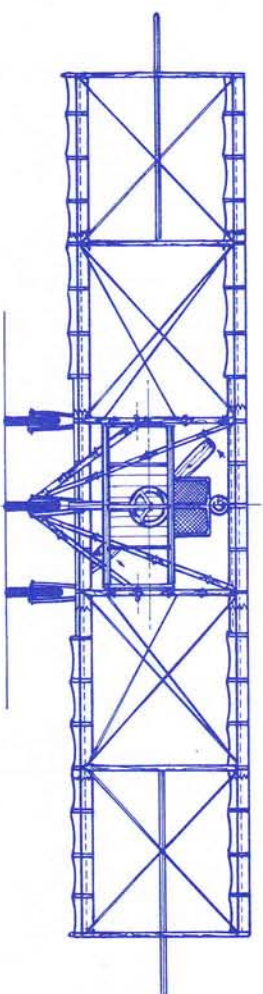
SPAN - 28' 9" AREA - 258 FT<sup>2</sup>  
 SPAN (OVER AILERONS) - 32' 9"  
 LENGTH - 28' 6"  
 HEIGHT  $\approx$  9'  
 GROSS WEIGHT - 830 LBS.

$\frac{5}{64}$  SQUARES

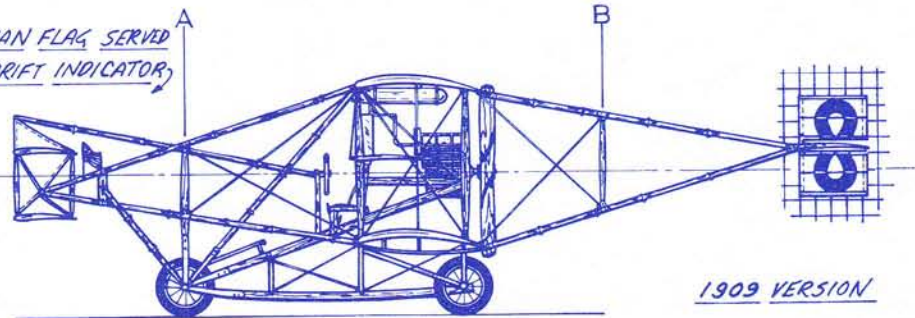
TYPICAL RIB AIRFOIL - COVERED ON TOP SURFACE ONLY



POWERPLANT: CURTISS 50 H.P. 8 CYLINDER 'V' TYPE ENGINE  
PROPELLER: CARVED SPRUCE. 7' DIA.



AMERICAN FLAG SERVED AS A DRIFT INDICATOR



1909 VERSION

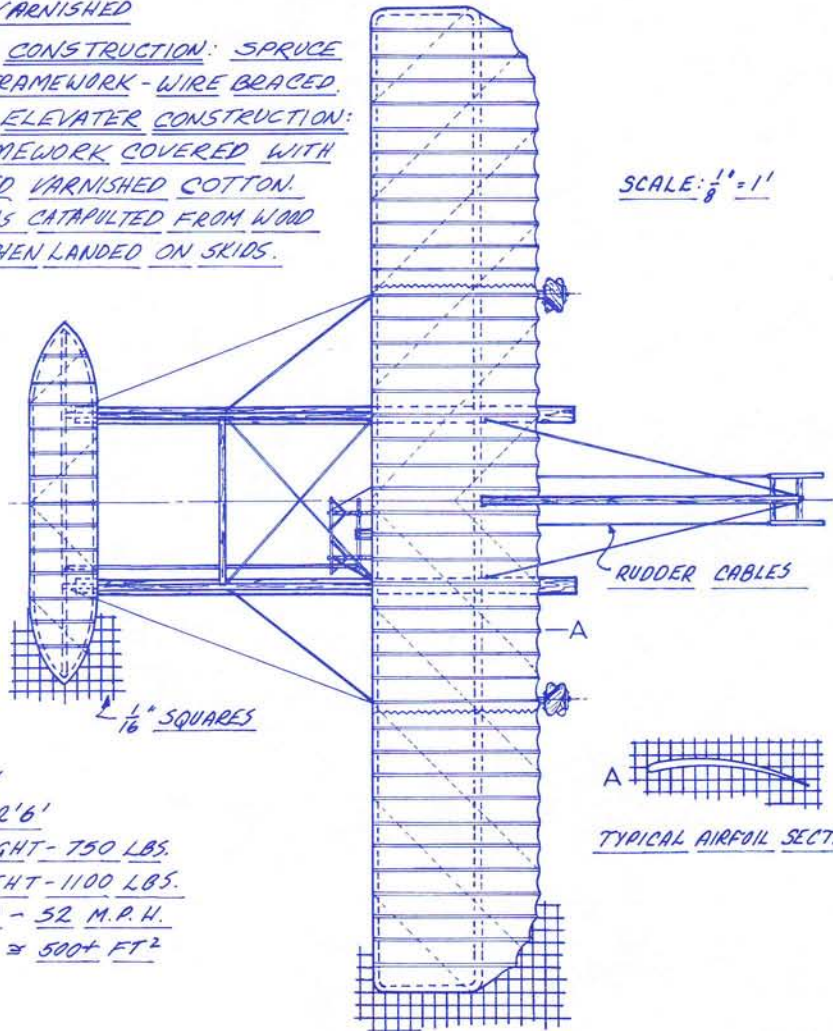
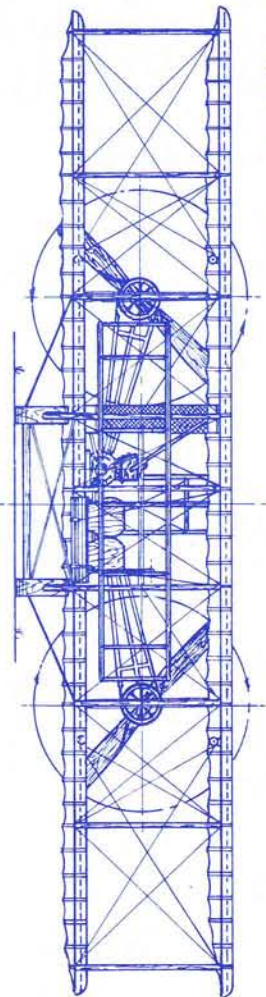
GLENN CURTISS WON THE WORLD'S FIRST AIR RACE (FOR THE JAMES GORDON BENNETT CUP) IN AUGUST 1909. THE RACE, HELD AT RHEIMS, FRANCE, CONSISTED OF 2 LAPS & EQUAL TO A 12.43 MILE RACE. CURTISS, WITH A TOTAL OF 10 HOURS FLIGHT TIME, NONE IN THE 'GOLDEN FLYER', WON AT 47.65 M.P.H. TOP LEVEL SPEED - 60 M.P.H. CW

WING CONSTRUCTION: SPRUCE SPARS AND RIBS COVERED WITH UNBLEACHED COTTON & VARNISHED

FUSELAGE CONSTRUCTION: SPRUCE AND ASH FRAMEWORK - WIRE BRACED.

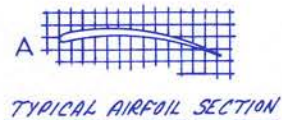
RUDDER & ELEVATOR CONSTRUCTION: WOOD FRAMEWORK COVERED WITH UNBLEACHED VARNISHED COTTON.

AIRCRAFT WAS CATAPULTED FROM WOOD MONORAIL, THEN LANDED ON SKIDS.



SCALE:  $\frac{1}{8}'' = 1'$

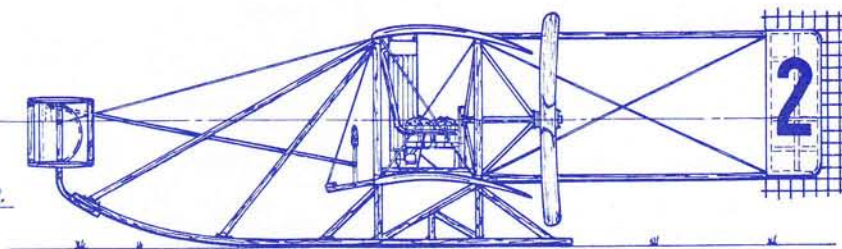
SPAN - 41'  
 LENGTH - 32'6"  
 EMPTY WEIGHT - 750 LBS.  
 GROSS WEIGHT - 1100 LBS.  
 MAX SPEED - 52 M.P.H.  
 WING AREA  $\approx 500$  FT<sup>2</sup>



WRIGHT

POWERPLANT: WATERCOOLED WRIGHT 4 CYLINDER ENGINE. 25 HORSEPOWER. 2 - 8'6\"/>

COLOR SCHEME: ALL WOOD SURFACES WERE NATURAL VARNISH. METAL SURFACES PAINTED BLACK. FABRIC WAS WHITE, BLACK RACE NO.



1909 VERSION

AIRCRAFT SHOWN WAS ONE OF THREE WRIGHTS AT RHEIMS IN 1909. THIS ONE, #2, WAS FLOWN BY EUGENE LEFEBVRE OF FRANCE TO 4TH PLACE IN JAMES GORDON BENNETT CUP RACE AVERAGING 35.7 MILES PER HOUR. CRAFT WAS VERY SIMILAR TO FIRST PLANE SUBMITTED TO U.S. ARMY FOR TESTING *CH*

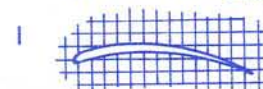
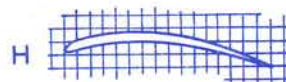
WING CONSTRUCTION: 2 WARREN TRUSS  
SPRUCE SPARS WITH WOOD BUILT-UP RIBS;  
COVERED WITH MICHELIN RUBBERIZED FABRIC  
FUSELAGE CONSTRUCTION: SPRUCE LONGERONS  
WITH ASH UPRIGHTS AND CROSSPIECES  
ANCHORED AT JOINTS WITH ALUMINUM GUSSETS.  
FRONT AREA COVERED BY CEDAR PANELS &  
NATURAL BRASS SIDE RADIATORS. REAR OF  
FUSLAGE COVERED WITH MICHELIN RUBBERIZED FABRIC.  
TAIL CONSTRUCTION: STEEL & WOOD FRAME-  
WORK COVERED WITH MICHELIN RUBBERIZED FABRIC.  
LANDING GEAR CONST: PNEUMATIC TIRES, SPOKE  
WHEELS, STEEL AXEL, ASH NOSE-OVER STRUT.

SCALE:  $\frac{1}{8}'' = 1'$

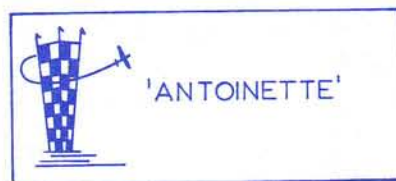
SPAN: - 42'  
 WING AREA - 538.2 FT<sup>2</sup>  
 LENGTH - 37' 8 $\frac{1}{2}$ ''  
 HEIGHT - 9' 10''  
 GROSS WEIGHT - 1,301 LBS.  
 MAX SPEED - 50+ M.P.H.

MULTIPLE SPRUCE  
 STRINGERS

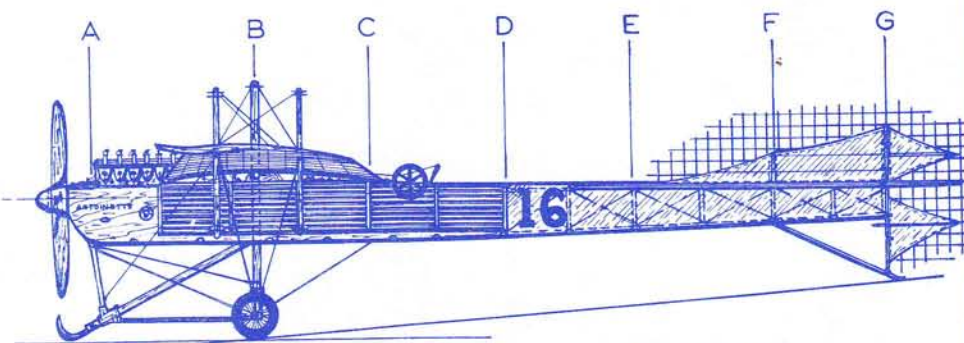
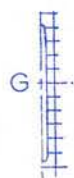
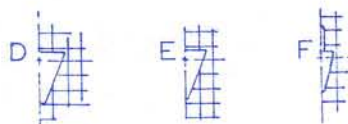
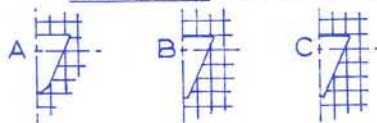
$\frac{1}{16}''$  SQUARES



TYPICAL AIRFOIL SECTIONS



POWERPLANT: V-16 WATERCOOLED ANTOINETTE RATED @ 100 H.P.  
PROPELLER: ONE PIECE CARVED MAHOGANY.

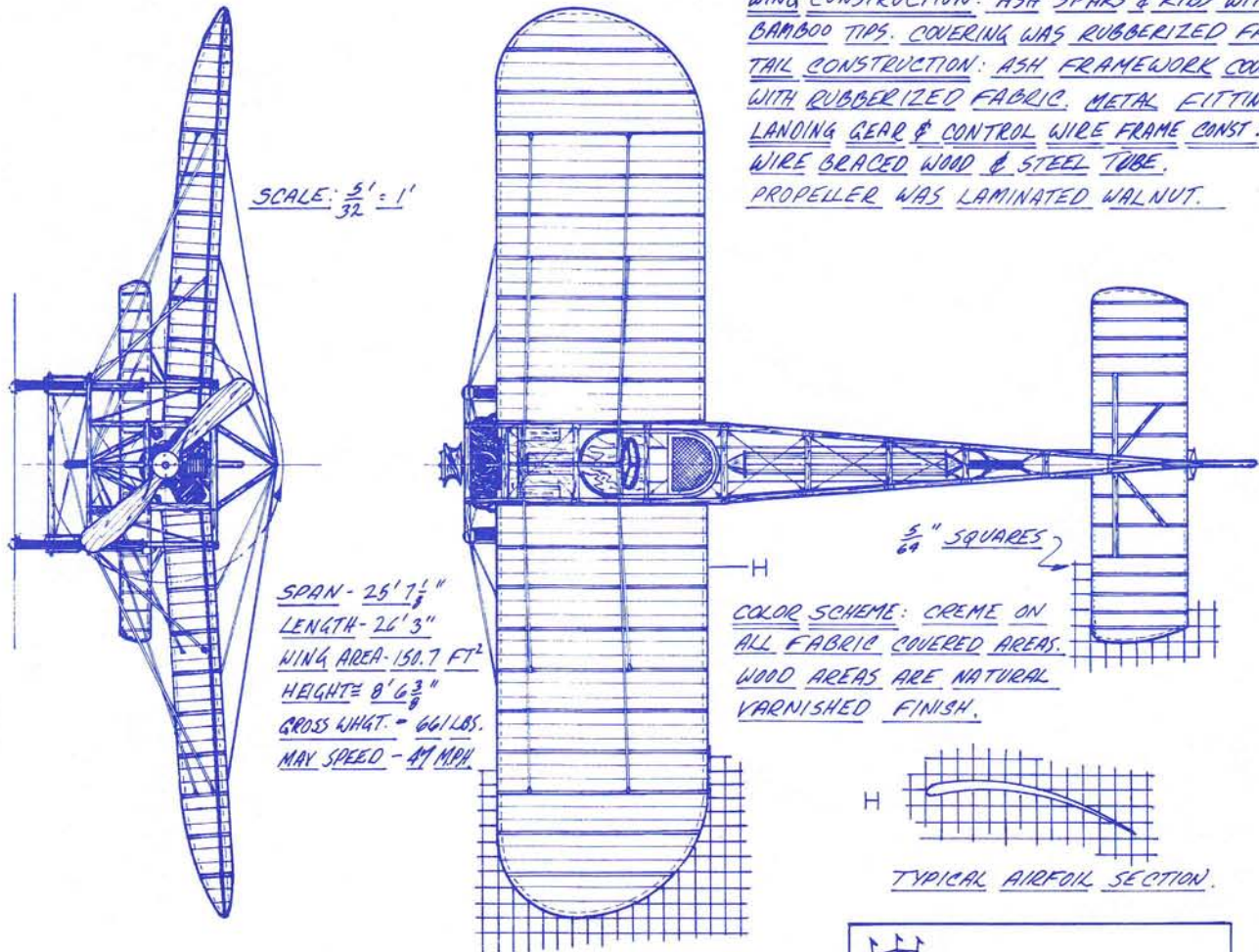


1910 VERSION

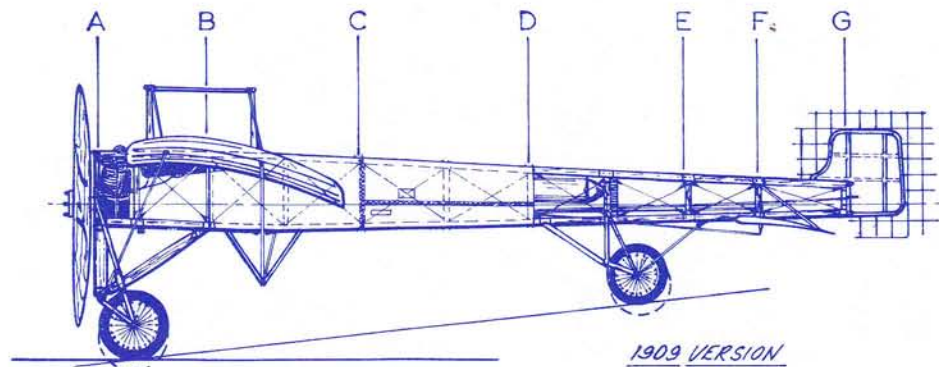
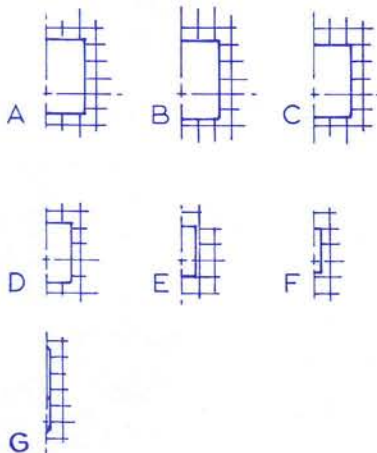
COLOR SCHEME: ALL WOOD AREAS WERE VARNISHED NATURAL WOOD. RACE NO AND EXPOSED  
METAL SURFACE PAINTED BLACK. FABRIC COVERED AREAS WERE LIGHT PEARL GRAY.

THE ANTOINETTE SERIES OF AIRCRAFT BEGAN IN 1908 WITH ANTOINETTE I AND WERE REFINED THRU ANTOIN-  
ETTE VIII. CRAFT WERE DESIGNED BY M. LAVAVASSEUR. HUBERT LATHAM FLEW CRAFT (ANT. VIII) IN 1909 & 1910  
JAMES GORDON BENNETT CUP RACES TAKING 3RD PLACE IN 1909 AND 4TH PLACE IN 1910.

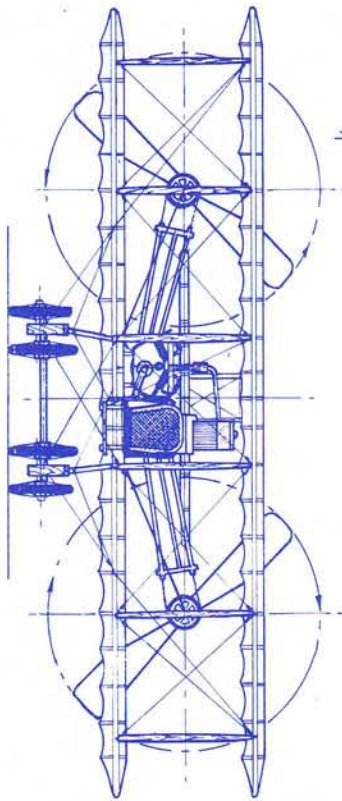
FUSELAGE CONSTRUCTION: ASH LONGERONS - UPRIGHTS & CROSSPIECES. COVERED AREAS WERE CONTINENTAL RUBBERIZED & WATERPROOFED FABRIC. FRAMEWORK WAS CROSS BRACED WITH PIANO WIRE.  
WING CONSTRUCTION: ASH SPARS & RIBS WITH BAMBOO TIPS. COVERING WAS RUBBERIZED FABRIC.  
TAIL CONSTRUCTION: ASH FRAMEWORK COVERED WITH RUBBERIZED FABRIC. METAL FITTINGS.  
LANDING GEAR & CONTROL WIRE FRAME CONST: WIRE BRACED WOOD & STEEL TUBE.  
PROPELLER WAS LAMINATED WALNUT.



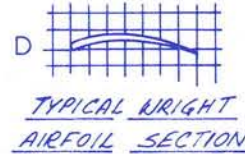
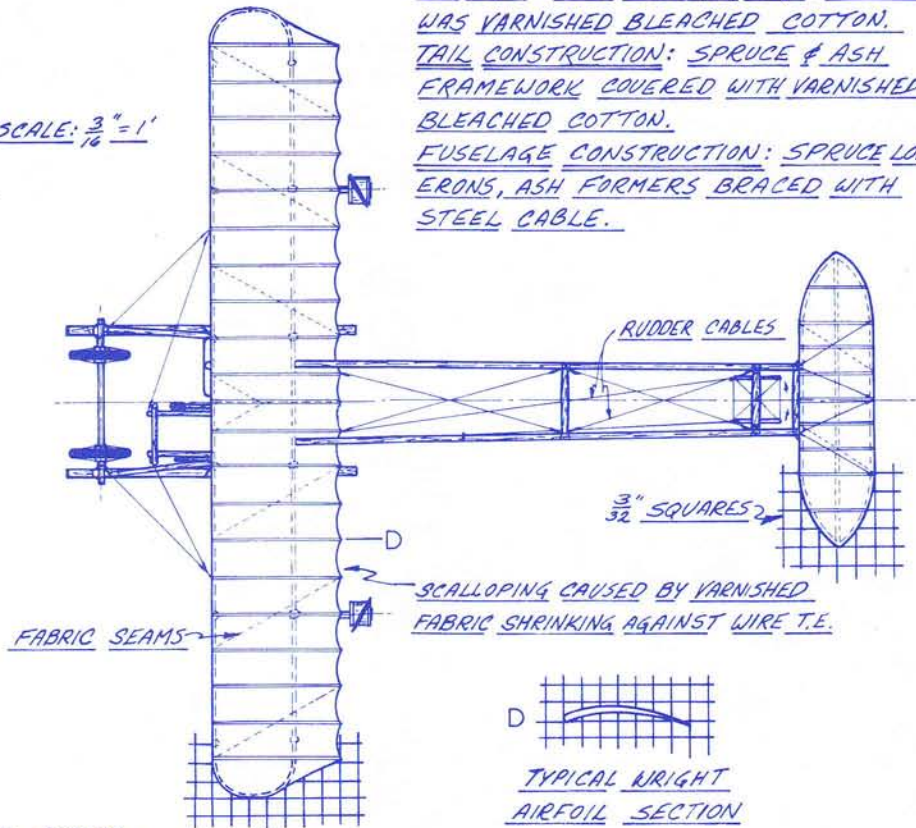
POWERPLANT: 25 H.P. ANZANI 3 CYLINDER SEMI-RADIAL AIR COOLED. PROP WAS 6' 6 $\frac{3}{4}$ " IN DIAMETER.



HELD AUGUST 22-29, 1909 THE FIRST AIR RACE AT RHEIMS, FRANCE FOUND THE BLÉRIOT XI A CONTENDER. THIS CRAFT FLOWN BY LOUIS BLÉRIOT HAD ON JULY 25TH BEEN FIRST TO CROSS THE ENGLISH CHANNEL. AS BLÉRIOT CRACKED UP THIS SHIP DURING EARLY TRIALS AT THE RACE HE WAS FORCED TO FLY THE LARGER & MOST UNGRACEFUL BLÉRIOT XII, WHEREIN HE PLACED 2ND IN THE JAMES GORDON BENNETT RACE @ 46.03 MPH.



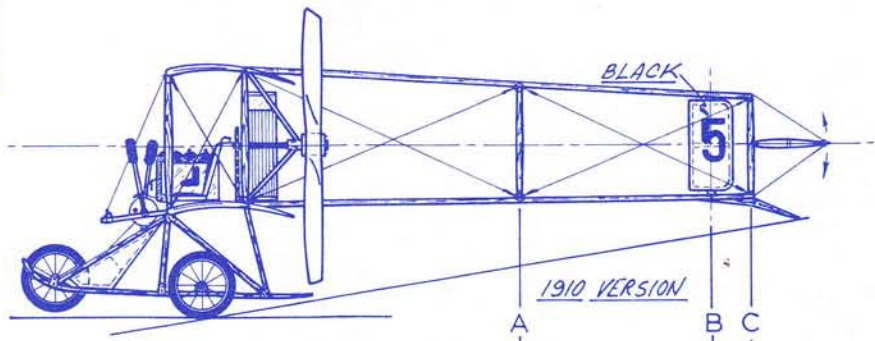
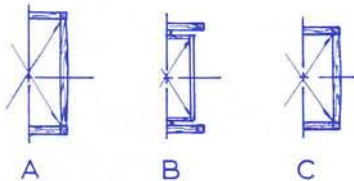
SCALE:  $\frac{3}{16}'' = 1'$



WITHOUT AILERONS BANKING WAS ACCOMPLISHED BY WARPING WINGS WITH CONTROLS

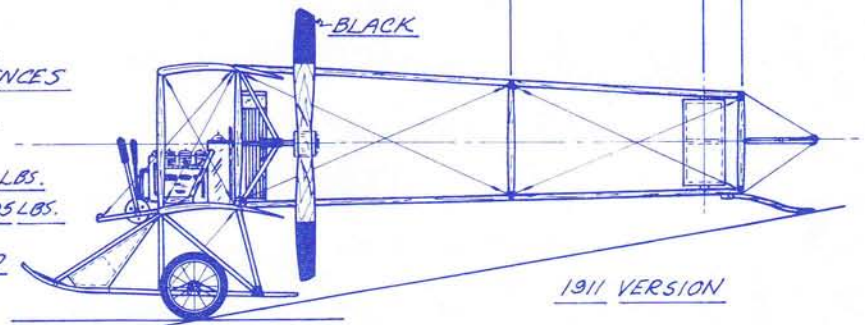


POWERPLANT: 50 HORSEPOWER WRIGHT V-8 - WATER COOLED  
PROPELLERS: RH & LH CARVED YELLOW PINE.



SEVERAL BABY WRIGHT RACING AIRCRAFT WERE BUILT - ALL WITH VARIANCES IN DIMENSIONS FROM EACH OTHER.  
SPAN  $\approx 21' 5''$  AREA  $\approx 145 \text{ FT.}^2$   
HEIGHT  $\approx 6' 10''$  GROSS WEIGHT  $\approx 860 \text{ LBS.}$   
MAX SPEED  $\approx 75 \text{ M.P.H.}$  EMPTY WGT  $\approx 685 \text{ LBS.}$

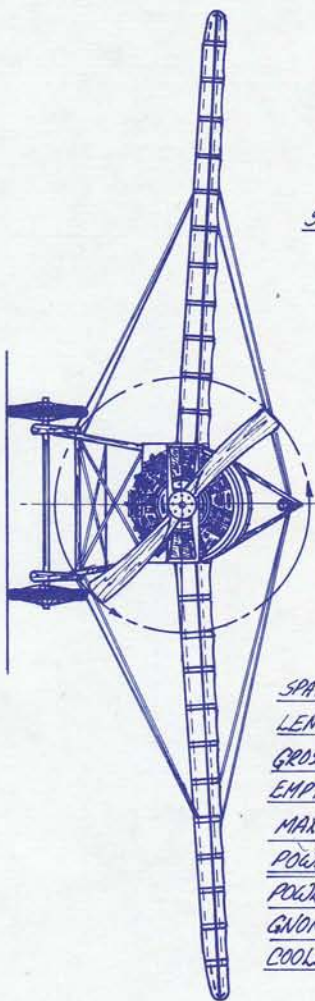
COLOR SCHEME: NATURAL VARNISHED COTTON AND VARNISHED WOOD.



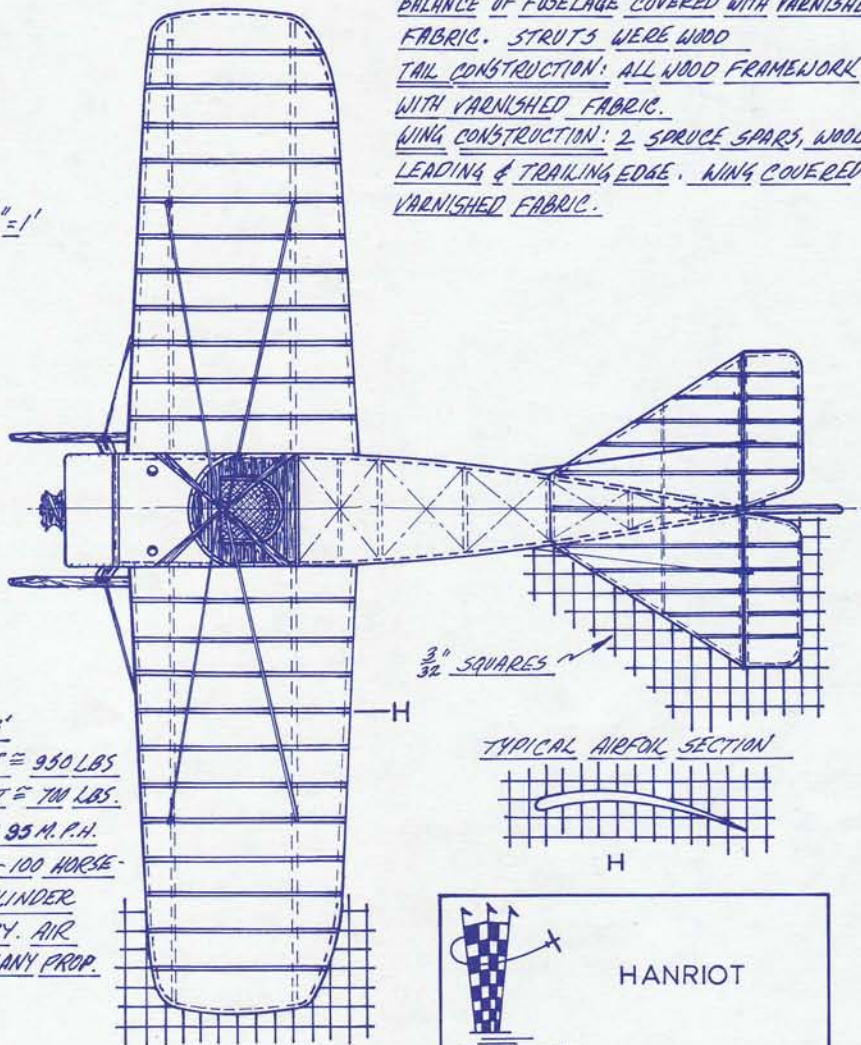
THESE PLANES WERE FLOWN IN 1910 AND 1911 GORDEN BENNET CUP RACES; IN 1910 BY W.R. BROOKINS AT BELMONT N.Y. & IN 1911 BY ALEC OGILVIE WHO TOOK 4TH PLACE (53.31 M.P.H.) AT EASTCHURCH ENGLAND.

FUSELAGE CONSTRUCTION: WOOD LONGERONS WITH WIRE BRACED UPRIGHTS & CROSSPIECES, ALUMINUM ENGINE COVL & AROUND COCKPIT. BALANCE OF FUSELAGE COVERED WITH VARNISHED FABRIC. STRUTS WERE WOOD  
TAIL CONSTRUCTION: ALL WOOD FRAMEWORK COVERED WITH VARNISHED FABRIC.  
WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD RIBS, LEADING & TRAILING EDGE. WING COVERED WITH VARNISHED FABRIC.

SCALE:  $\frac{3}{16}'' = 1'$



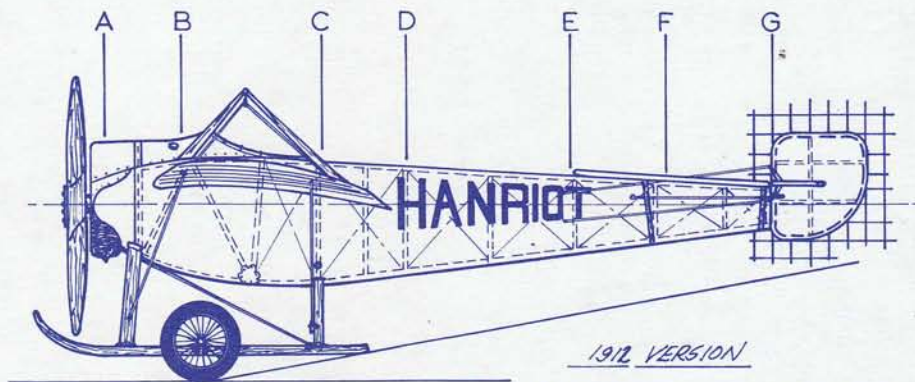
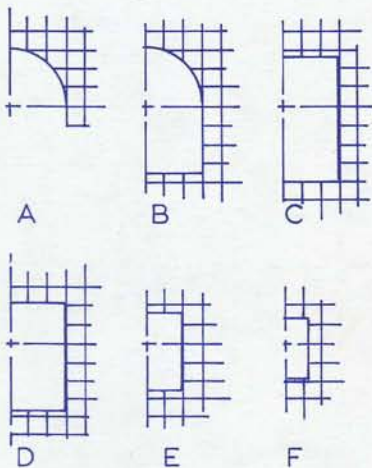
SPAN  $\approx 28'$   
 LENGTH  $\approx 23'$   
 GROSS WEIGHT  $\approx 950$  LBS  
 EMPTY WEIGHT  $\approx 700$  LBS.  
 MAX SPEED  $\approx 95$  M.P.H.  
 POWER PLANT: - 100 HORSE-  
 POWER 4 CYLINDER  
 GNOME ROTARY. AIR  
 COOLED. HANDBANY PROP.



TYPICAL AIRFOIL SECTION



HANRIOT



1912 VERSION

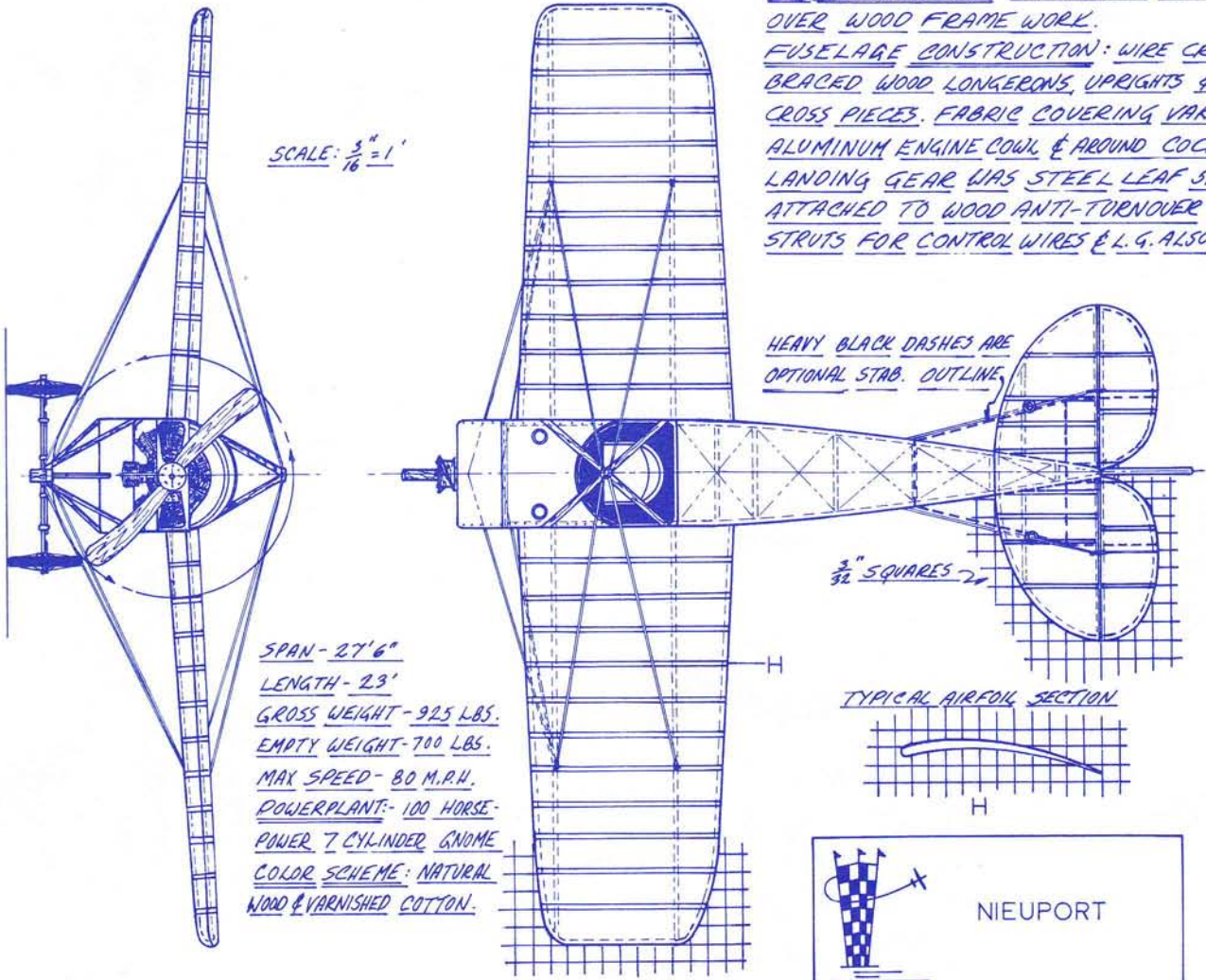
COLOR SCHEME: BELIEVED TO BE LIGHT GREEN WITH BLACK LETTERING.

ANDRÉ FREY FLEW THIS AIRCRAFT IN THE 1912 BENNETT RACE HELD AT CHICAGO. ENGINE PROBLEMS FORCED HIM OUT OF THE RACE ON THE 24TH LAP OF THE 30 LAP 124.8 MILE RACE.

CH

WING CONSTRUCTION: 2 SPRUCE SPARS WITH WOOD RIBS, LEADING & TRAILING EDGES. COVERED WITH VARNISHED CLOTH.  
TAIL CONSTRUCTION: VARNISHED CLOTH OVER WOOD FRAME WORK.  
FUSELAGE CONSTRUCTION: WIRE CROSS-BRACED WOOD LONGERONS, UPRIGHTS & CROSS PIECES. FABRIC COVERING, VARNISHED.  
ALUMINUM ENGINE COWL & AROUND COCKPIT.  
LANDING GEAR WAS STEEL LEAF SPRINGS ATTACHED TO WOOD ANTI-TURNOVER SKID.  
STRUTS FOR CONTROL WIRES & L.G. ALSO WOOD.

SCALE:  $\frac{3}{16}'' = 1'$

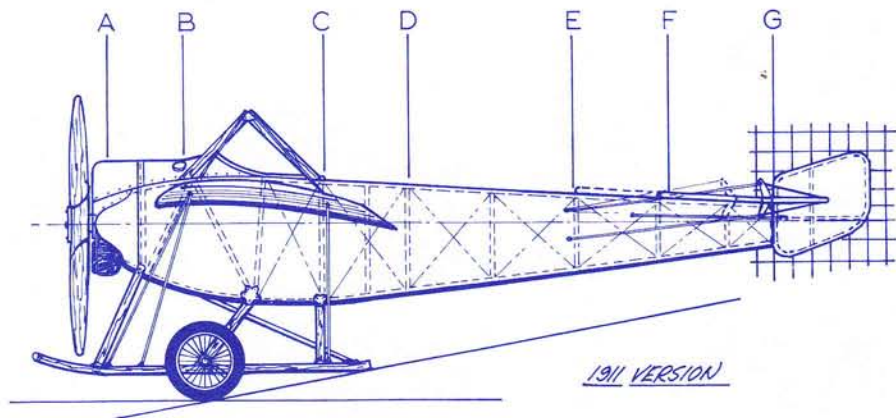
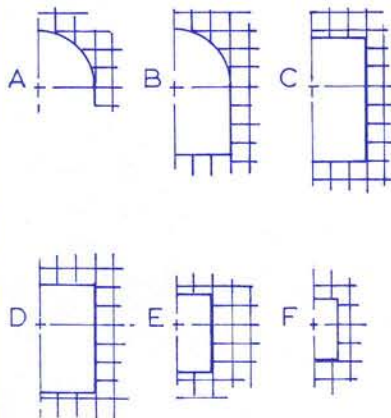


SPAN - 27'6"  
LENGTH - 23'  
GROSS WEIGHT - 925 LBS.  
EMPTY WEIGHT - 700 LBS.  
MAX SPEED - 80 M.P.H.  
POWERPLANT: - 100 HORSE-POWER 7 CYLINDER Gnome  
COLOR SCHEME: NATURAL WOOD & VARNISHED COTTON.

$\frac{3}{32}''$  SQUARES

TYPICAL AIRFOIL SECTION

H



1911 VERSION

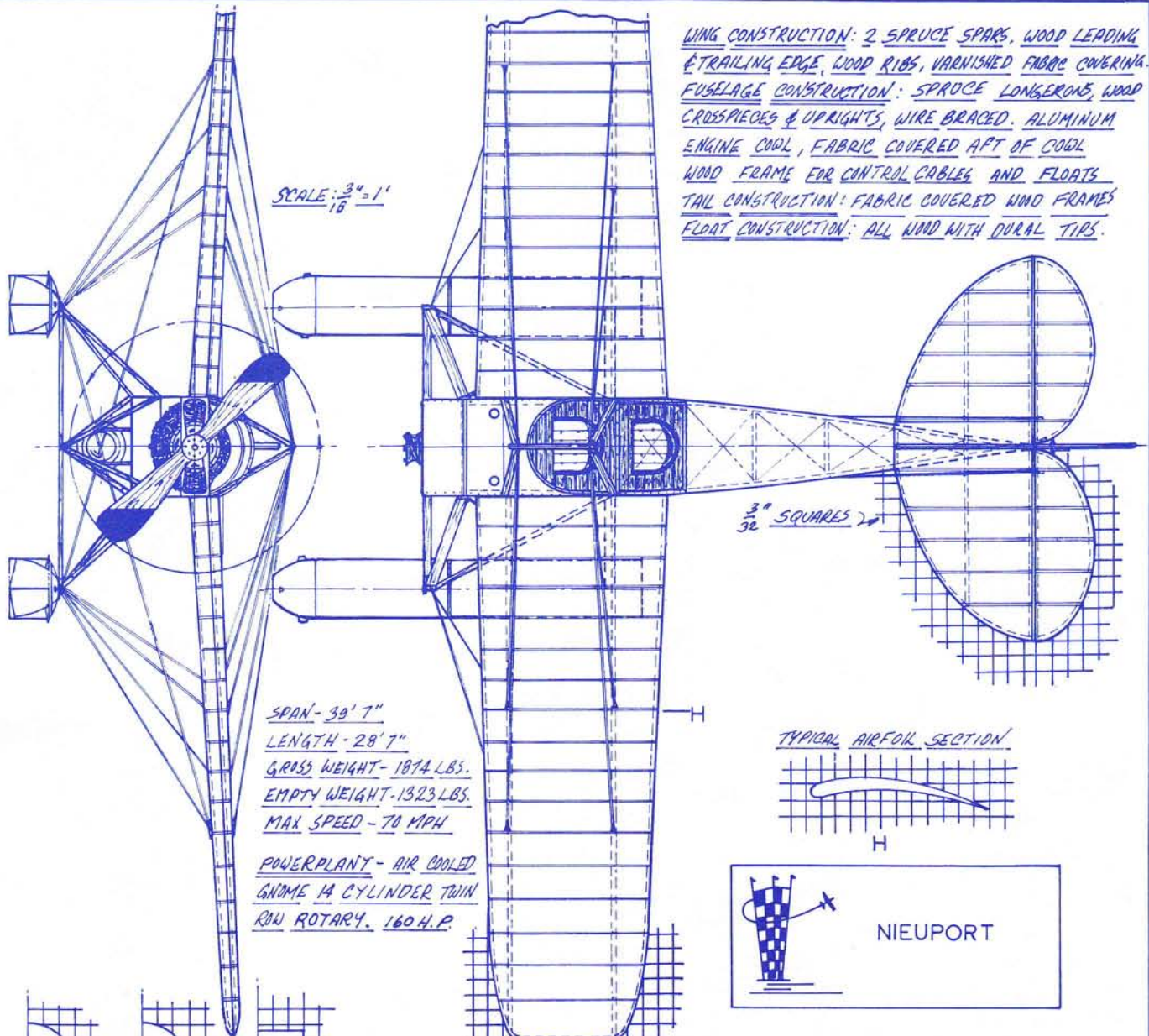
G

NIEUPORT RACERS, DESIGNED BY M. NIEUPORT, ENG. OF FRANCE, WERE TO BECOME PROTOTYPES OF THE SEVERAL NIEUPORT FIGHTERS OF WORLD WAR I. AT THE 1911 JAMES GORDON BENNETT CUP RACES HELD AT EASTCHURCH ENGLAND, A 25 LAP 94 MILE RACE, AN AMERICAN, CHARLES WEYMAN PILOTTED A NIEUPORT RACER AT 78 M.P.H. TO FIRST PLACE. 3RD & 5TH PLACES IN RACE WERE ALSO NIEUPORTS.

CH

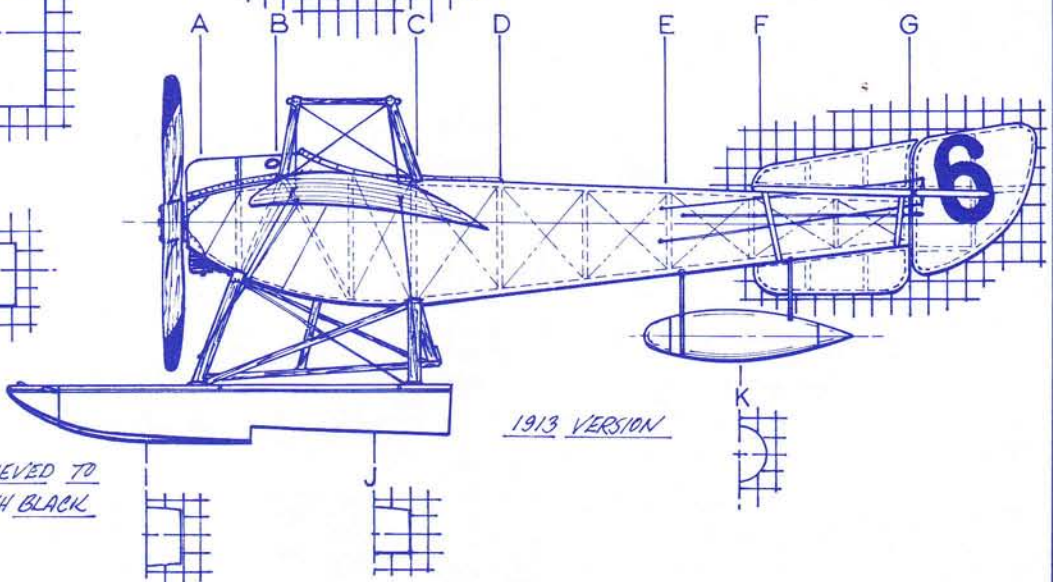
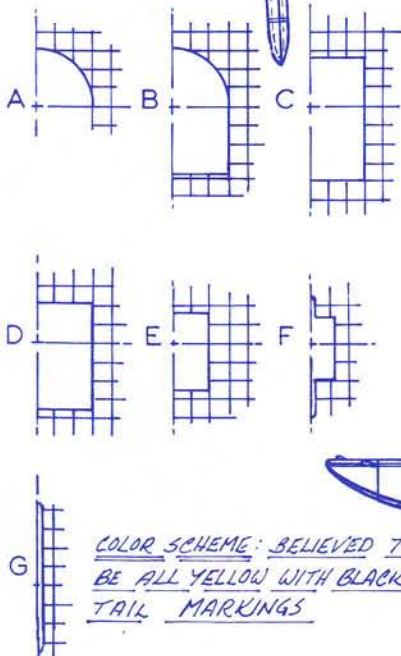
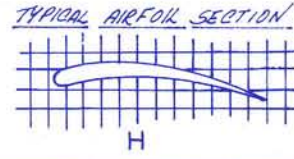
WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD LEADING  
& TRAILING EDGE, WOOD RIBS, VARNISHED FABRIC COVERING  
FUSELAGE CONSTRUCTION: SPRUCE LONGERONS, WOOD  
CROSSPIECES & UPRIGHTS, WIRE BRACED. ALUMINUM  
ENGINE COOL, FABRIC COVERED AFT OF COOL  
WOOD FRAME FOR CONTROL CABLES AND FLOATS  
TAIL CONSTRUCTION: FABRIC COVERED WOOD FRAMES  
FLOAT CONSTRUCTION: ALL WOOD WITH DURAL TIPS.

SCALE:  $\frac{3}{16}'' = 1'$



SPAN - 39' 7"  
 LENGTH - 28' 7"  
 GROSS WEIGHT - 1814 LBS.  
 EMPTY WEIGHT - 1323 LBS.  
 MAX SPEED - 70 MPH

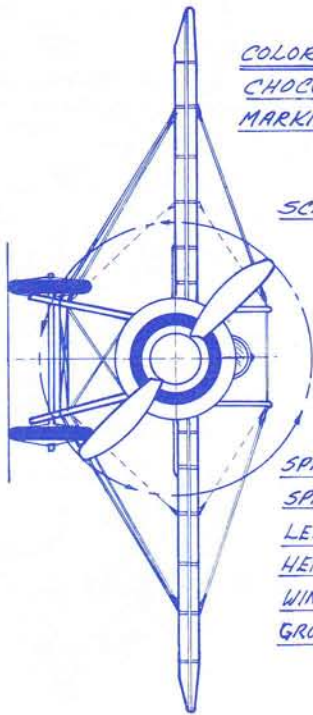
POWERPLANT - AIR COOLED  
 Gnome 14 CYLINDER TWIN  
 ROW ROTARY. 160 H.P.



COLOR SCHEME: BELIEVED TO  
 BE ALL YELLOW WITH BLACK  
 TAIL MARKINGS

CHARLES WEYMAN FLEW ABOVE PLANE IN 1913 SCHNEIDER TROPHY RACE WHICH WAS 28 LAPS COVERING  
 174 MILES AVERAGING 68.8 M.P.H. WEYMAN DROPPED OUT AFTER 5TH LAP. RACE WAS IN MONACO.

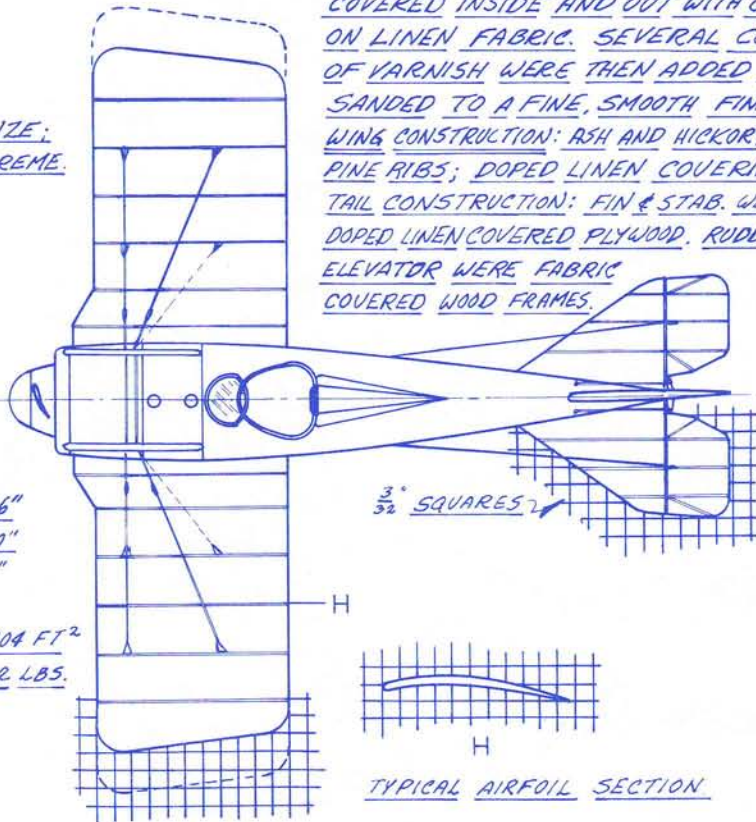




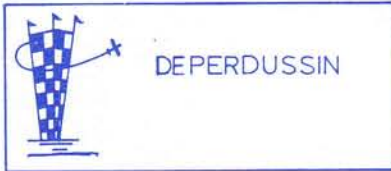
COLOR SCHEME:  
CHOCOLATE BRONZE;  
MARKINGS WERE CREME.

SCALE:  $\frac{3}{16}$ " = 1'

SPAN (1913) - 19' 6"  
SPAN (1912) - 21' 10"  
LENGTH - 20' 0  $\frac{1}{8}$ "  
HEIGHT  $\approx$  7' 6  $\frac{1}{2}$ "  
WING AREA (1913) 104 FT<sup>2</sup>  
GROSS WGT.  $\approx$  992 LBS.

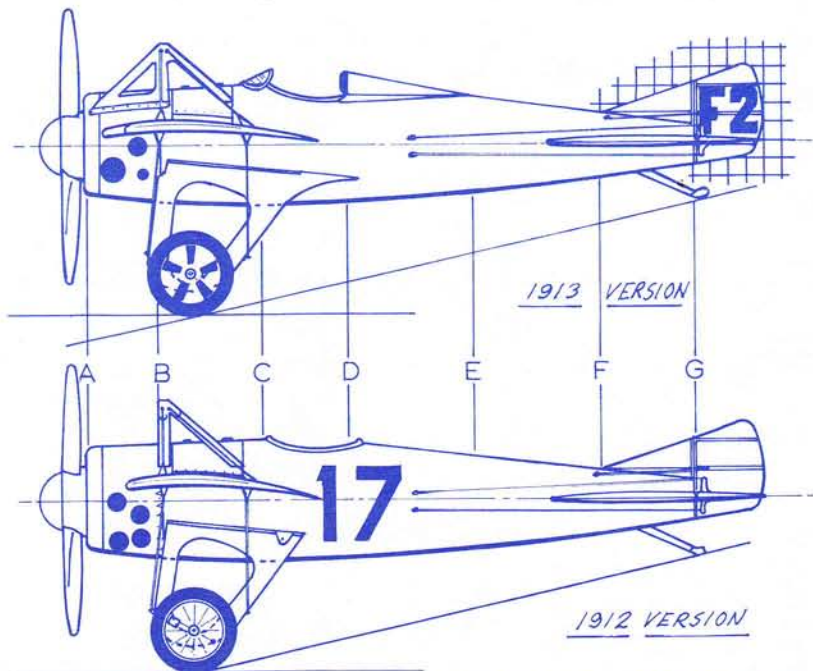
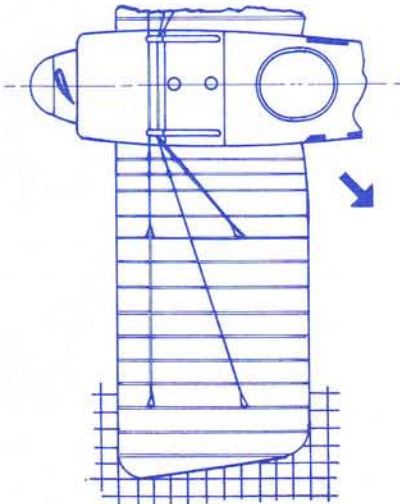
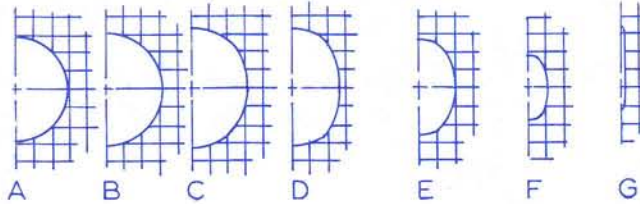


FUSELAGE CONSTRUCTION: WOODEN MONOCOQUE OF  $\frac{1}{8}$ " 3 PLY TULIP WOOD COVERED INSIDE AND OUT WITH GLUED ON LINEN FABRIC. SEVERAL COATS OF VARNISH WERE THEN ADDED AND SANDED TO A FINE, SMOOTH FINISH.  
WING CONSTRUCTION: ASH AND HICKORY SPARS; PINE RIBS; DOPED LINEN COVERING.  
TAIL CONSTRUCTION: FIN & STAB. WERE DOPED LINEN COVERED PLYWOOD. RUDDER & ELEVATOR WERE FABRIC COVERED WOOD FRAMES.



DEPERDUSSIN

POWERPLANT: 160 H.P. GNOME 14 CYLINDER TWO ROW ROTARY.  
PROPELLER: CARVED MAHOGANY  
TOP SPEED - 127 M.P.H.



DEPERDUSSIN AIRCRAFT WERE THE FIRST TO EXCEED 100 M.P.H. THEY WON (AND TOOK MOST OTHER PLACES) THE 1912 AND 1913 JAMES GORDON BENNETT CUP RACES; IN 1912 VEDRINE AT 105.5 MPH; PREVOST '13 @ 124.5. CA

WING CONSTRUCTION: SPRUCE SPARS WITH PINE RIBS; DOPED LINEN FABRIC.

TAIL CONSTRUCTION: WOOD FRAMES COVERED WITH DOPED LINEN.

FUSELAGE CONSTRUCTION: PLYWOOD MONOCOQUE COVERED INSIDE AND OUT WITH GLUED LINEN FABRIC. AFTER SEVERAL COATS OF VARNISH SURFACE WAS SANDED SMOOTH.

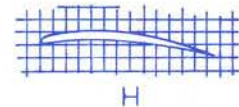
FLOAT CONSTRUCTION: ALL WOOD.

COLOR SCHEME: ALL BLUE WITH WHITE RACE NO. '19'

SCALE:  $\frac{1}{8}'' = 1'$

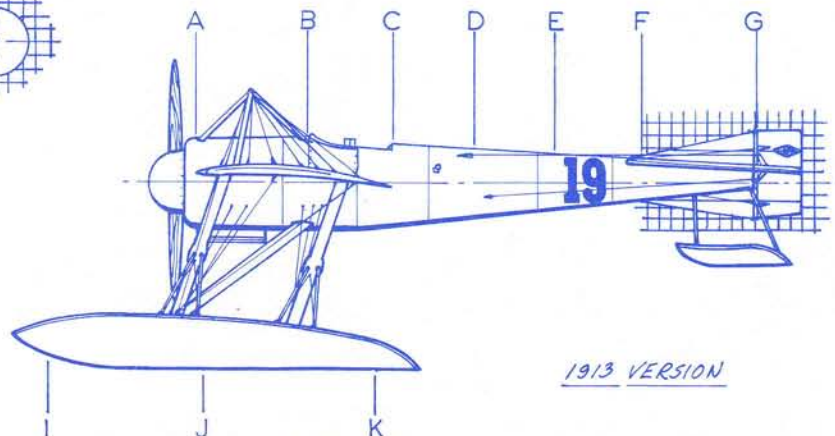
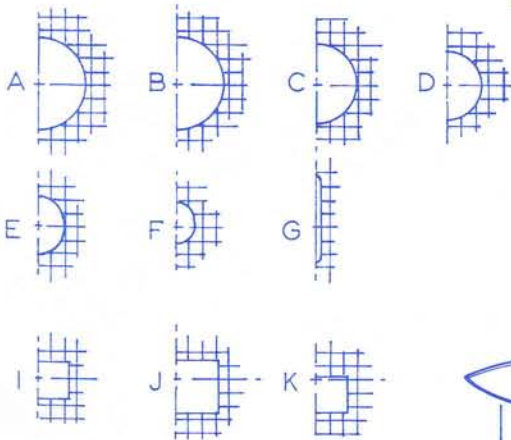
$\frac{1}{16}''$  SQUARES

SPAN - 44' 3"  
 LENGTH - 32' 9 $\frac{1}{2}$ "  
 EMPTY WEIGHT - 2095 LBS.  
 GROSS WEIGHT - 2646 LBS.  
 MAX SPEED - 65 M.P.H.



TYPICAL AIRFOIL SECTION

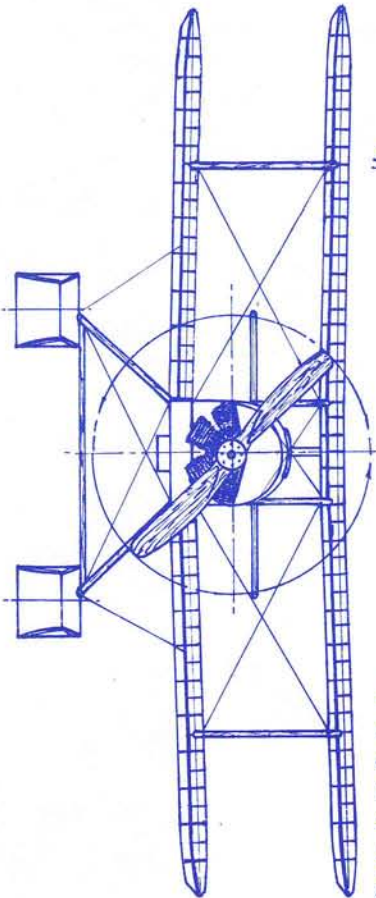
POWERPLANT: 2 ROW ROTARY GNOME - 14 CYLINDER - 160 HORSE POWER



1913 VERSION

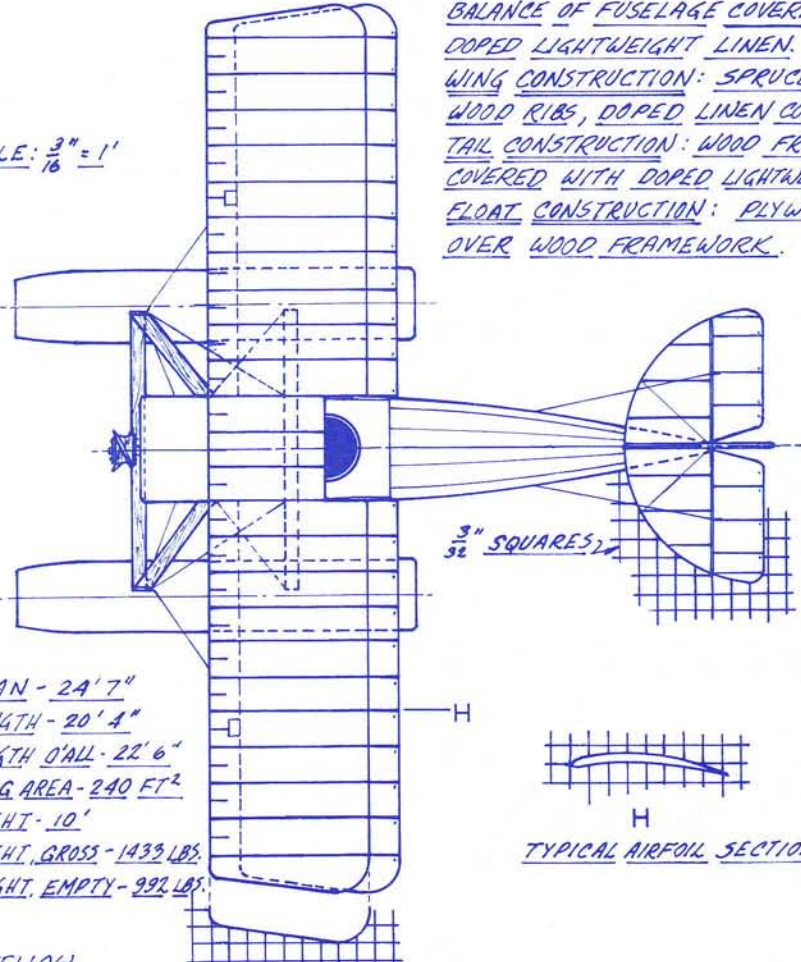
ON APRIL 6, 1913 MARCEL PREVOST WON THE FIRST SCHNEIDER TROPHY RACE WITH ABOVE PLANE. RACE WAS AT MONACO COVERING 174 MILES IN 20 LAPS. AIRCRAFT WAS VERY ADVANCED DESIGN FOR ITS TIME.

FUSELAGE CONSTRUCTION: SPRUCE LONGERONS WITH WIRE BRACED PINE UPRIGHTS & CROSS PIECES; ALUMINUM COWL & COCKPIT DECKING; BALANCE OF FUSELAGE COVERED WITH DOPED LIGHTWEIGHT LINEN.  
WING CONSTRUCTION: SPRUCE SPARS, WOOD RIBS, DOPED LINEN COVERING.  
TAIL CONSTRUCTION: WOOD FRAMEWORK COVERED WITH DOPED LIGHTWEIGHT LINEN.  
FLOAT CONSTRUCTION: PLYWOOD OVER WOOD FRAMEWORK.

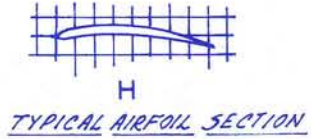


SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 24' 7"  
 LENGTH - 20' 4"  
 LENGTH O'ALL - 22' 6"  
 WING AREA - 240 FT<sup>2</sup>  
 HEIGHT - 10'  
 WEIGHT, GROSS - 1433 LBS.  
 WEIGHT, EMPTY - 992 LBS.

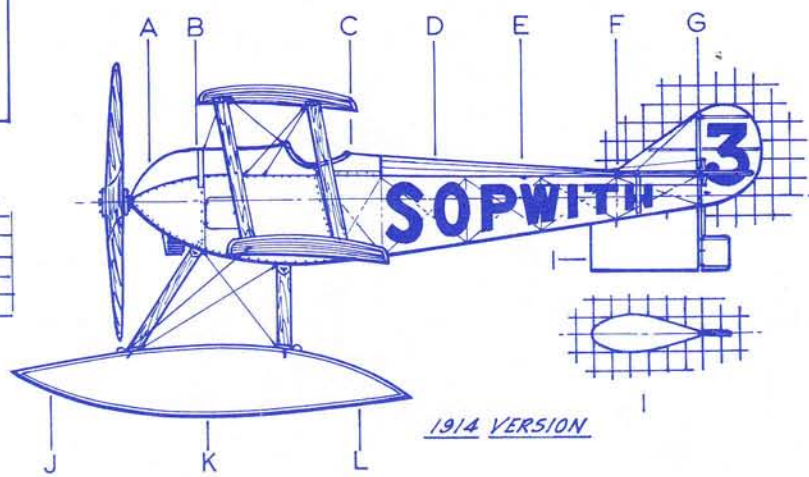
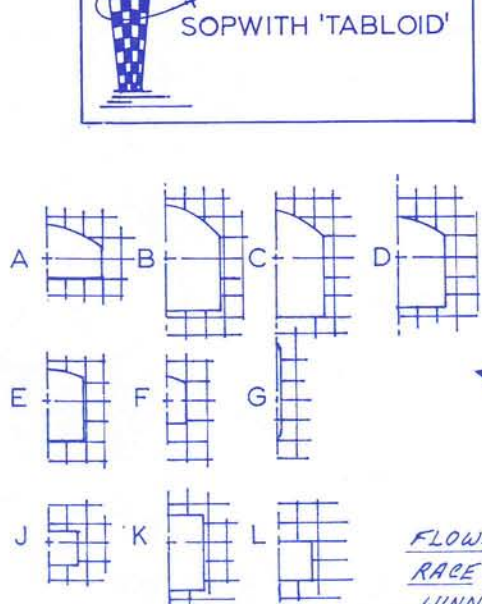


$\frac{3}{32}''$  SQUARES



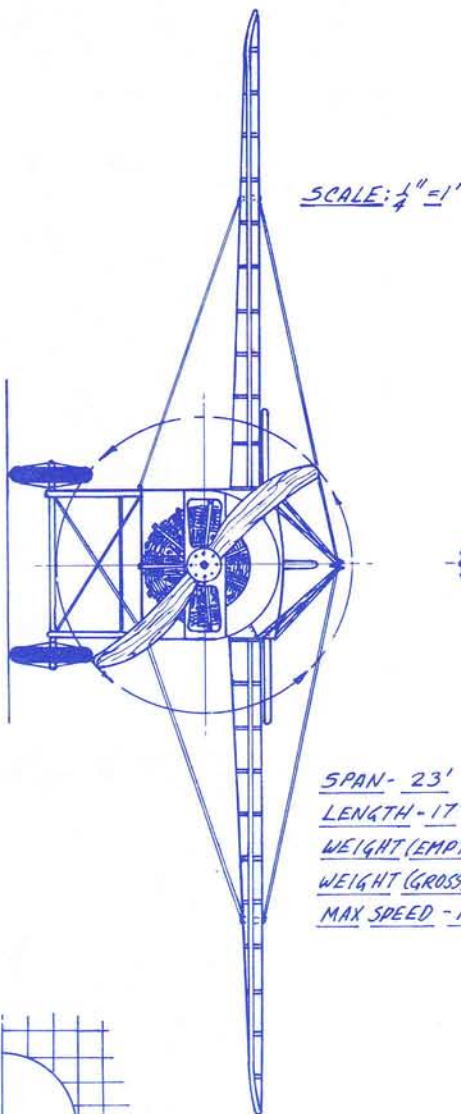
COLOR SCHEME: PALE GOLDEN YELLOW WITH BLACK MARKINGS. NATURAL ALUMINUM COWL & COCKPIT DECKING. VARNISHED WOOD STRUTS.

POWERPLANT: AIR COOLED 3 CYLINDER RADIAL GNOME. 100 HORSEPOWER. CARVED MAHOGANY PROPELLER

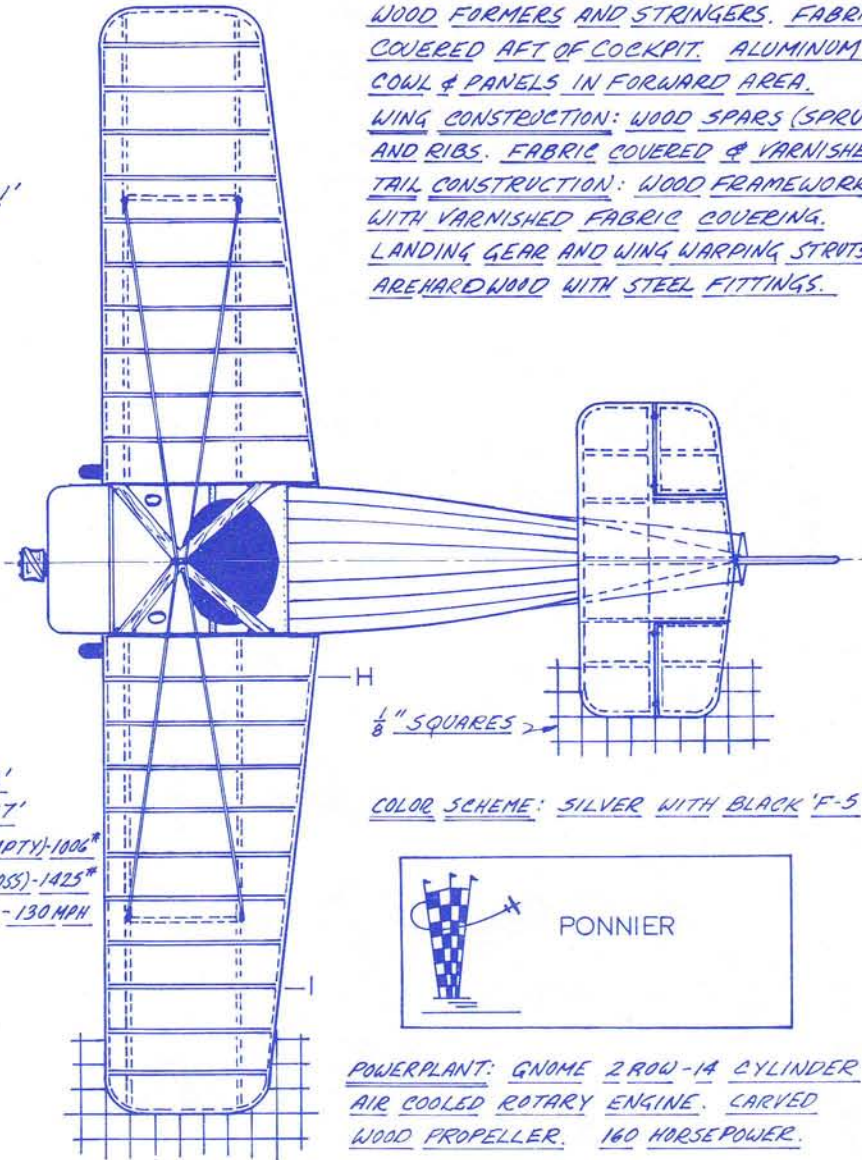


FLOWN BY C. HOWARD PIXTON CRAFT WON THE 1914 SCHNEIDER TROPHY RACE. RACE WAS 28 LAPS COVERING 174 MILES AND WAS HELD AT MONACO. WINNING SPEED WAS 86.75 MILES PER HOUR. THIS PLANE STILL USED WING WARPING.

FUSELAGE CONSTRUCTION: ASH AND SPRUCE  
FRAME CROSS BRACED WITH MUSIC WIRE.  
WOOD FORMERS AND STRINGERS. FABRIC  
COVERED AFT OF COCKPIT. ALUMINUM  
COWL & PANELS IN FORWARD AREA.  
WING CONSTRUCTION: WOOD SPARS (SPRUCE)  
AND RIBS. FABRIC COVERED & VARNISHED.  
TAIL CONSTRUCTION: WOOD FRAMEWORK  
WITH VARNISHED FABRIC COVERING.  
LANDING GEAR AND WING WARPING STRUTS  
ARE HARD WOOD WITH STEEL FITTINGS.



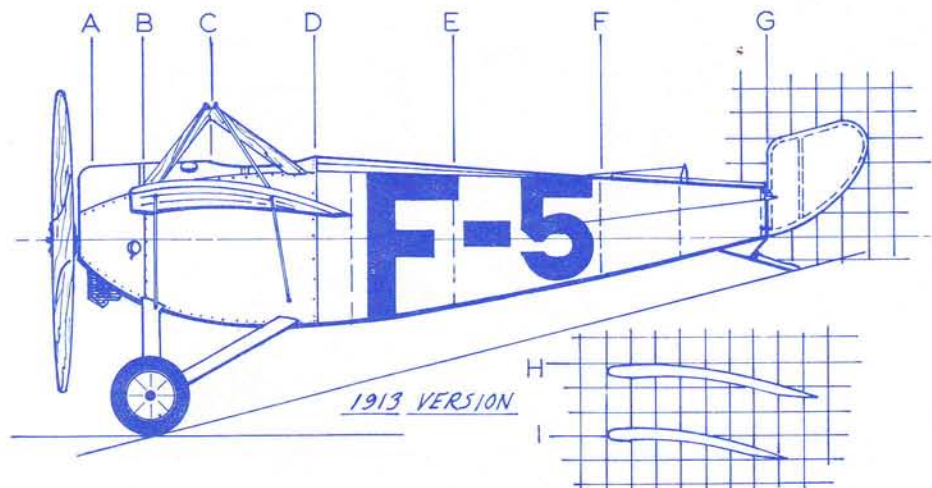
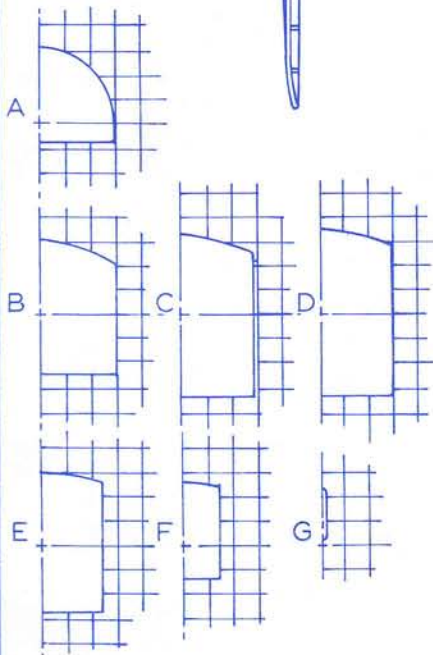
SPAN - 23'  
 LENGTH - 17'  
 WEIGHT (EMPTY) - 1006#  
 WEIGHT (GROSS) - 1425#  
 MAX SPEED - 130 MPH



COLOR SCHEME: SILVER WITH BLACK 'F-5'

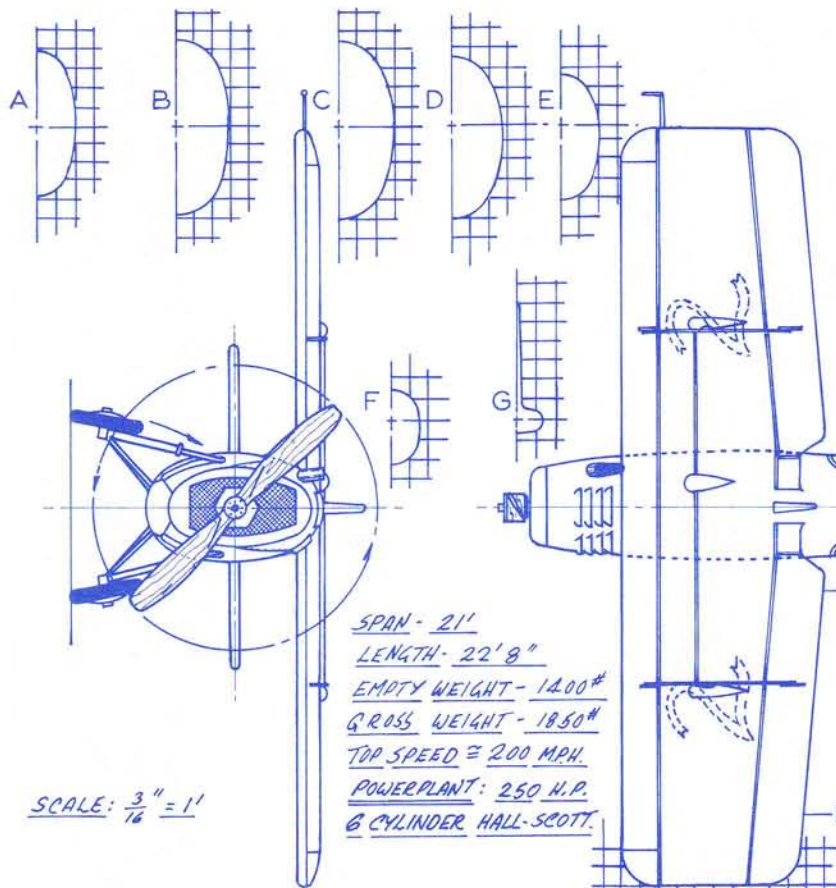


POWERPLANT: Gnome 2 ROW - 14 CYLINDER  
 AIR COOLED ROTARY ENGINE. CARVED  
 WOOD PROPELLER. 160 HORSEPOWER.



TYPICAL AIRFOIL SECTIONS.

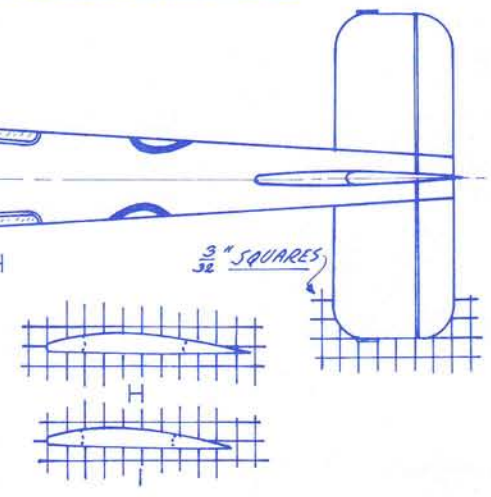
THIS AIRCRAFT FLOWN BY EMILE VEDRINES TO SECOND PLACE IN 1913 JAMES GORDON BENNETT CUP RACE AT AN AVERAGES SPEED OF 123 M.P.H. PONNIER WAS VERY SIMILAR TO THE 1911 NIEUPORT & 1912 HANRIOT RACERS.



SPAN - 21'  
 LENGTH - 22' 8"  
 EMPTY WEIGHT - 1400#  
 GROSS WEIGHT - 1850#  
 TOP SPEED  $\approx$  200 MPH.  
 POWERPLANT: 250 H.P.  
 6 CYLINDER HALL-SCOTT.

SCALE:  $\frac{3}{16}'' = 1'$

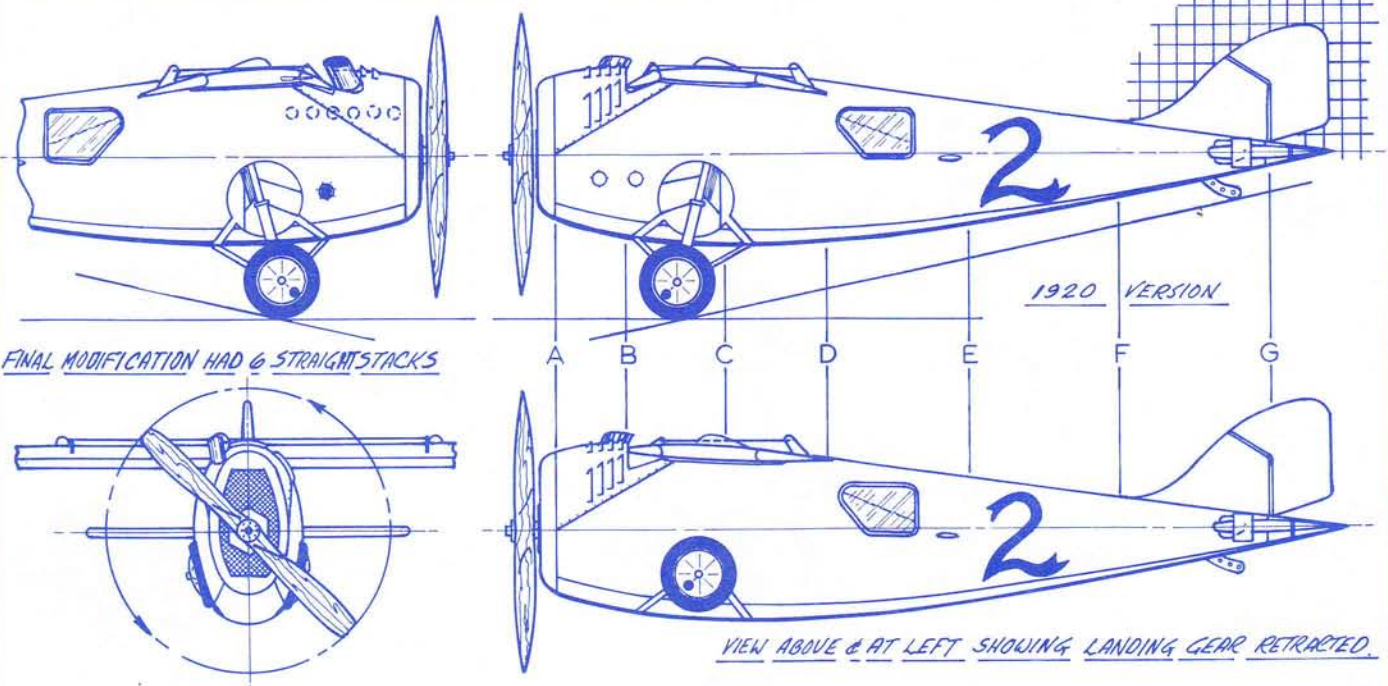
FUSELAGE CONSTRUCTION: LIGHT WOODEN FRAMEWORK COVERED WITH PLYWOOD. LINEN WAS THEN VARNISHED-GLUED TO PLYWOOD FORMING STRONG, SMOOTH SHELL.  
WING CONSTRUCTION: WOOD SPARS AND RIBS COVERED WITH PLYWOOD, THEN VARNISHED FABRIC COVERED.  
TAIL CONSTRUCTION: SAME AS WING.  
COLOR SCHEME: SILVER GRAY WITH BLACK RACE NUMBERS.



TYPICAL ADJUSTABLE BAUMANN AIRFOIL



THE DAYTON-WRIGHT WAS DESIGNED BY MILTON C. BAUMANN AND ITS OFFICIAL NAME WAS THE RB-1. WITH RETRACTABLE LANDING GEAR AND INTERCONNECTED VARIABLE CAMBER WING FOR LOW SPEED LANDINGS, AIRCRAFT WAS MANY YEARS AHEAD OF ITS TIME.

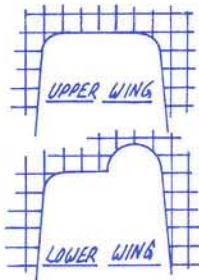
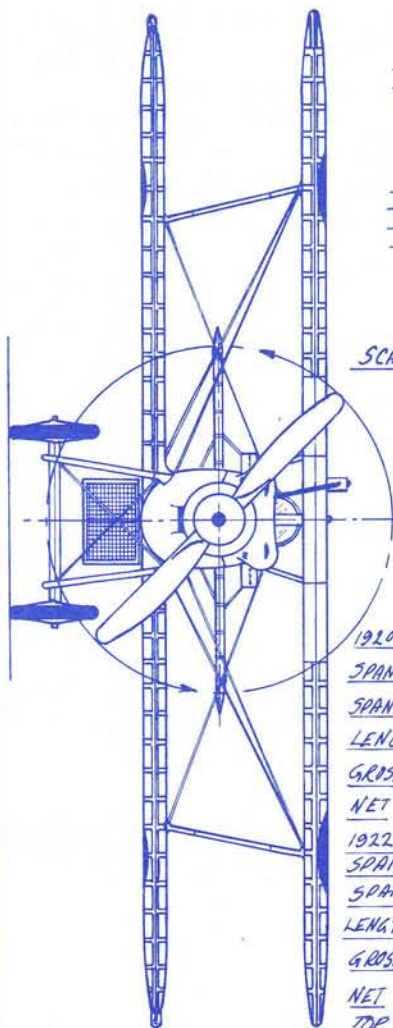


FINAL MODIFICATION HAD 6 STRAIGHT STACKS

1920 VERSION

VIEW ABOVE & AT LEFT SHOWING LANDING GEAR RETRACTED.

THE DAYTON-WRIGHT WAS ENTERED IN THE 1920 JAMES GORDON BENNETT CUP RACE. IT WAS PILOTED BY HOWARD RINEHART. DUE TO MECHANICAL PROBLEMS SHE LEFT RACE AFTER FIRST LAP. RACE WAS AT ETAMPES, FRANCE.



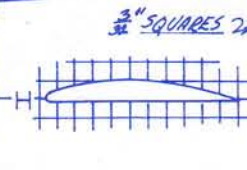
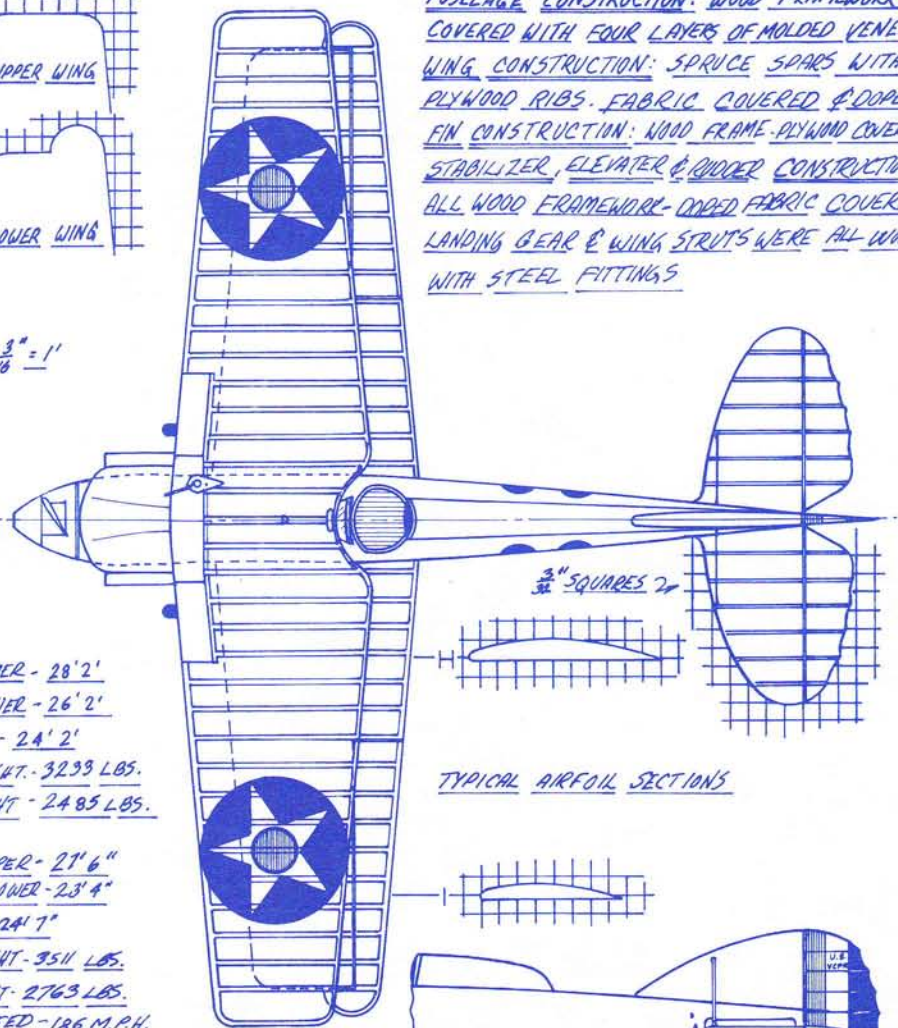
SCALE:  $\frac{3}{16}'' = 1'$

1920:-  
 SPAN-UPPER - 28' 2"  
 SPAN-LOWER - 26' 2"  
 LENGTH - 24' 2"  
 GROSS WGT. - 3293 LBS.  
 NET WGT - 2485 LBS.  
 1922:-  
 SPAN-UPPER - 21' 6"  
 SPAN-LOWER - 23' 4"  
 LENGTH - 24' 7"  
 GROSS WGT - 3511 LBS.  
 NET WGT - 2763 LBS.  
 TOP SPEED - 186 M.P.H.

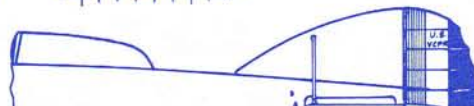
POWERPLANT: PACKARD V-12 1A2025  
 ENGINE, 638 HORSE POWER. CARVED  
 WOODEN PROPELLER.



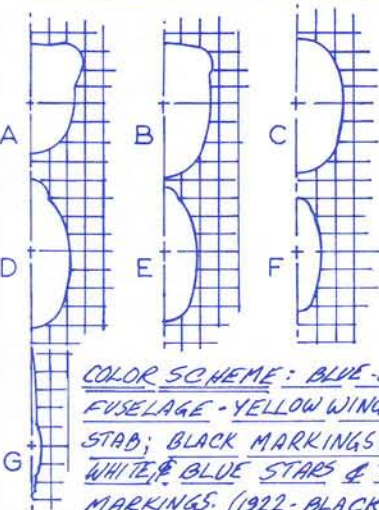
FUSelage CONSTRUCTION: WOOD FRAMEWORK  
 COVERED WITH FOUR LAYERS OF MOLDED VENEER.  
 WING CONSTRUCTION: SPRUCE SPARS WITH  
 PLYWOOD RIBS. FABRIC COVERED & DOPED.  
 FIN CONSTRUCTION: WOOD FRAME-PLYWOOD COVERED  
 STABILIZER, ELEVATOR & RUDDER CONSTRUCTION:  
 ALL WOOD FRAMEWORK-DOPED FABRIC COVERING.  
 LANDING GEAR & WING STRUTS WERE ALL WOOD  
 WITH STEEL FITTINGS



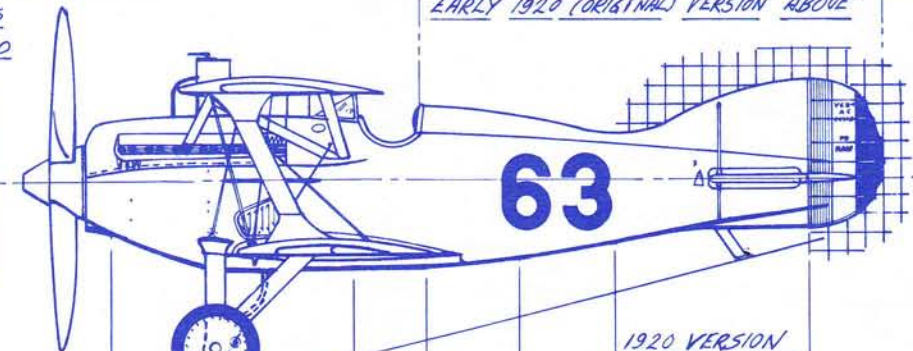
TYPICAL AIRFOIL SECTIONS



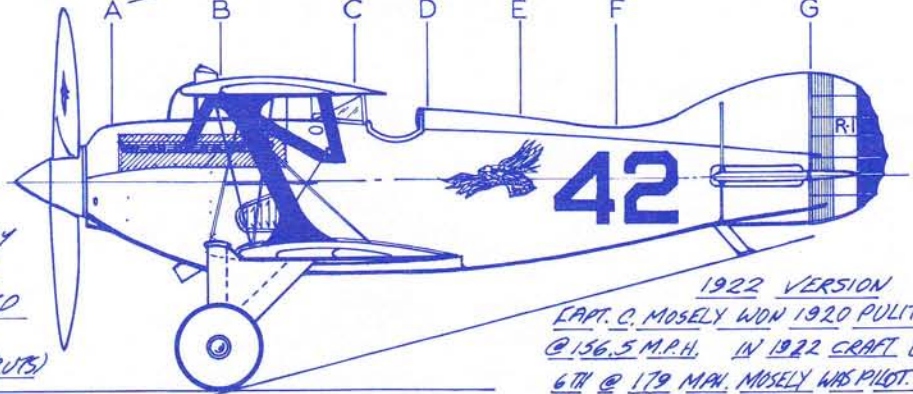
EARLY 1920 (ORIGINAL) VERSION ABOVE



COLOR SCHEME: BLUE-GRAY  
 FUSELAGE - YELLOW WINGS &  
 STAB; BLACK MARKINGS; RED  
 WHITE & BLUE STARS & TAIL  
 MARKINGS. (1922 - BLACK STRUTS)



1920 VERSION

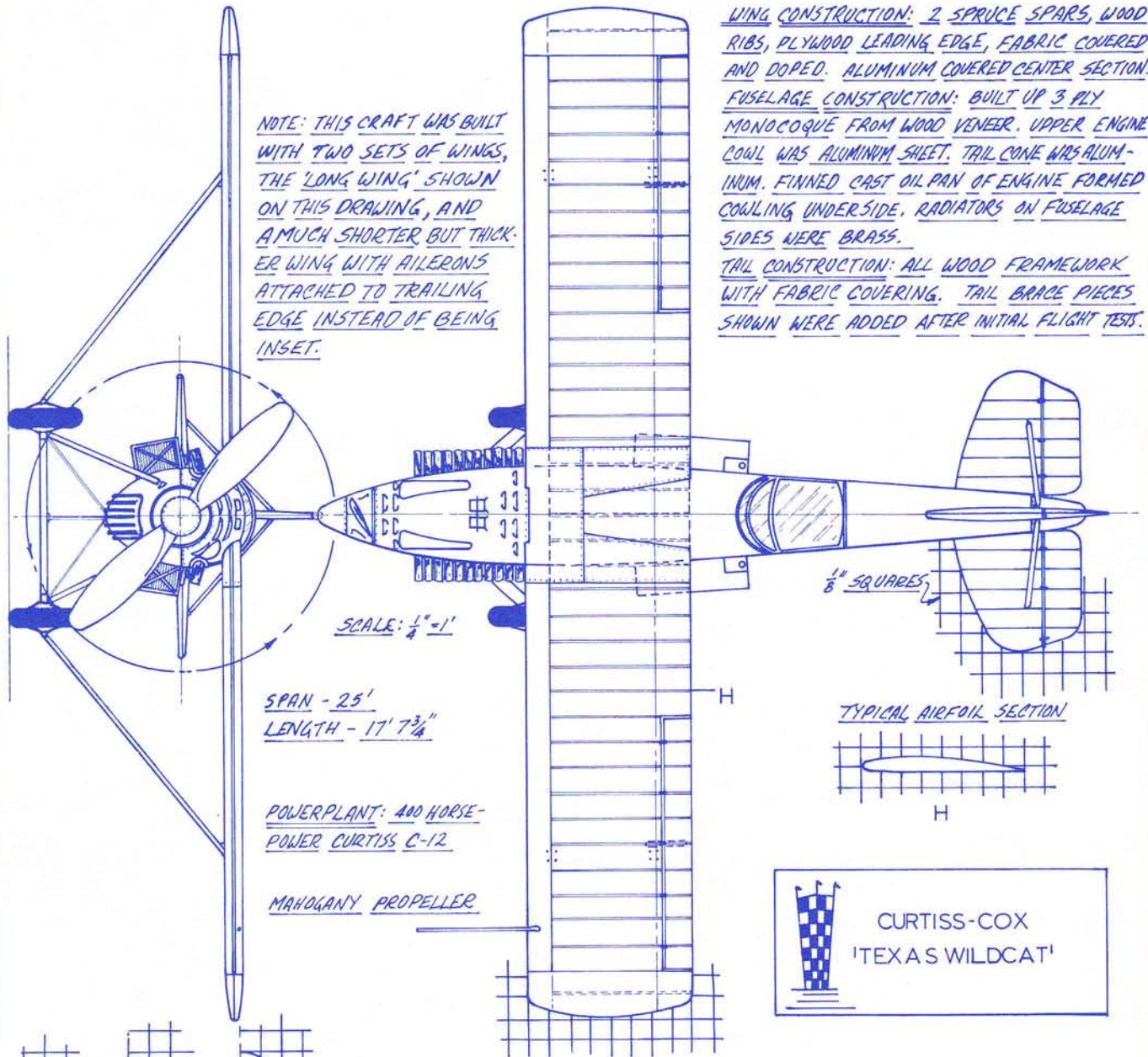


1922 VERSION  
 CAPT. C. MOSELY WON 1920 PULITZER  
 @ 156.5 M.P.H. IN 1922 CRAFT TOOK  
 6TH @ 179 M.P.H. MOSELY WAS PILOT.

NOTE: THIS CRAFT WAS BUILT WITH TWO SETS OF WINGS, THE 'LONG WING' SHOWN ON THIS DRAWING, AND A MUCH SHORTER BUT THICKER WING WITH AILERONS ATTACHED TO TRAILING EDGE INSTEAD OF BEING INSET.

WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD RIBS, PLYWOOD LEADING EDGE, FABRIC COVERED AND DOPED. ALUMINUM COVERED CENTER SECTION. FUSELAGE CONSTRUCTION: BUILT UP 3 PLY MONOCOQUE FROM WOOD VENEER. UPPER ENGINE COUL WAS ALUMINUM SHEET. TAIL CONE WAS ALUMINUM. FINNED CAST OIL PAN OF ENGINE FORMED COWLING UNDERSIDE. RADIATORS ON FUSELAGE SIDES WERE BRASS.

TAIL CONSTRUCTION: ALL WOOD FRAMEWORK WITH FABRIC COVERING. TAIL BRACE PIECES SHOWN WERE ADDED AFTER INITIAL FLIGHT TESTS.



SCALE:  $\frac{1}{4}'' = 1'$

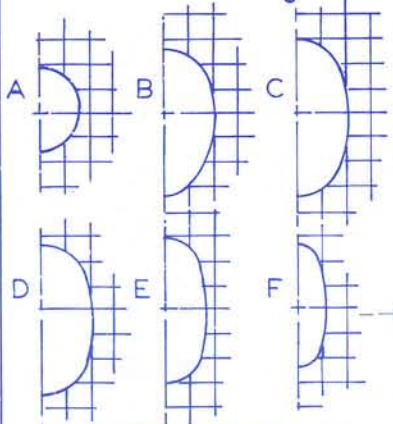
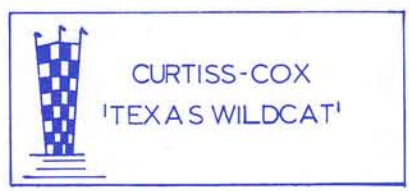
SPAN - 25'  
LENGTH - 17' 7 $\frac{3}{4}$ ''

POWERPLANT: 400 HORSE-POWER CURTISS C-12

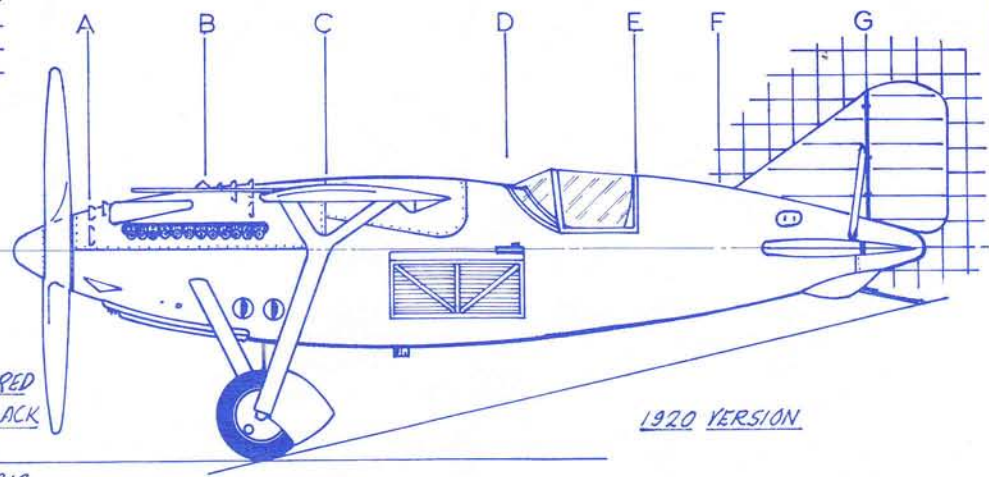
MAHOGANY PROPELLER

$\frac{1}{8}$  SQUARES

TYPICAL AIRFOIL SECTION



COLOR SCHEME: BRIGHT RED FUSELAGE & SPINNER, BLACK PROPELLER, WINGS & TAIL WERE CLEAR DOPED FABRIC



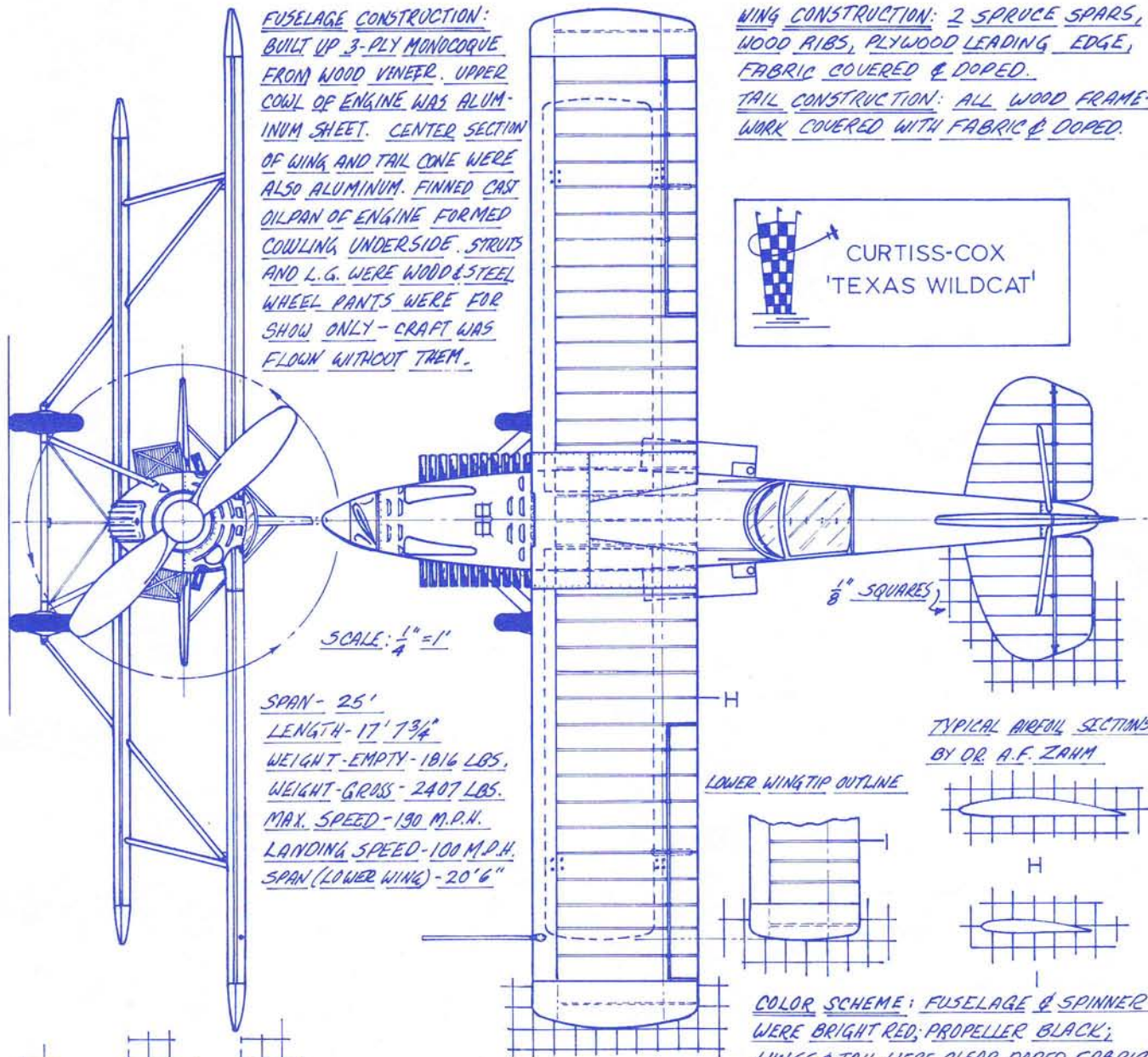
1920 VERSION

THIS AIRCRAFT AND ITS SISTER SHIP 'CACTUS KITTEN' HAVE GOT TO BE UNIQUE IN RACE PLANE HISTORY IN THAT IT STARTED AS A MONOPLANE, THEN PROGRESSED TO A BIPLANE AND FINALLY REACHED A LEVEL OF SUCCESS AS A TRIPLANE! BIGGEST PROBLEM WAS LONG TAKE OFF RUNS DUE TO VERY HIGH PITCH PROP.

FUSELAGE CONSTRUCTION:  
 BUILT UP 3-PLY MONOCOQUE  
 FROM WOOD VENEER. UPPER  
 COUL OF ENGINE WAS ALUM-  
 INUM SHEET. CENTER SECTION  
 OF WING AND TAIL CONE WERE  
 ALSO ALUMINUM. FINNED CAST  
 OILPAN OF ENGINE FORMED  
 COWLING UNDERSIDE. STRUTS  
 AND L.G. WERE WOOD & STEEL.  
 WHEEL PANTS WERE FOR  
 SHOW ONLY - CRAFT WAS  
 FLOWN WITHOUT THEM.

WING CONSTRUCTION: 2 SPRUCE SPARS,  
 WOOD RIBS, PLYWOOD LEADING EDGE,  
 FABRIC COVERED & DOPED.

TAIL CONSTRUCTION: ALL WOOD FRAME-  
 WORK COVERED WITH FABRIC & DOPED.

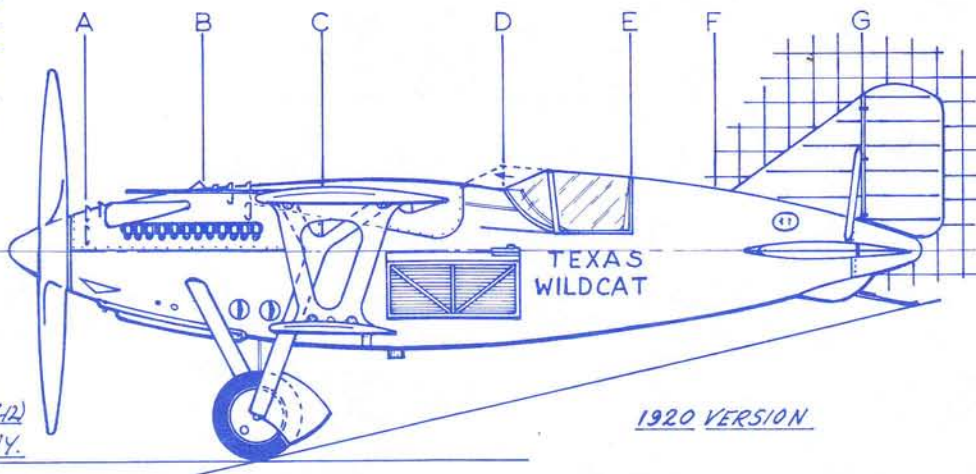
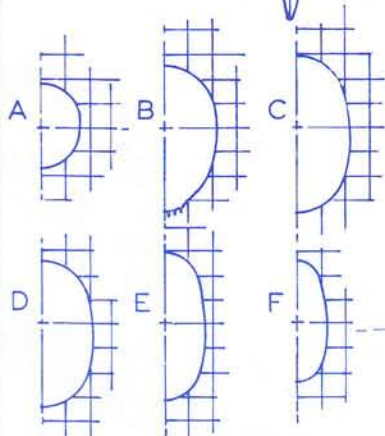


SPAN - 25'  
 LENGTH - 17' 7 3/4"  
 WEIGHT - EMPTY - 1816 LBS.  
 WEIGHT - GROSS - 2407 LBS.  
 MAX. SPEED - 130 M.P.H.  
 LANDING SPEED - 100 M.P.H.  
 SPAN (LOWER WING) - 20' 6"

TYPICAL AIRFOIL SECTIONS  
 BY DR. A.F. ZAHM

LOWER WING TIP OUTLINE

COLOR SCHEME: FUSELAGE & SPINNER  
 WERE BRIGHT RED; PROPELLER BLACK;  
 WINGS & TAIL WERE CLEAR DOPED FABRIC



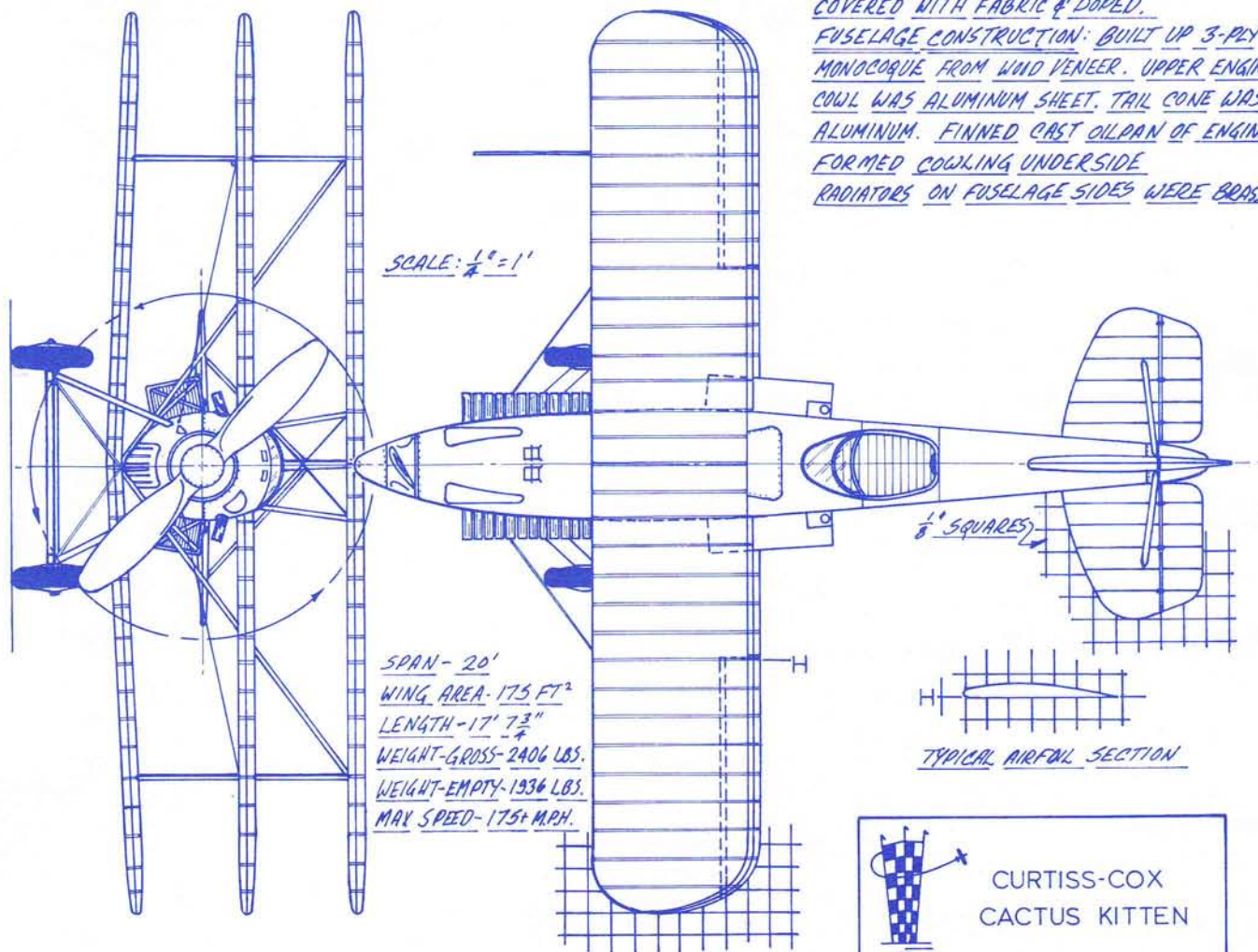
POWERPLANT: 400 H.P.  
 CURTISS-KIRKHAM K-12 (C-12)  
 PROPELLER WAS MAHOGANY.

THE DESIGN OF THIS AIRCRAFT WAS SPONSORED BY TEXAS MILLIONAIRE S.E.J. COX FOR INTENDED ENTRY  
 IN 1920 GORDON BENNETT CUP RACE. TOO HOT TO HANDLE, AIRCRAFT WAS DESTROYED IN CRASH IN  
 FRANCE. PILOT WAS ROLAND ROHLFS WHO HAND PAINTED IN BLACK "TEXAS WILDCAT" ON FUSELAGE BEFORE FLIGHT.



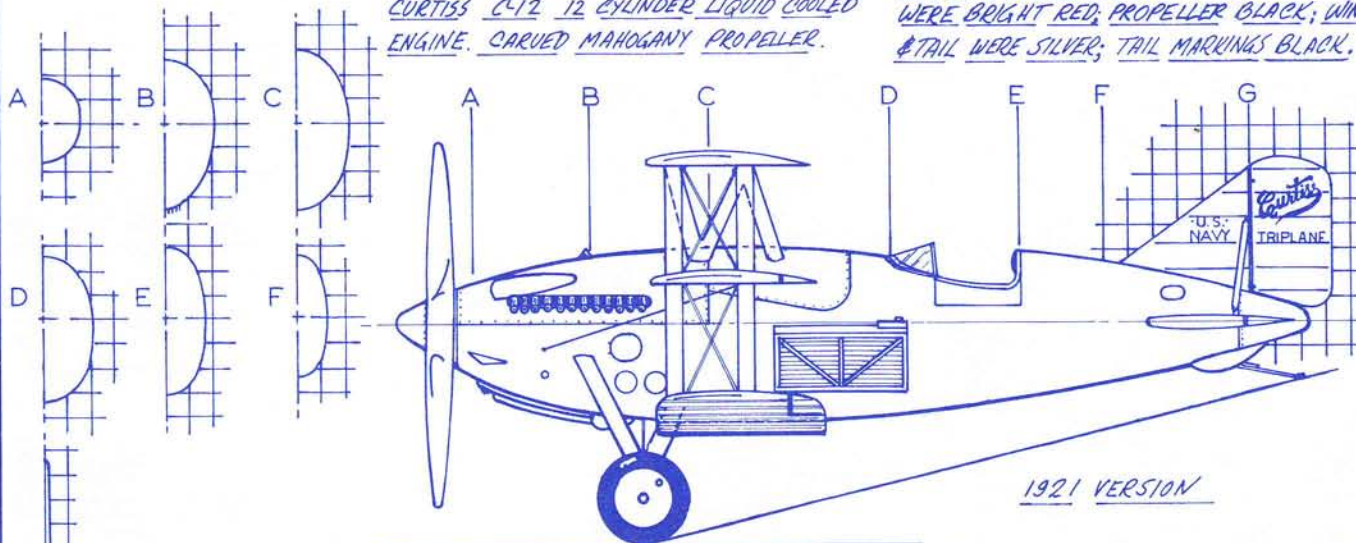
WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD RIBS, WOOD STRUTS, FABRIC COVERING  
TAIL CONSTRUCTION: ALL WOOD FRAMEWORK COVERED WITH FABRIC & DOPED.

FUSELAGE CONSTRUCTION: BUILT UP 3-PLY MONOCOQUE FROM WOOD VENEER. UPPER ENGINE COWL WAS ALUMINUM SHEET. TAIL CONE WAS ALUMINUM. FINNED CAST OIL PAN OF ENGINE FORMED COWLING UNDERSIDE  
RADIATORS ON FUSELAGE SIDES WERE BRASS.

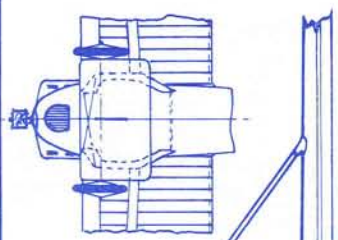


POWER PLANT - 435 HORSEPOWER  
CURTISS C-12 12 CYLINDER LIQUID COOLED  
ENGINE. CARVED MAHOGANY PROPELLER.

COLOR SCHEME: FUSELAGE & SPINNER  
WERE BRIGHT RED, PROPELLER BLACK; WINGS  
& TAIL WERE SILVER; TAIL MARKINGS BLACK.



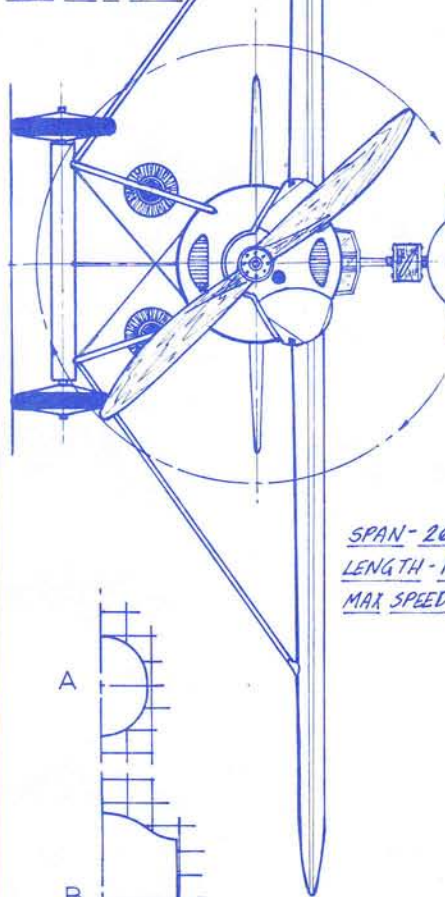
AIRCRAFT SHOWN HERE WAS BUILT FROM THE 1920 'CACTUS KITTEN' FUSELAGE & TAIL WITH A NEW  
SET OF TRI-PLANE WINGS. PLANE WAS FLOWN TO SECOND PLACE IN 1921 IN THE PULITZER TROPHY RACE  
BY CLARENCE COOMBS. SPEED WAS 170.26 M.P.H. IN THE 5 LAP 155.35 MILE RACE AT OMAHA, NEBRASKA.  
PLANE WAS DONATED BY S.E.L. COX TO THE U.S. NAVY AFTER THE RACE. BERT ACOSTA'S CURTISS R-1 WON.



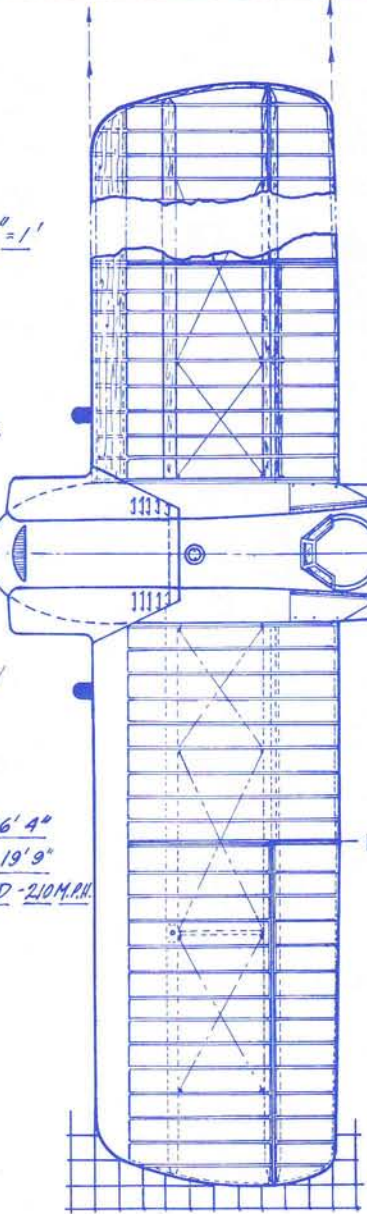
ABOVE NOT TO SCALE

SCALE:  $\frac{10}{4} = 1'$

FUSELAGE CONSTRUCTION: WOOD FORMERS & STRINGERS - SEMIMONOCOQUE PLYWOOD COVERING. ENGINE COUL WAS SHEET ALUMINUM. HORIZONTAL & VERTICAL TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING. WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD RIBS WITH PLYWOOD COVERED 'D' SECTION LEADING EDGE. AILERONS CONTROLLED WITH TORQUE TUBE. ENTIRE ASSEMBLY COVERED WITH FABRIC. WING STRUTS WERE STREAMLINED METAL.



SPAN - 26' 4"  
LENGTH - 19' 9"  
MAX SPEED - 210 M.P.H.



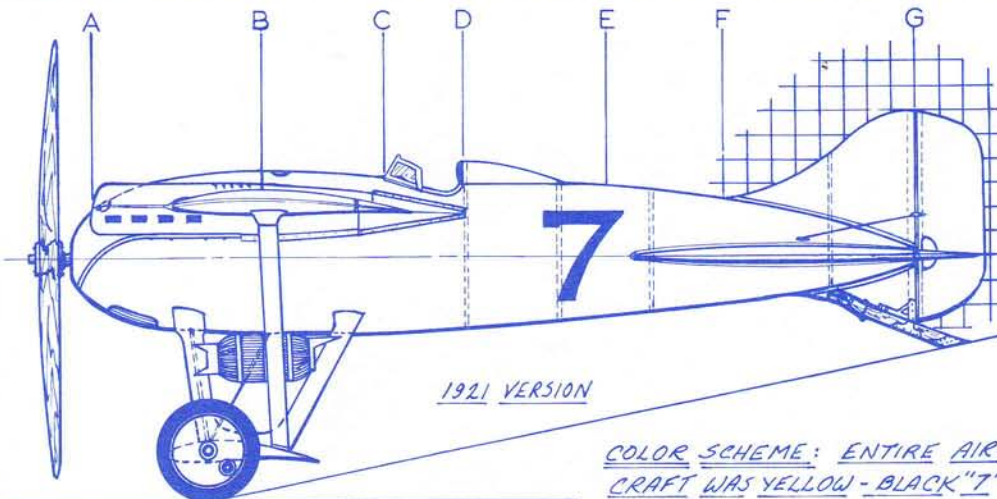
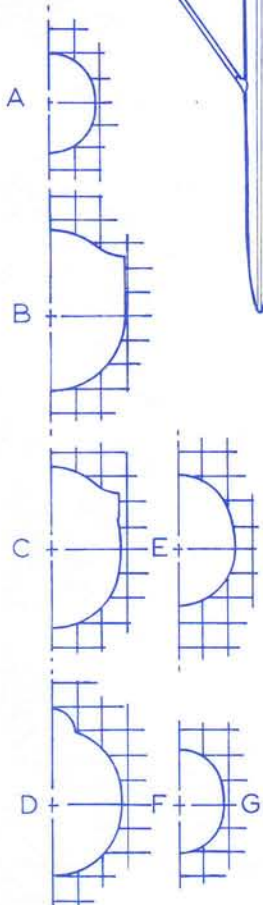
$\frac{1}{8}$ " SQUARES



TYPICAL AIRFOIL SECTION



POWER PLANT: 300 HORSEPOWER HISPANO-SUIZA DIRECT DRIVE V-8 WITH LAMBLIN RAD'RS.

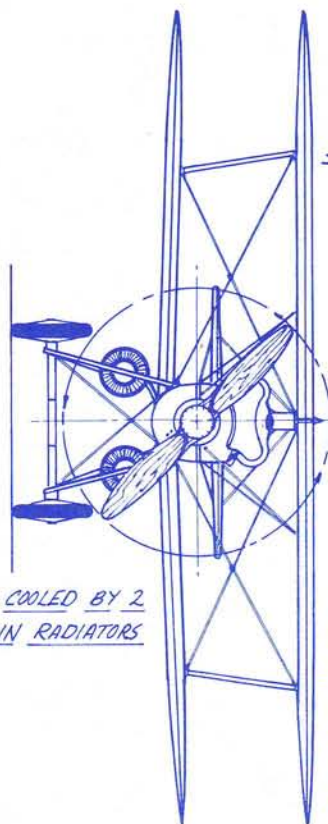


1921 VERSION

COLOR SCHEME: ENTIRE AIRCRAFT WAS YELLOW - BLACK "7"

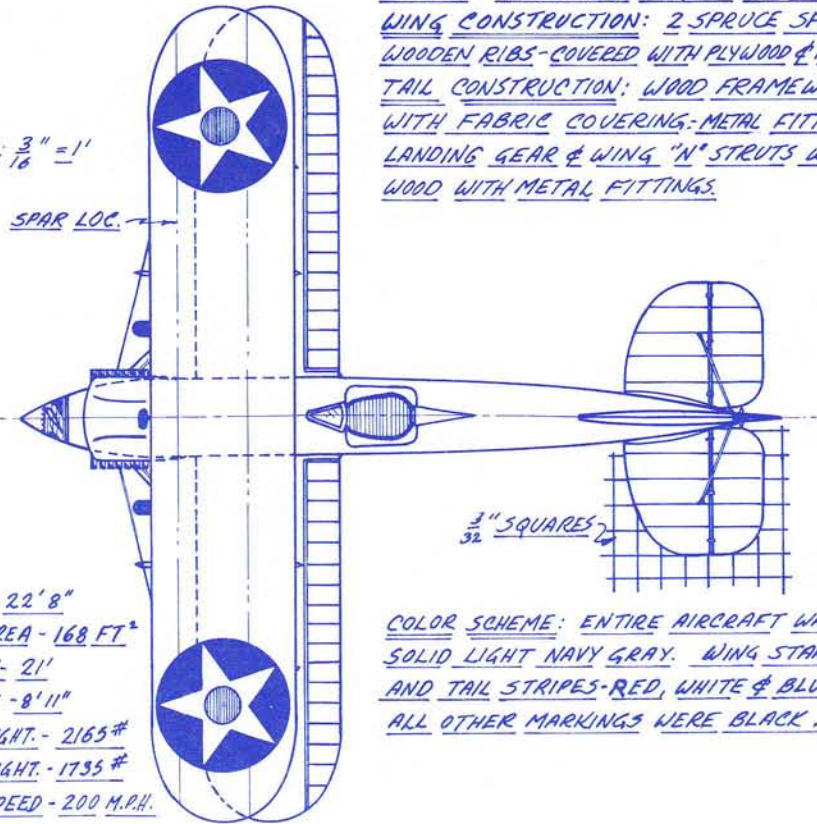
THIS AIRCRAFT WAS FIRST TO EXCEED 300 KM/HR. IN 1920 IT FLEW 187.8 M.P.H. BY 1921 REFINEMENTS HAD BROUGHT SPEED UP TO 206.9 M.P.H. THIS PLANE WAS FIRST OF A SERIES ENDING WITH THE 1923 NIEUPORT-DELAUGE FLOWN BY SADI LACOINTE TO A WORLD SPEED RECORD OF 234.66 M.P.H.

FUSELAGE CONSTRUCTION: PLYWOOD COVERING OVER BUILT UP WOOD FRAME: ALUMINUM ENGINE COWLING.  
WING CONSTRUCTION: 2 SPRUCE SPARS, WOODEN RIBS - COVERED WITH PLYWOOD & FABRIC.  
TAIL CONSTRUCTION: WOOD FRAMEWORK WITH FABRIC COVERING - METAL FITTINGS  
LANDING GEAR & WING "N" STRUTS WERE WOOD WITH METAL FITTINGS.



NOTE: COOLED BY 2 LAMBLIN RADIATORS

SCALE:  $\frac{3}{16}'' = 1'$



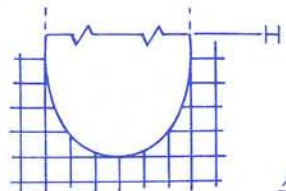
SPAN - 22' 8"  
 WING AREA - 168 FT<sup>2</sup>  
 LENGTH - 21'  
 HEIGHT - 8' 11"  
 GROSS WGT. - 2165 #  
 EMPTY WGT. - 1735 #  
 MAX. SPEED - 200 M.P.H.

$\frac{3}{32}''$  SQUARES

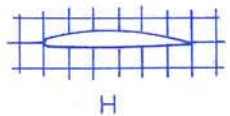
COLOR SCHEME: ENTIRE AIRCRAFT WAS SOLID LIGHT NAVY GRAY. WING STARS AND TAIL STRIPES - RED, WHITE & BLUE ALL OTHER MARKINGS WERE BLACK.



CURTISS CR-1



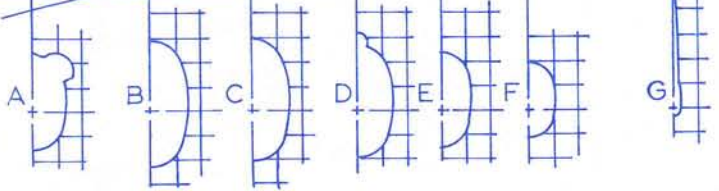
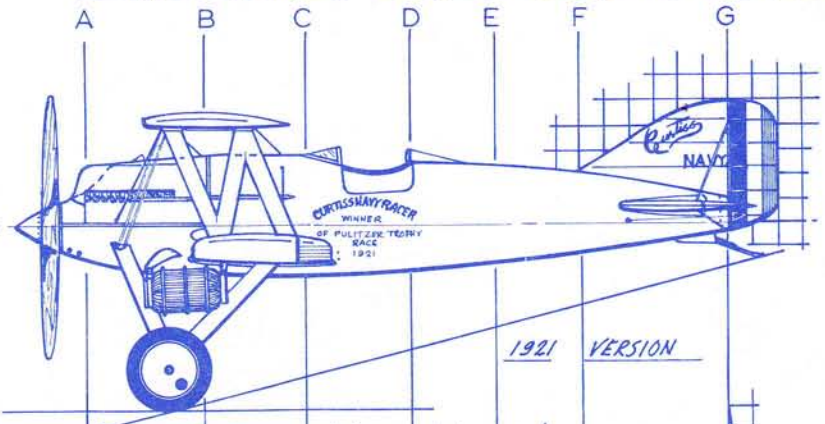
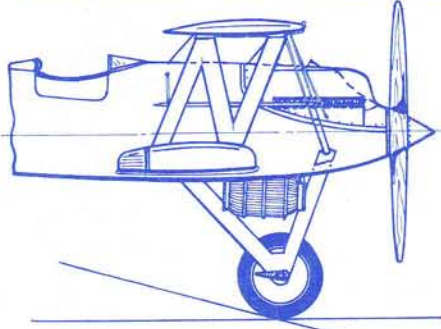
VIEW ABOVE APPLIES TO UPPER & LOWER WING TIPS.



TYPICAL CURTISS RACING AIRFOIL

POWERPLANT: 405 HORSEPOWER CURTISS D-12 12 CYLINDER VEE-TYPE CARVED WOOD PROPELLER (NATURAL WOOD FINISH).

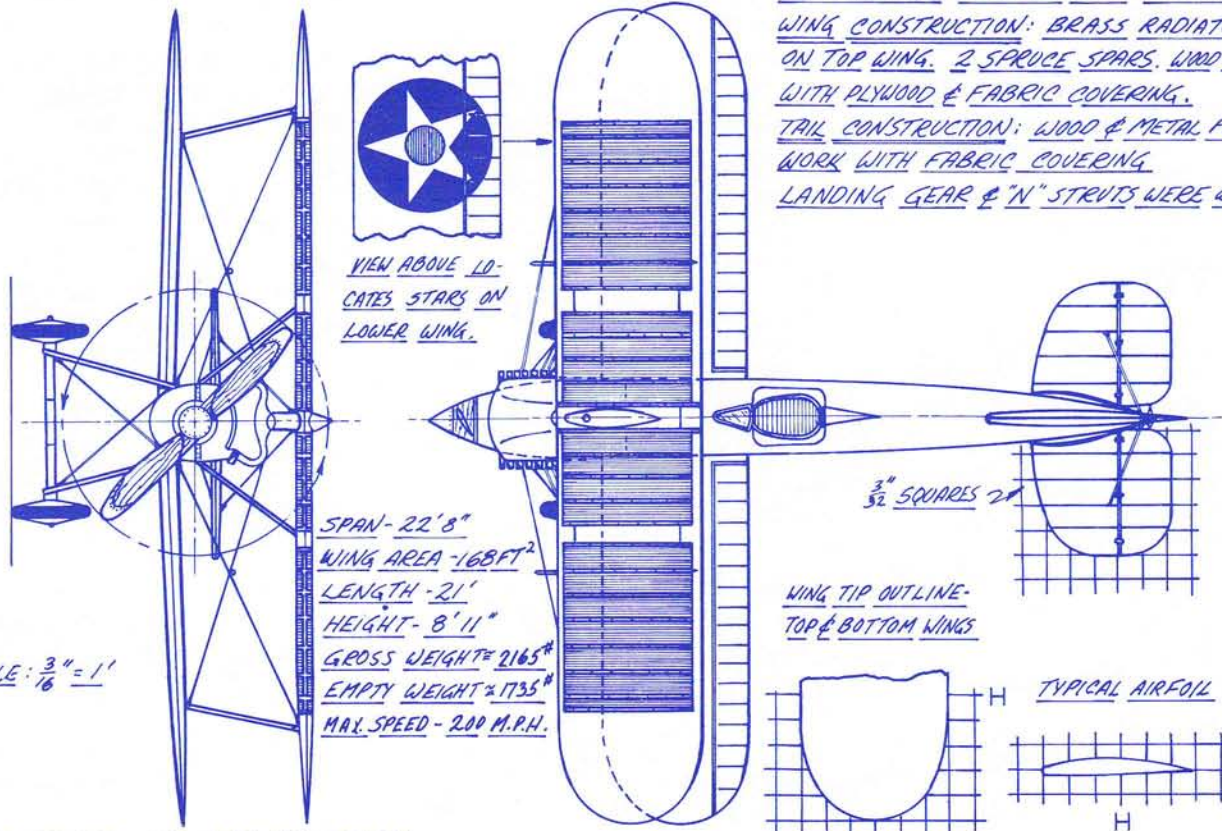
VIEW BELOW SHOWS SAME PLANE WITH A DIFFERENT ENGINE COWL.



THIS AIRCRAFT FLOWN TO FIRST PLACE IN 1921 PULITZER TROPHY RACE BY BERT ACOSTA. WINNING SPEED WAS 176.7 M.P.H.

THE ABOVE DESIGN WAS THE FIRST OF THE RACING CURTISS BIPLANES OF THE 1920's - ALL CONSTRUCTED ALIKE!

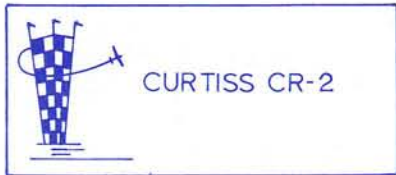
FUSELAGE CONSTRUCTION: ALUMINUM  
ENGINE COWLING. WOOD FORMERS &  
FRAMEWORK COVERED WITH PLYWOOD.  
WING CONSTRUCTION: BRASS RADIATORS  
ON TOP WING. 2 SPRUCE SPARS. WOOD RIBS  
WITH PLYWOOD & FABRIC COVERING.  
TAIL CONSTRUCTION: WOOD & METAL FRAME-  
WORK WITH FABRIC COVERING  
LANDING GEAR & "N" STRUTS WERE WOOD.



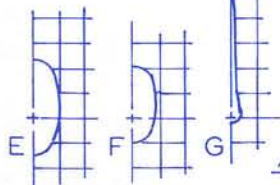
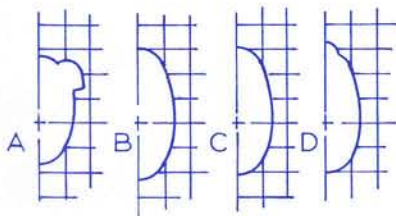
SCALE: 3/16" = 1'

COLOR SCHEME: NAVY GRAY O'ALL; BLACK  
NUMERALS - WHITE RACE NUMBERS.

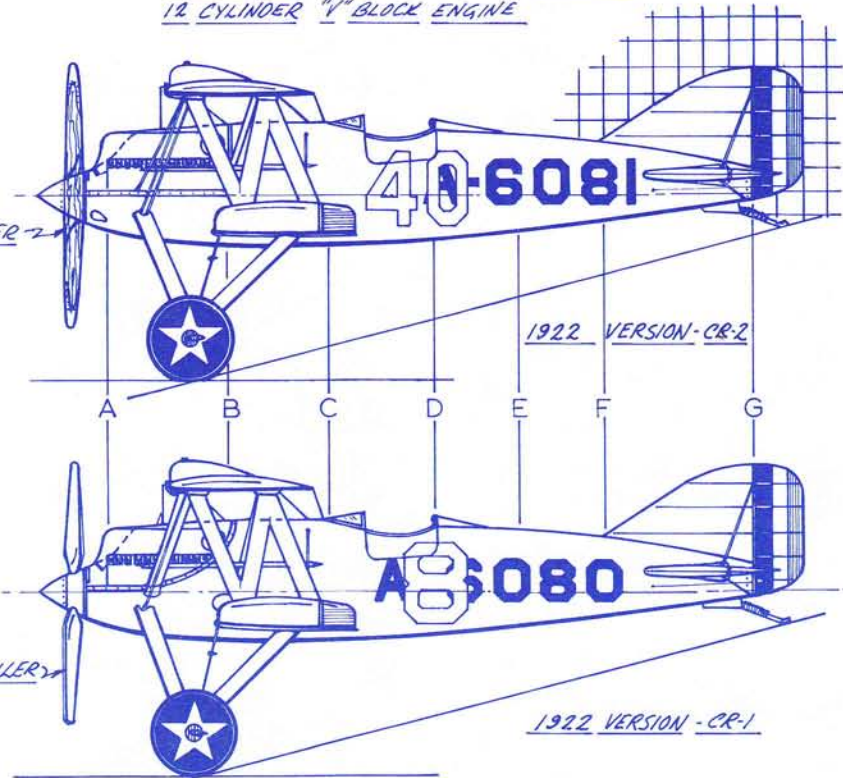
POWERPLANT: 405 HORSEPOWER CURTISS D-12  
12 CYLINDER "V" BLOCK ENGINE



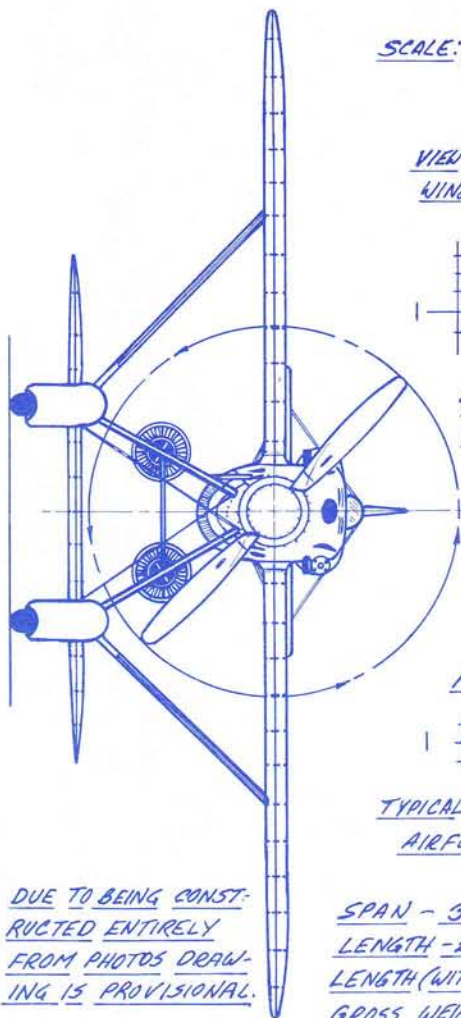
CARVED WOOD PROPELLER



METAL PROPELLER



IN 1922 PULITZER TROPHY RACE A-6081 FLOWN BY LT. H.V. BROW TOOK 3RD PLACE AT 193.2 MPH. CR-1 MODIFIED  
TO CR-2 STANDARDS TOOK 4TH PLACE AT 188 M.P.H. FLOWN BY LT. ALFORD WILLIAMS. 155.35 MILE RACE AT DETROIT, MI.



SCALE:  $\frac{3}{16}'' = 1'$

VIEW BELOW OF LOWER WING-TIP OUTLINE

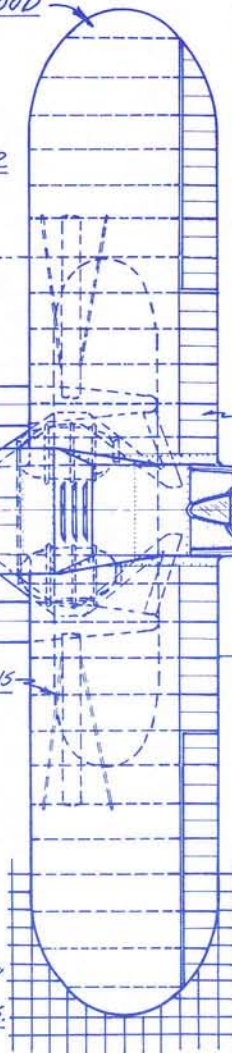


MAIN RIB LOCATIONS



TYPICAL LOWER WING AIRFOIL SECTION

PLYWOOD



FABRIC - REAR SPAR AFT

$\frac{3}{32}$  SQUARES

TYPICAL MAIN WING AIRFOIL SECTION (M-80)

COLOR SCHEME: ENTIRE AIRCRAFT WAS SOLID LIGHT GRAY. RACING NUMERAL "9" WAS BLACK; RED, WHITE & BLUE RUDDER.

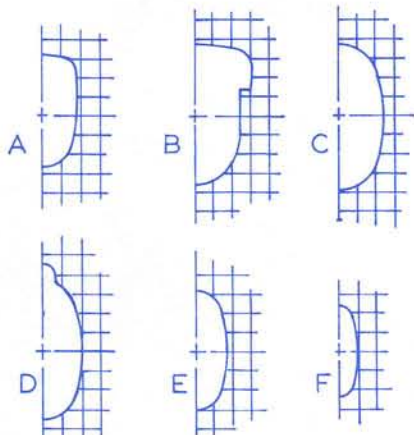


DUE TO BEING CONSTRUCTED ENTIRELY FROM PHOTOS DRAWING IS PROVISIONAL.

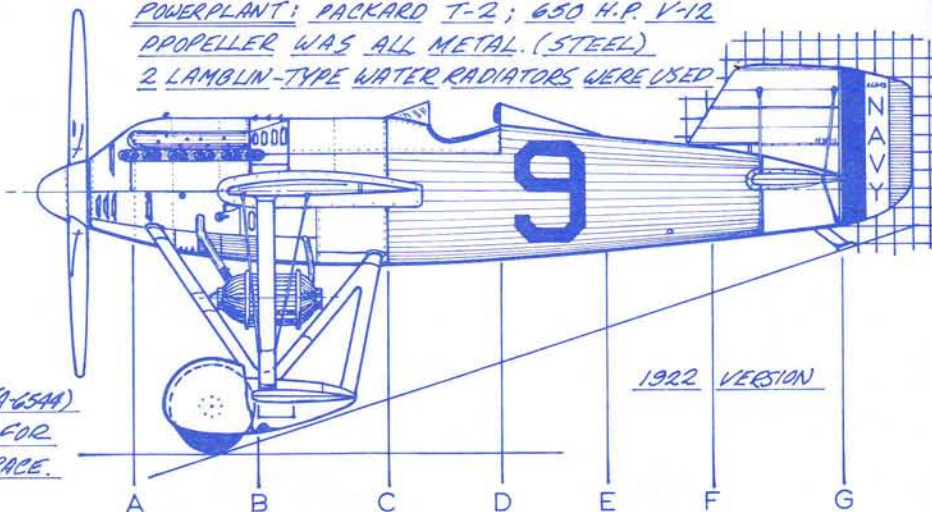
SPAN - 30'  
LENGTH - 24'  
LENGTH (WITH FLOATS) - 28'5"  
GROSS WEIGHT - 3000 LBS.  
MAX. SPEED  $\approx$  209 MPH.

NOTE: DUE TO CRAFT BEING ENGINE TEST BED COWLING CONFIGURATION VARIED FROM TIME TO TIME.

POWERPLANT: PACKARD T-2; 650 H.P. V-12  
PROPELLER WAS ALL METAL (STEEL)  
2 LAMBLIN-TYPE WATER RADIATORS WERE USED



SISTER SHIP OF THIS CRAFT (A-65AA) REBUILT AS NW-2 WITH FLOATS FOR 1923 SCHNEIDER TROPHY RACE.



1922 VERSION

THIS AIRCRAFT WAS BUILT AS A FLYING TEST BED FOR THE PACKARD T-2 ENGINE. NAMED "MYSTERY" IT WAS INTENDED FOR THE 1922 PULITZER RACE. HOWEVER IT WAS DESTROYED IN AN ACCIDENT WHILE FLOWN BY USMC LT. SAUNDERSON BEFORE IT COULD PROVE ITSELF. ITS FORM-SESQUIPLANE.

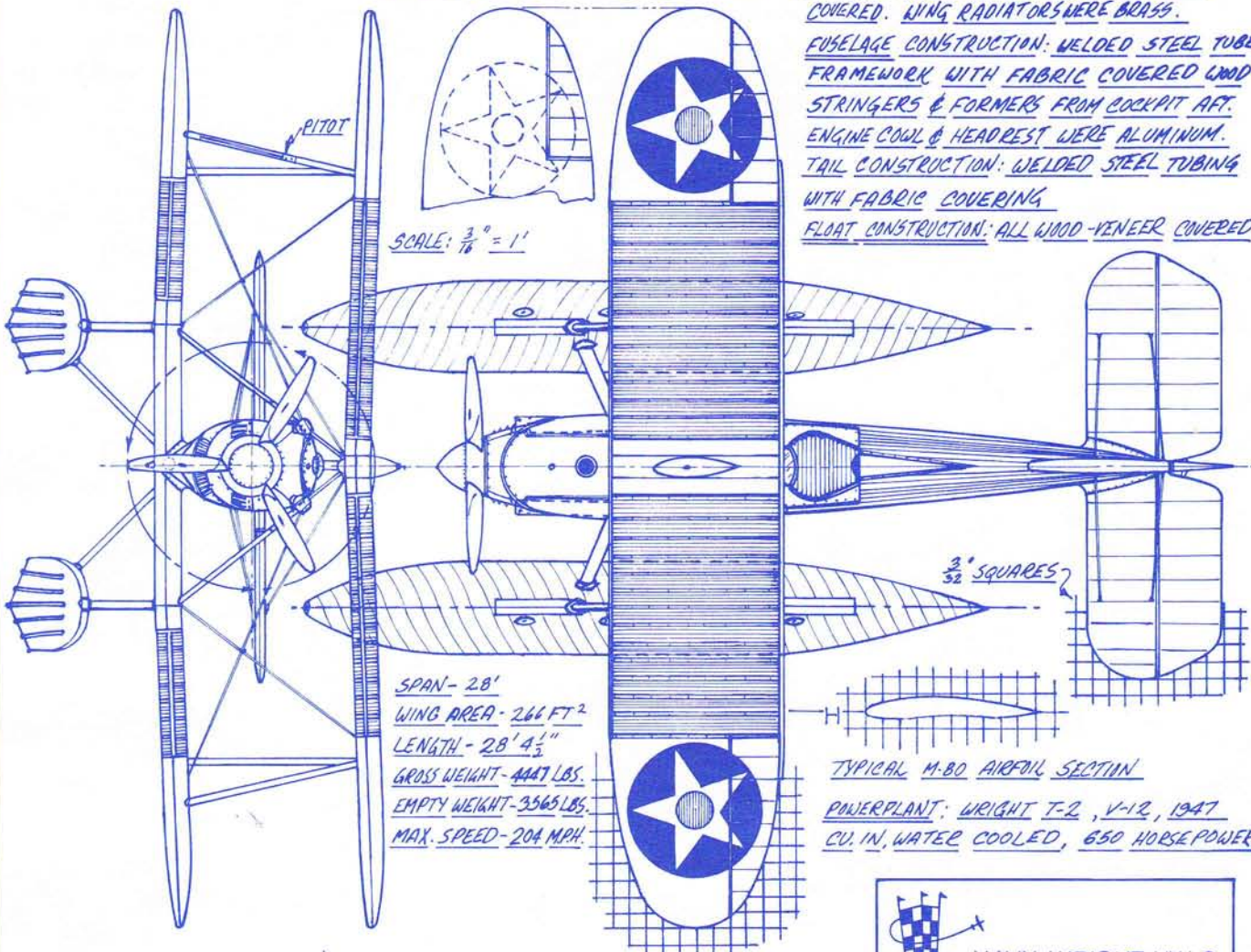
NOTE LOWER WING AILERON IS SHORTER THAN THE UPPER WING AILERON.

WING CONSTRUCTION: PLYWOOD COVERING OVER WOOD RIBS & SPARS. AILERONS WERE FABRIC COVERED. WING RADIATORS WERE BRASS.

FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK WITH FABRIC COVERED WOOD STRINGERS & FORMERS FROM COCKPIT AFT. ENGINE COWL & HEADREST WERE ALUMINUM.

TAIL CONSTRUCTION: WELDED STEEL TUBING WITH FABRIC COVERING.

FLOAT CONSTRUCTION: ALL WOOD - VENEER COVERED



SPAN - 28'  
WING AREA - 266 FT<sup>2</sup>  
LENGTH - 28' 4 1/2"  
GROSS WEIGHT - 4447 LBS.  
EMPTY WEIGHT - 3565 LBS.  
MAX. SPEED - 204 MPH.

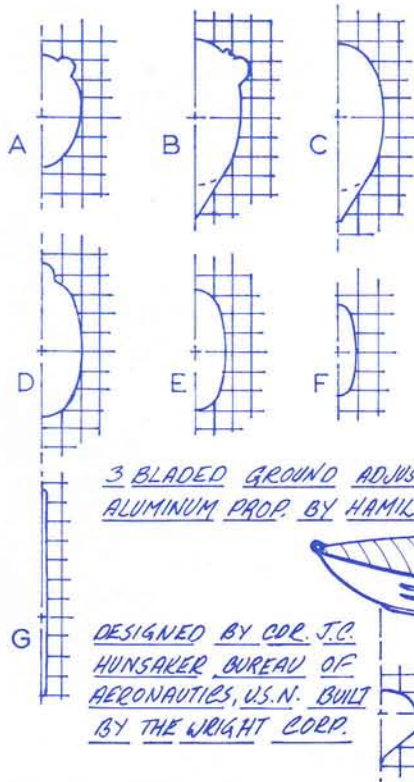
TYPICAL M-80 AIRFOIL SECTION

POWERPLANT: WRIGHT T-2, V-12, 1947 CU. IN, WATER COOLED, 650 HORSEPOWER.



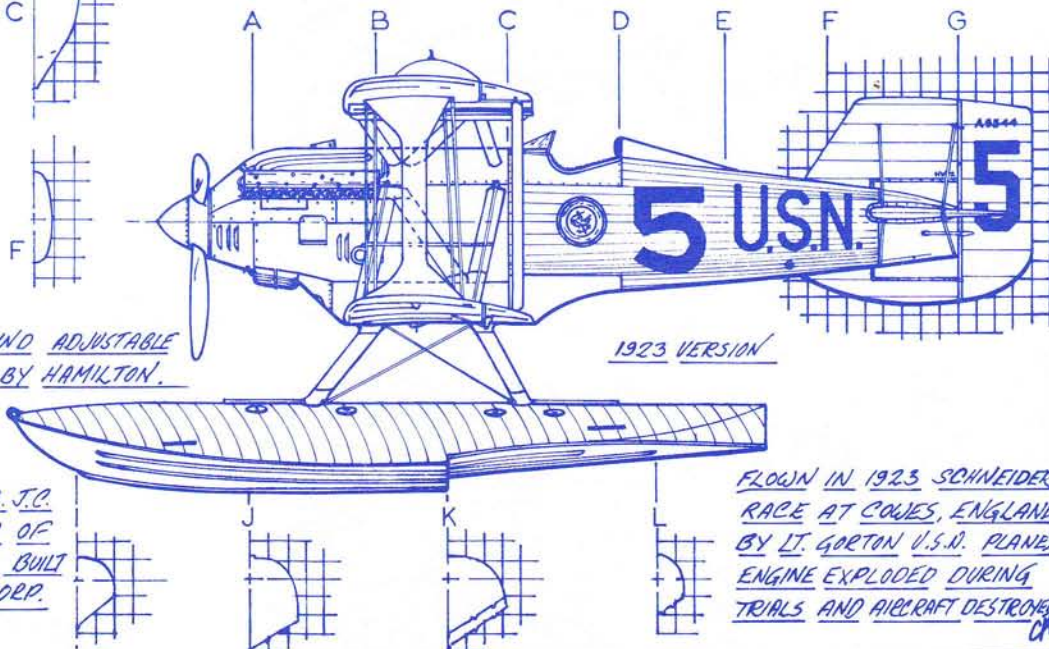
NAVY-WRIGHT NW-2

COLOR SCHEME: WINGS & TAIL WERE SILVER EXCEPT WHITE RUDDER. FUSELAGE, FLOATS & STRUTS MEDIUM GRAY. MARKINGS WERE BLACK.



3 BLADED GROUND ADJUSTABLE ALUMINUM PROP. BY HAMILTON.

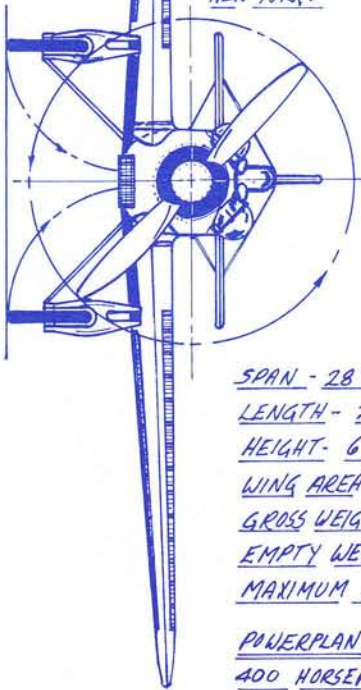
DESIGNED BY CAPT. J.C. HUNSAKER, BUREAU OF AERONAUTICS, U.S.N. BUILT BY THE WRIGHT CORP.



FLOWN IN 1923 SCHNEIDER RACE AT COWES, ENGLAND BY LT. GORTON U.S.N. PLANE'S ENGINE EXPLODED DURING TRIALS AND AIRCRAFT DESTROYED.

THIS AIRCRAFT WAS DESIGNED AS  
PULITZER CONTENDER FOR THE U.S.  
NAVY BY BOOTH & THURSTON, FORMER  
CURTISS ENGINEERS. 2 PLANES  
WERE BUILT BY THE AERIAL ENG-  
INEERING CORP. OF HAMMONDSPORT,  
NEW YORK.

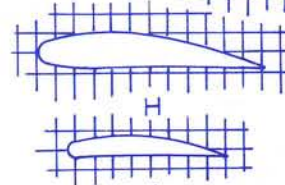
FUSELAGE CONSTRUCTION: WELDED STEEL  
TUBE FRAMEWORK WITH WOOD FORMERS  
& STRINGERS FOR TURTLE DECK. ALUMINUM  
SHEET COWL & FROM COCKPIT FORWARD;  
FABRIC COVERING AFT ON TURTLE DECK,  
PLYWOOD SIDES.  
WING CONSTRUCTION: PLYWOOD COVERED WOOD  
SPARS & RIBS. BRASS SHEET RADIATORS  
TAIL CONSTRUCTION: WELDED  
STEEL TUBE, FABRIC COVER.



SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 28' 1"  
LENGTH - 21' 1 1/4"  
HEIGHT - 6' 4 1/2"  
WING AREA - 104 FT<sup>2</sup>  
GROSS WEIGHT - 2020 LBS.  
EMPTY WEIGHT - 1635 LBS.  
MAXIMUM SPEED - 213 MPH.  
POWERPLANT: WRIGHT H-3  
400 HORSEPOWER.

$\frac{3''}{32}$  SQUARES

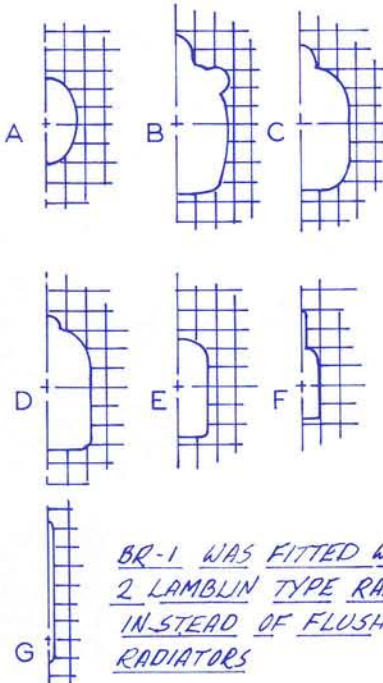


GÖTTINGEN 387 AIRFOIL SECTIONS

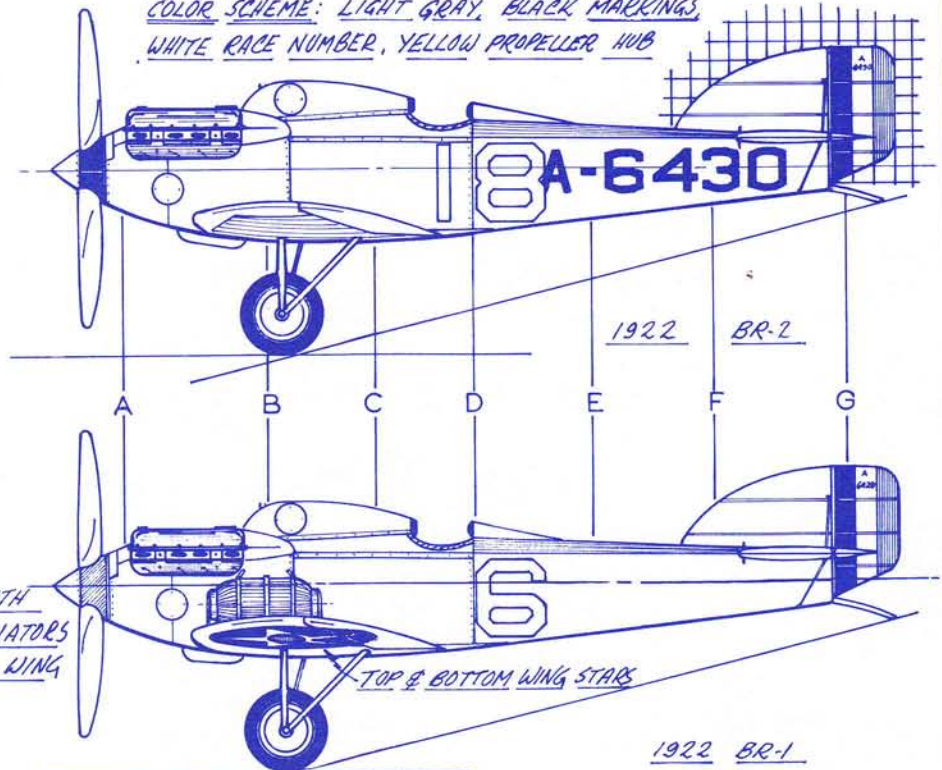


NAVY BEE LINE BR-1  
 & BR-2

COLOR SCHEME: LIGHT GRAY, BLACK MARKINGS,  
WHITE RACE NUMBER, YELLOW PROPELLER HUB



BR-1 WAS FITTED WITH  
2 LAMBUN TYPE RADIATORS  
INSTEAD OF FLUSH WING  
RADIATORS



1922 BR-1

LT. RITTENHOUSE U.S.N. WAS PILOT OF BR-2, LT. CALLAWAY WAS PILOT OF BR-1. DUE TO MECHANICAL TROUBLES  
NEITHER CRAFT RACED.

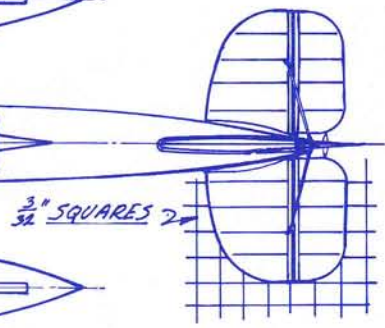
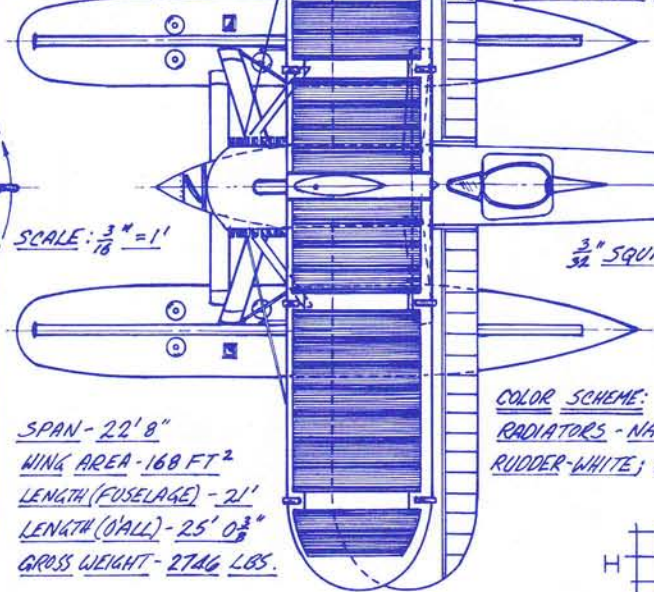
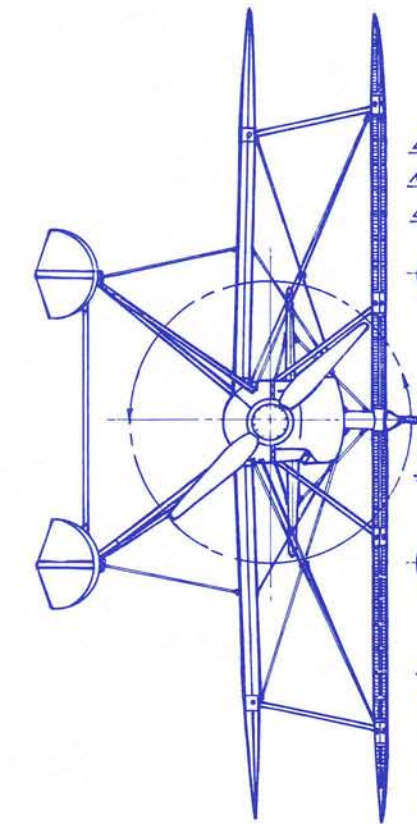
FUSELAGE CONSTR: ALUMINUM COWL,  
 PLYWOOD SHELL OVER WOOD FRAME  
WING CONSTR: WOODEN RIBS ON 2  
 SPRUCE SPARS. PLYWOOD & FABRIC COVERING  
TAIL CONSTR: FABRIC COVERED WOOD  
 FRAMEWORK WITH METAL FITTINGS.  
FLOAT CONSTR: ALL WOOD KEEL, CHINES,  
 FRAMES COVERED WITH PLYWOOD STRIP  
 LAMINATIONS. METAL FUEL TANKS WERE  
 CONTAINED IN FLOATS.

DETAIL ABOVE SHOWS  
 RED, WHITE, & BLUE STAR  
 LOCATION ON LOWER WINGS.

SCALE:  $\frac{3}{16}'' = 1'$

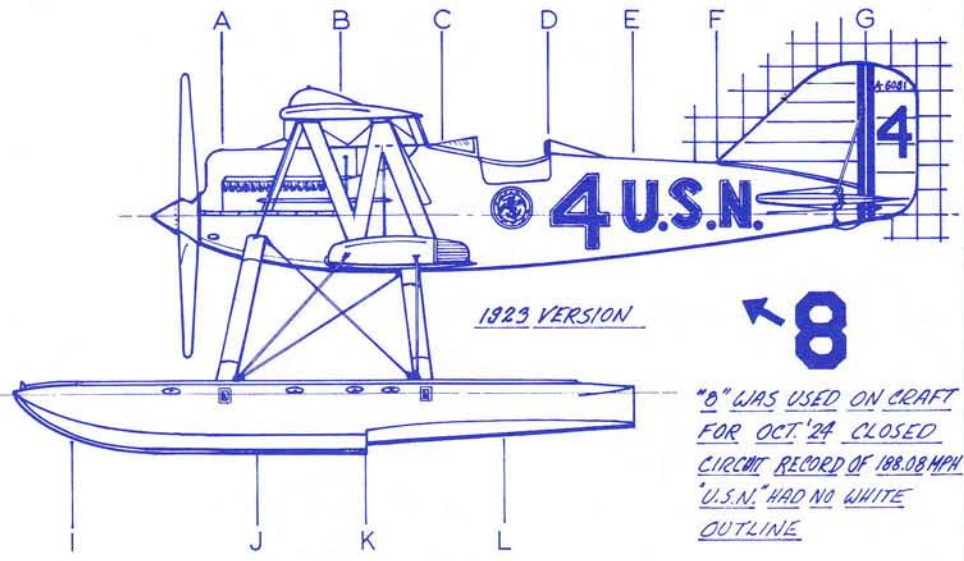
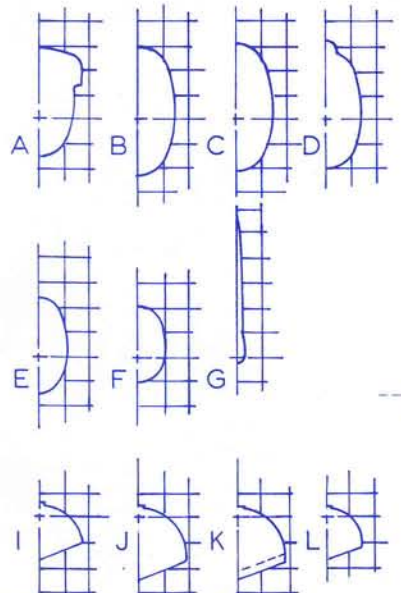
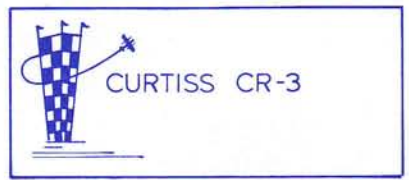
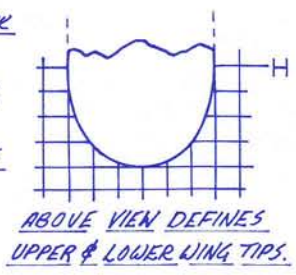
COLOR SCHEME: ALL NAVY GRAY EXCEPT:  
 RADIATORS - NATURAL BRASS; FIN - YELLOW;  
 RUDDER - WHITE; NUMERALS - WHITE EDGE BLACK.

SPAN - 22' 8"  
 WING AREA - 168 FT<sup>2</sup>  
 LENGTH (FUSELAGE) - 21'  
 LENGTH (OALL) - 25' 0 $\frac{3}{8}$ "  
 GROSS WEIGHT - 2746 LBS.



POWERPLANT: CURTISS D-12 12 CYLINDER "VEE" BLOCK  
 ENGINE DELIVERING 465 HORSEPOWER.

PROPELLER: CURTISS-REED ALL METAL FIXED PITCH.  
 NOTE: DUE TO INCREASED H.P. OF CURTISS D-12 ENGINE  
 ADDITIONAL WING RADIATORS WERE ADDED TO WING TIPS  
 OUTSIDE OF 'N' STRUTS OVER & ABOVE THOSE ON CR-2.

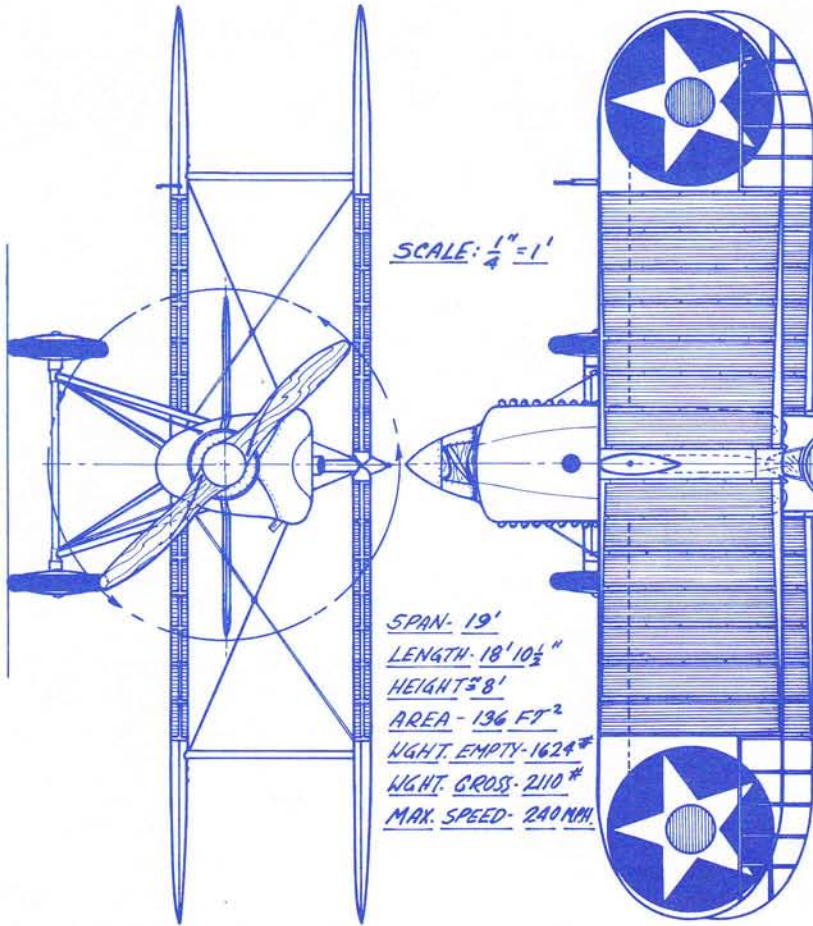


"8" WAS USED ON CRAFT  
 FOR OCT. '24 CLOSED  
 CIRCUIT RECORD OF 188.08 MPH  
 "U.S.N." HAD NO WHITE  
 OUTLINE

ABOVE PLANE WAS CR-1 IN 1921, MODIFIED TO CR-2 IN 1922, AND STILL FURTHER MODIFIED WITH FLOATS IN 1923.  
 FLOWN BY LT. DAVID RITTENHOUSE A-6081 WON 1923 SCHNEIDER TROPHY AT COWES, U.K. AT 177.38 MPH, TOP SPEED - 190 MPH.



FUSELAGE CONSTRUCTION: BUILT-UP WOODEN FRAMEWORK COVERED WITH PLYWOOD. ENGINE COWL WAS ALUMINUM.  
WING CONSTRUCTION: 2 WOODEN SPARS, WOOD RIBS - COVERED WITH PLYWOOD. BRASS RADIATORS MOUNTED ON TOP AND UNDER SURFACES - BOTH WINGS.  
FIN & STABILIZER CONSTRUCTION: WOOD FRAMEWORK - PLYWOOD COVERED.  
RUDDER, ELEVATOR & AILERON CONSTR: METAL FRAMEWORK; FABRIC COVERED.  
POWERPLANT:  
460 H.P. CURTISS D-12

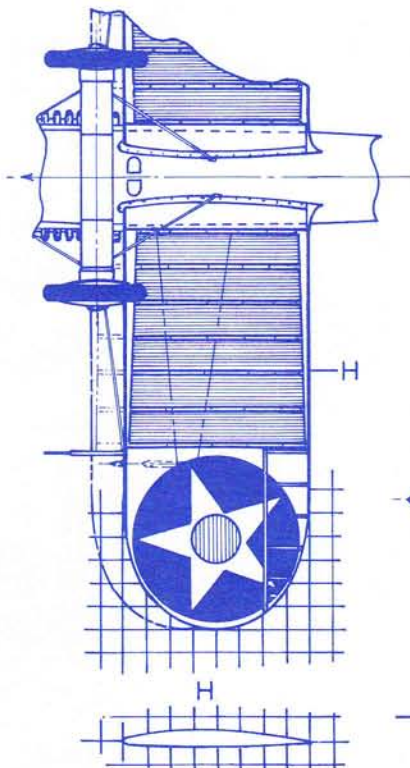


SPAN - 19'  
 LENGTH - 18' 10 1/2"  
 HEIGHT - 8'  
 AREA - 136 FT<sup>2</sup>  
 WGT. EMPTY - 1624#  
 WGT. GROSS - 2110#  
 MAX. SPEED - 240 MPH.

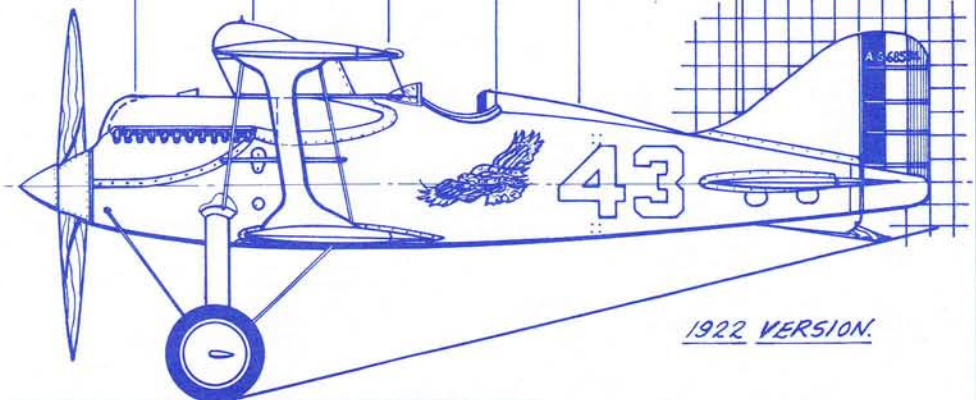
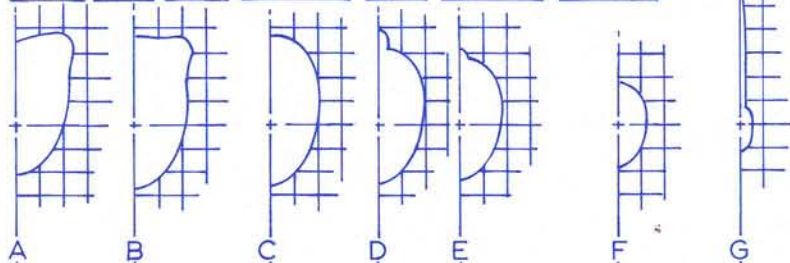
1/8" SQUARES  
 #43 WAS WHITE  
 SERIAL NO. WAS BLACK  
 EAGLE WAS BROWN & WHITE  
 WITH WHITE BANNER.



VIEW BELOW SHOWING LOWER WING UNDERSIDE. TIP DETAIL: UPPER WING ALSO.



COLOR SCHEME: RUDDER BOTTOM, FIN, FUSELAGE, STABILIZER "I" STRUTS & LANDING GEAR WERE BLACK; WING TIPS & ELEVATORS WERE GOLD. RADIATORS WERE NATURAL BRASS.



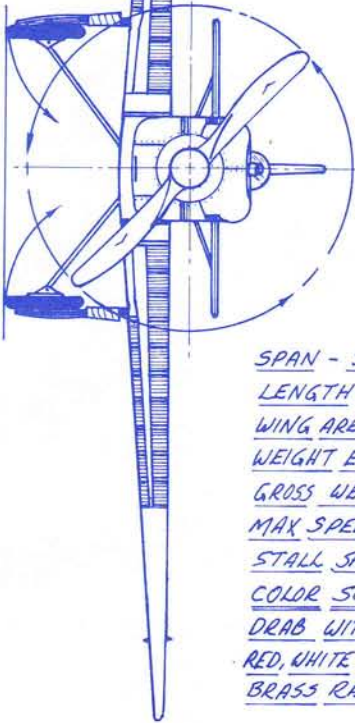
1922 VERSION.

TYPICAL CURTISS C-27 AIRFOIL - BOTH WINGS.

CRAFT WON 1922 PULITZER @ 205.8 MPH. FLOWN BY LT. RUSSELL L. MAUGHAN. IN 1923 MAUGHAN SET WORLD SPEED RECORD WITH CRAFT.

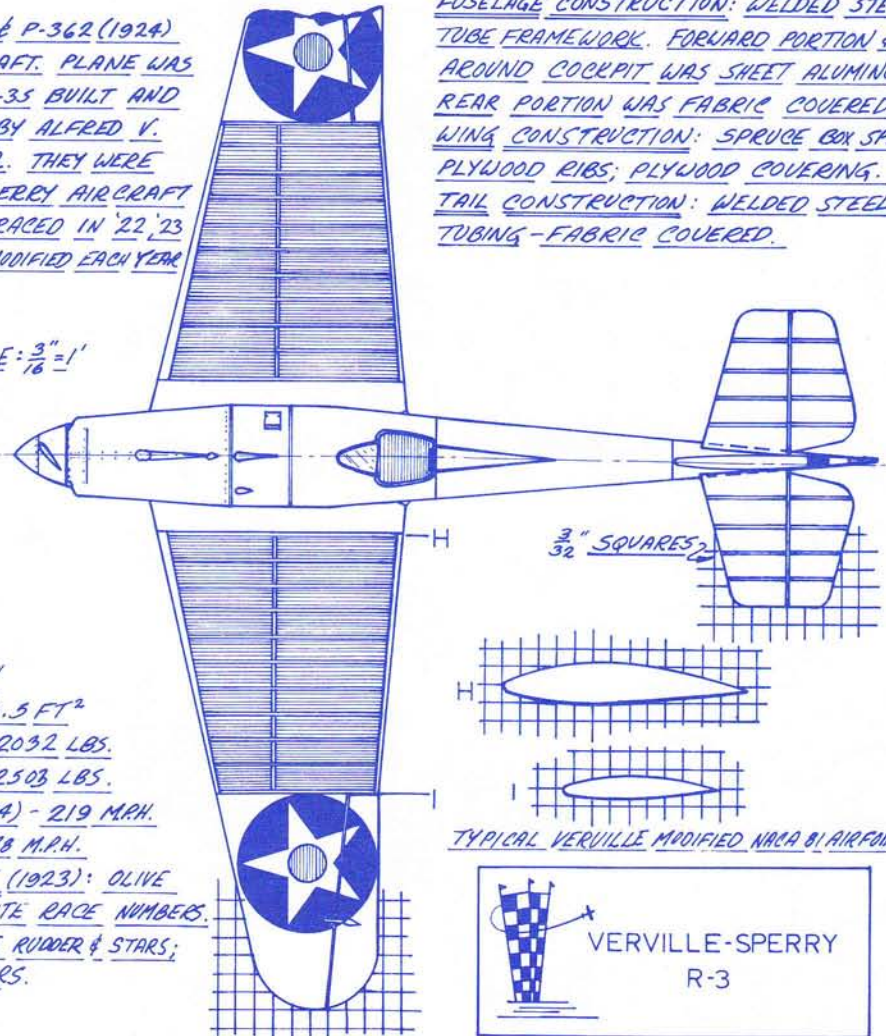
A.S. 22-328 (1923) & P-362 (1924)  
 ARE SAME AIRCRAFT. PLANE WAS  
 ONE OF THREE R-3S BUILT AND  
 WERE DESIGNED BY ALFRED V.  
 VERVILLE IN 1922. THEY WERE  
 BUILT BY THE SPERRY AIRCRAFT  
 CORP IN 1922, RACED IN '22, '23  
 & '24 PULITZER; MODIFIED EACH YEAR

FUSELAGE CONSTRUCTION: WELDED STEEL  
 TUBE FRAMEWORK. FORWARD PORTION &  
 AROUND COCKPIT WAS SHEET ALUMINUM.  
 REAR PORTION WAS FABRIC COVERED.  
 WING CONSTRUCTION: SPRUCE BOX SPARS,  
 PLYWOOD RIBS; PLYWOOD COVERING.  
 TAIL CONSTRUCTION: WELDED STEEL  
 TUBING - FABRIC COVERED.

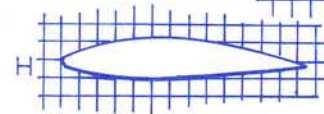


SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 30'6"  
 LENGTH - 23'6"  
 WING AREA - 146.5 FT<sup>2</sup>  
 WEIGHT EMPTY - 2032 LBS.  
 GROSS WEIGHT - 2503 LBS.  
 MAX SPEED (1924) - 219 M.P.H.  
 STALL SPEED - 78 M.P.H.  
 COLOR SCHEME (1923): OLIVE  
 DRAB WITH WHITE RACE NUMBERS,  
 RED, WHITE & BLUE RUDDER & STARS;  
 BRASS RADIATORS.



$\frac{3}{32}''$  SQUARES

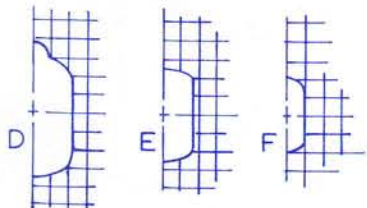
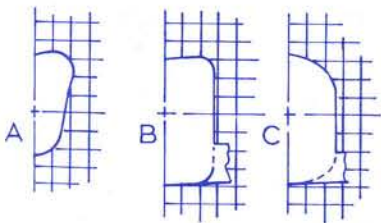


TYPICAL VERVILLE MODIFIED NACA 81 AIRFOIL

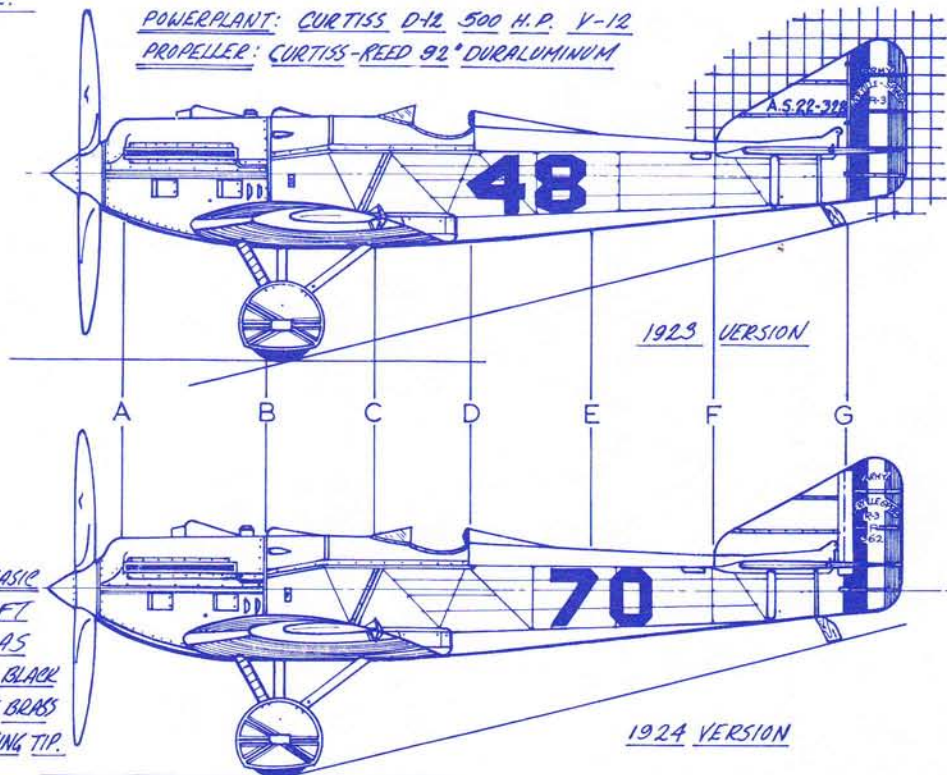


NOTE RETRACTABLE LANDING GEAR.

POWERPLANT: CURTISS D-12 500 H.P. V-12  
 PROPELLER: CURTISS-REED 92" DURALUMINUM



COLOR SCHEME (1924): BASIC  
 COLOR OF ENTIRE AIRCRAFT  
 WAS SILVER - RUDDER WAS  
 RED, WHITE, & BLUE WITH BLACK  
 LETTERING; RADIATORS WERE BRASS  
 '70' WAS ALSO UNDER LEFT WING TIP.

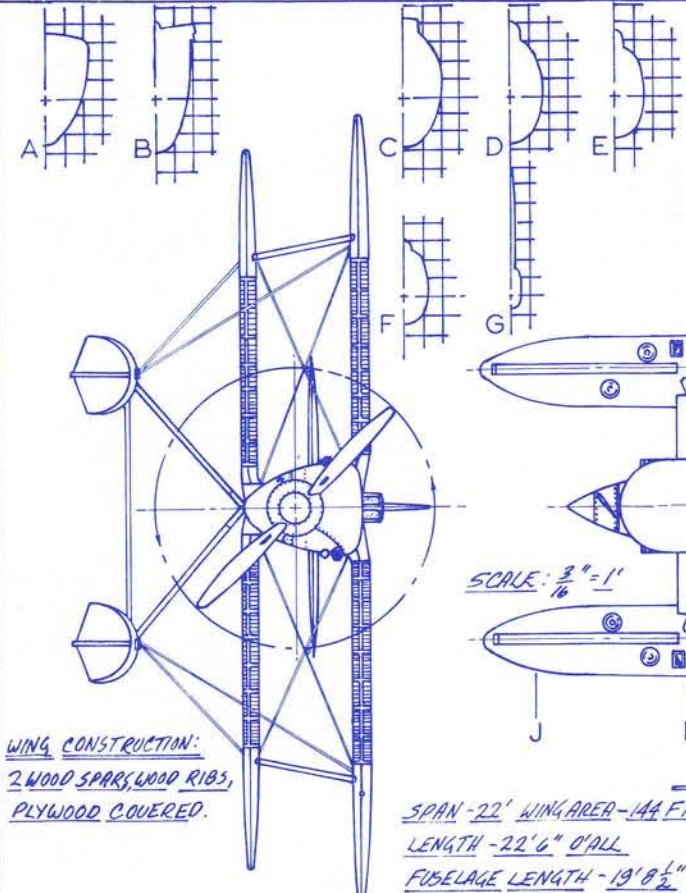


1923 VERSION

1924 VERSION

1924 VERSION WON PULITZER RACE FLOWN BY LT. H.H. MILLS AT 215.72 M.P.H. AT DAYTON, OHIO OCTOBER 4TH.

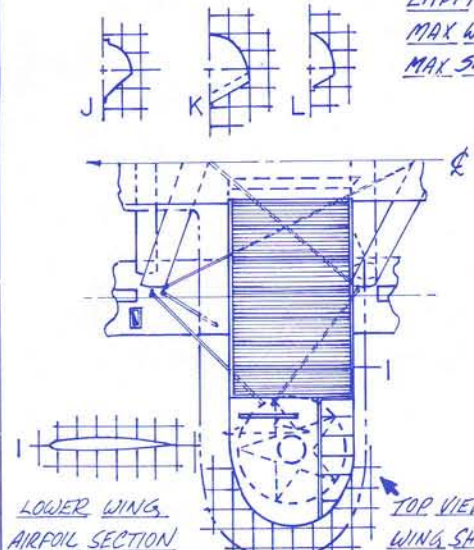
FUSELAGE CONSTRUCTION: WELDED STEEL TUBE INNER FRAME WITH CROSS LAMINATED VENEER STRIP COVERING. ALUMINUM COWLING.  
TAIL CONSTRUCTION: FIN & STABILIZER WERE SPRUCE FRAMEWORK WITH VENEER STRIP COVERING. RUDDER & ELEVATOR WERE WELDED STEEL TUBE FRAME FABRIC COVERED.  
FLOAT CONSTRUCTION: ALL WOOD FRAMES, KEEL & CHINES WITH CROSS LAMINATED VENEER COVERING.



WING CONSTRUCTION:  
 2 WOOD SPARS, WOOD RIBS,  
 PLYWOOD COVERED.

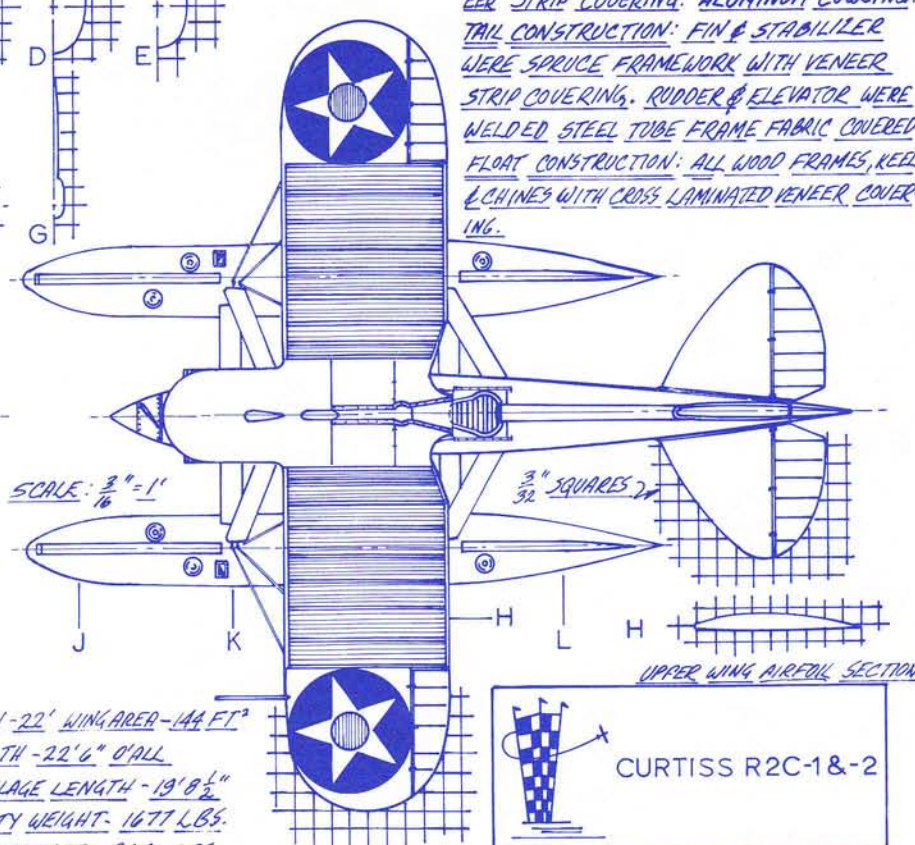
SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 22' WING AREA - 144 FT<sup>2</sup>  
 LENGTH - 22' 6" O'ALL  
 FUSELAGE LENGTH - 19' 8 1/2"  
 EMPTY WEIGHT - 1677 LBS.  
 MAX WEIGHT - 2150 LBS.  
 MAX SPEED - 266 M.P.H.



LOWER WING AIRFOIL SECTION

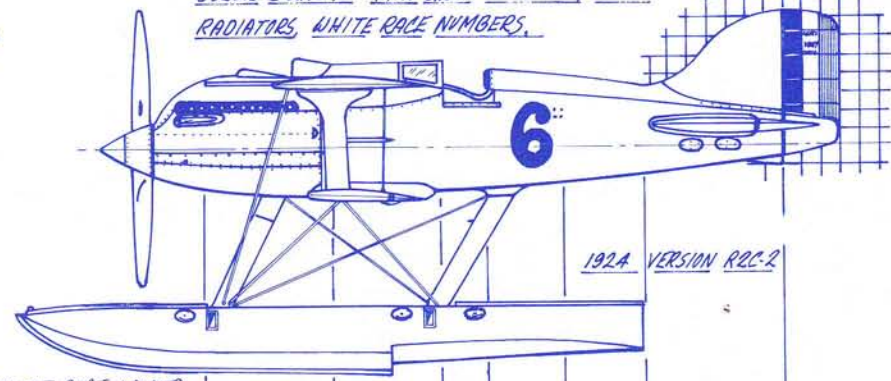
TOP VIEW OF PORT LOWER WING, SHOWING FLOAT RIGGING.



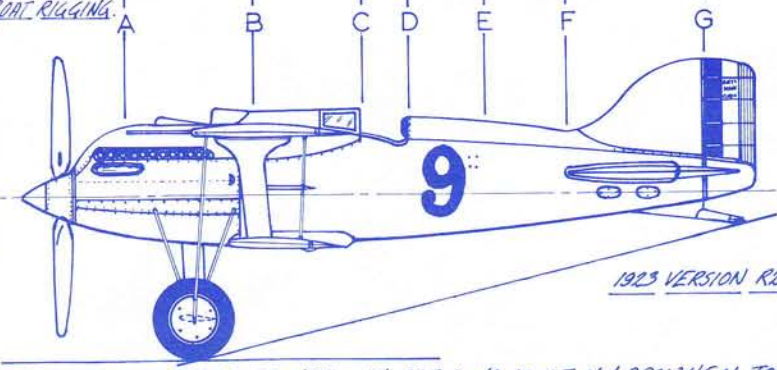
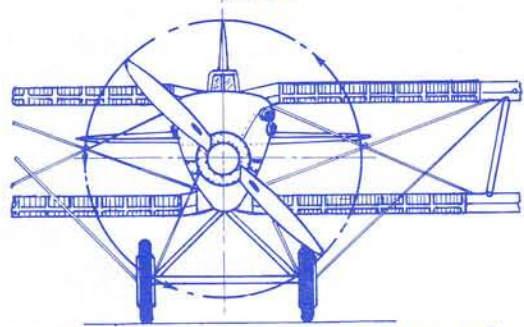
UPPER WING AIRFOIL SECTION



POWERPLANT - CURTISS D-12A, 488 HORSEPOWER.  
 COLOR SCHEME: NAVY GRAY OVERALL, BRASS RADIATORS, WHITE RACE NUMBERS.



1924 VERSION R2C-2



1923 VERSION R2C-1

LT. ALFORD WILLIAMS U.S.N. WON 1923 PULITZER TROPHY RACE @ 243.67 M.P.H. IN R2C-1 NO 10 LT. H.J. BROWN U.S.N. TOOK 2ND IN SAME RACE @ 241.70 M.P.H. RACE WAS 4 LAPS - 124.28 MILES HELD @ ST. LOUIS MO. IN 1924 THE TWO CRAFT WERE FITTED WITH FLOATS FOR THE SCHNEIDER RACE WHICH WAS CANCELLED. LATER WERE USED FOR PRACTICE.

COLOR SCHEME: FUSELAGE & SPINNER WERE BRIGHT RED. WINGS, TAIL SURFACES, WING STRUTS & LANDING GEAR WERE WHITE, WING RADIATORS WERE NATURAL BRASS. #8 & #7 WERE WHITE, LETTERING ON RED, WHITE & BLUE RUDDER WAS BLACK. U.S.N. Buz. Aero. EMBLEM WAS BLUE & GOLD.

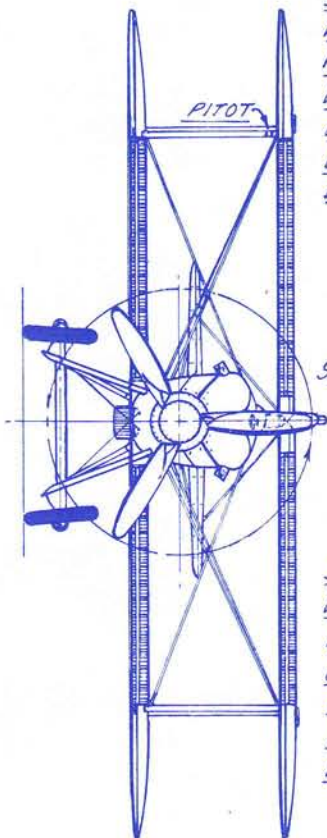
WING CONSTRUCTION: WOOD SPARS & RIBS COVERED WITH PLYWOOD. ALERONS WERE METAL FRAMES - FABRIC COVERED.

FUSELAGE CONSTRUCTION: MONOCOQUE MOLDED PLYWOOD. ENGINE COUL WAS ALUMINUM.

ELEVATOR & RUDDER CONSTRUCTION: WELDED STEEL TUBING - FABRIC COVERED.

FIN & STABILIZER CONSTRUCTION: SPRUCE FRAME COVERED WITH MANOGANY PLYWOOD.

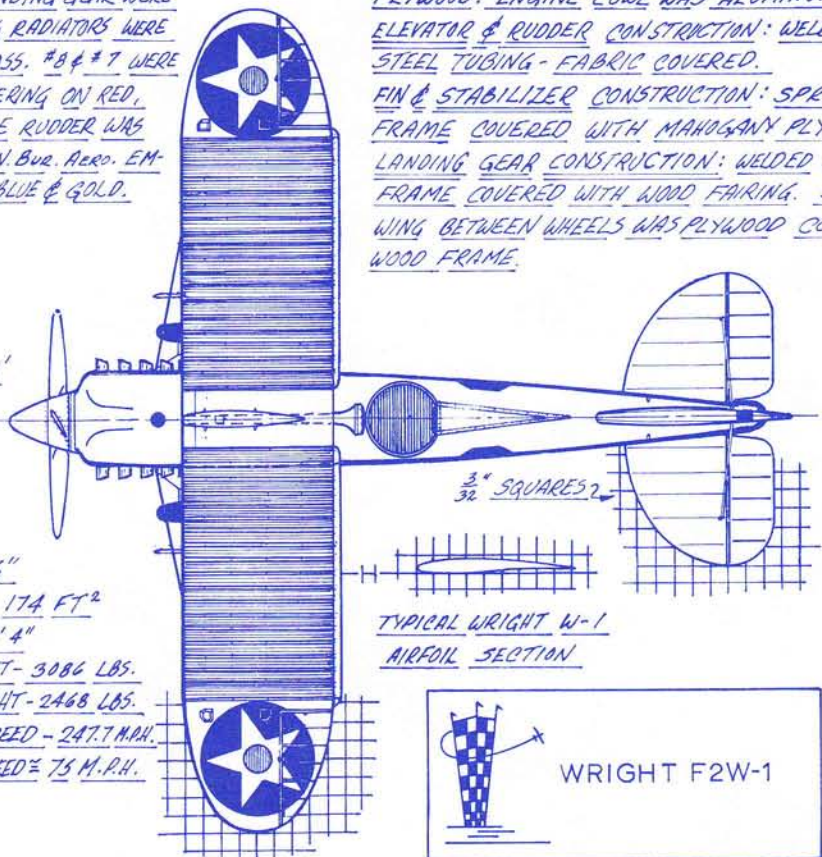
LANDING GEAR CONSTRUCTION: WELDED STEEL FRAME COVERED WITH WOOD FAIRING. SUB WING BETWEEN WHEELS WAS PLYWOOD COVERED WOOD FRAME.



PITOT

SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 22' 6"  
WING AREA - 174 FT<sup>2</sup>  
LENGTH - 21' 4"  
GROSS WEIGHT - 3086 LBS.  
EMPTY WEIGHT - 2468 LBS.  
MAXIMUM SPEED - 247.7 M.P.H.  
LANDING SPEED - 75 M.P.H.



$\frac{3}{32}''$  SQUARES

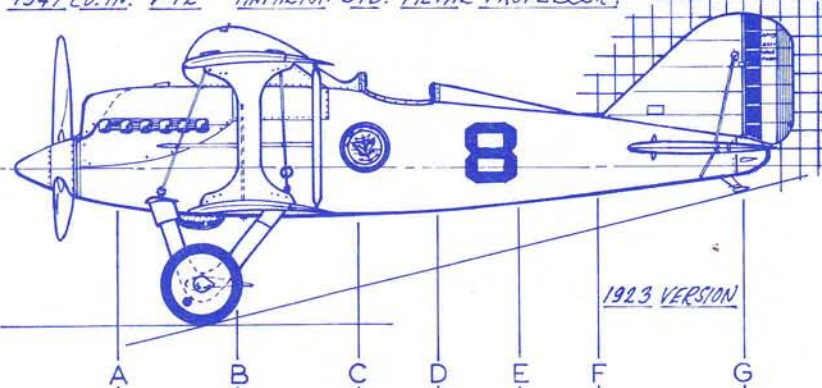
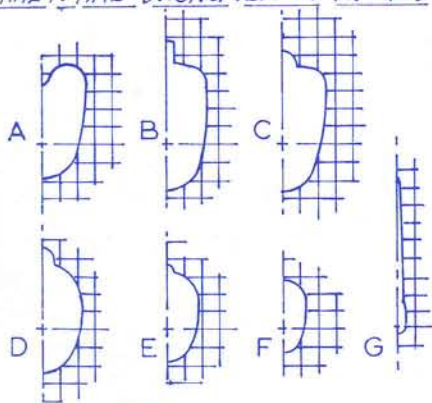
TYPICAL WRIGHT W-1 AIRFOIL SECTION



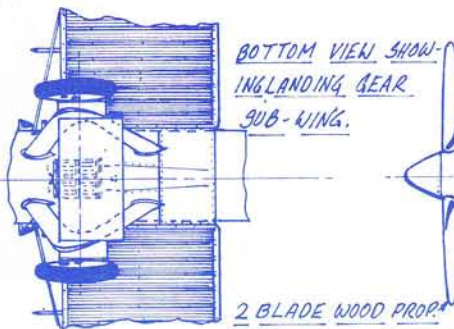
WRIGHT F2W-1

NOTE: 3 & 2 BLADE PROPELLERS WERE INTERCHANGED ON THESE PLANES FROM TIME TO TIME DURING TESTING PROGRAMS.

POWERPLANT: WRIGHT T-3 (S/N 6372 ON #8) 750 H.P. 1947 CU. IN. V-12 HAMILTON STD. METAL PROPELLER.

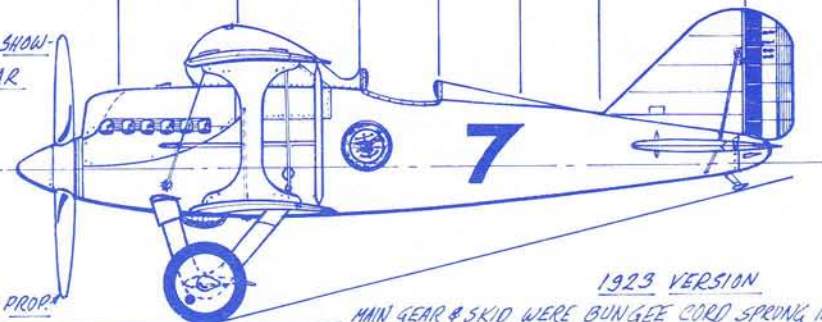


1923 VERSION



BOTTOM VIEW SHOWING LANDING GEAR SUB-WING.

2 BLADE WOOD PROP.



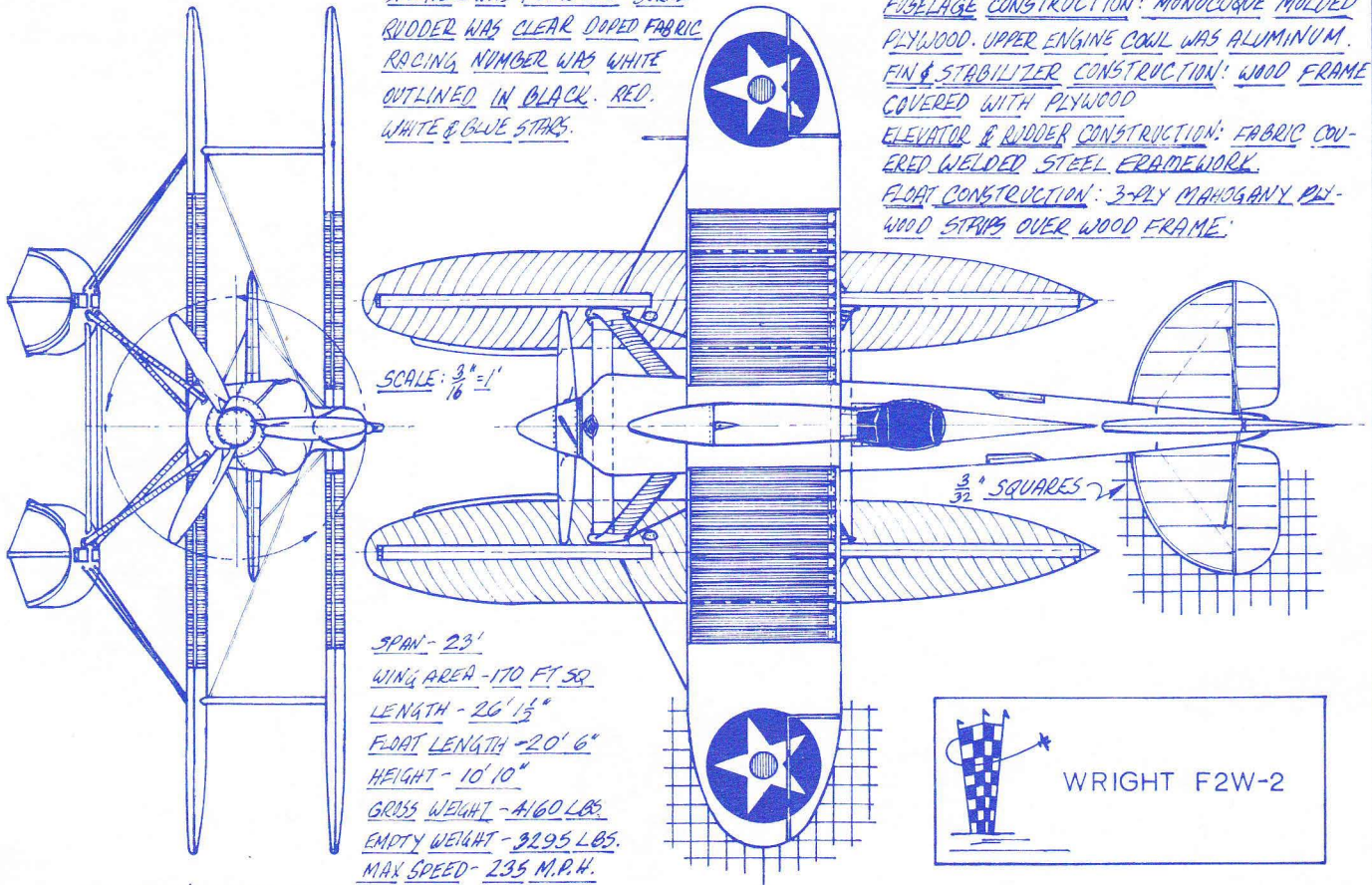
1923 VERSION

MAIN GEAR & SKID WERE BUNGEE CORD SPRUNG INTERNALLY

#8 WAS FLOWN IN 1923 PULITZER TROPHY RACE TO 3RD PLACE BY USMC LT. L.H. SANDERSON. #7 WAS FLOWN TO 4TH PLACE IN SAME RACE BY NAVY LT. S.W. CALLAWAY. RACE WAS 4 LAPS COVERING 124.28 MILES AND HELD AT ST. LOUIS, MO. CK

COLOR SCHEME: AIRCRAFT WAS MEDIUM BLUE THROUGH-OUT. SPINNER WAS POLISHED DURAL. RUDDER WAS CLEAR DOPED FABRIC. RACING NUMBER WAS WHITE OUTLINED IN BLACK. RED, WHITE & BLUE STARS.

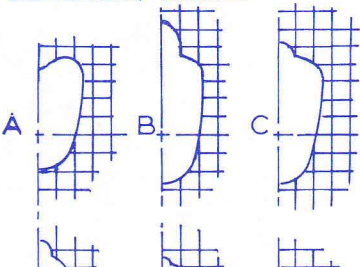
WING CONSTRUCTION: WOOD SPARS & RIBS COVERED WITH PLYWOOD. ALERONS CONTROLLED BY TORQUE TUBES & BELL CRANKS THROUGH INTERPLANE STRUTS.  
FUSELAGE CONSTRUCTION: MONOCOQUE MOLDED PLYWOOD. UPPER ENGINE COIL WAS ALUMINUM.  
FIN & STABILIZER CONSTRUCTION: WOOD FRAME COVERED WITH PLYWOOD.  
ELEVATOR & RUDDER CONSTRUCTION: FABRIC COVERED WELDED STEEL FRAMEWORK.  
FLOAT CONSTRUCTION: 3-PLY MAHOGANY PLYWOOD STRIPS OVER WOOD FRAME.



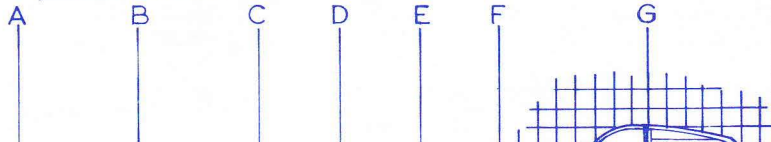
SPAN - 23'  
 WING AREA - 170 FT SQ  
 LENGTH - 26' 1 1/2"  
 FLOAT LENGTH - 20' 6"  
 HEIGHT - 10' 10"  
 GROSS WEIGHT - 4160 LBS.  
 EMPTY WEIGHT - 3295 LBS.  
 MAX SPEED - 235 M.P.H.



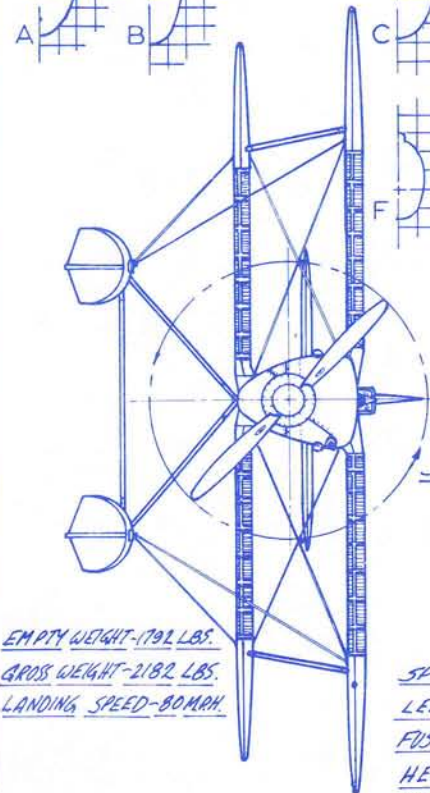
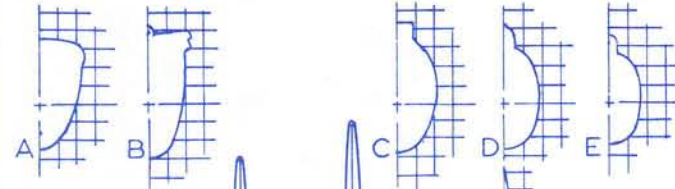
ALL FLYING WIRES WERE STREAMLINE SECTION.



TYPICAL NAVY N-9 AIRFOIL SECTION

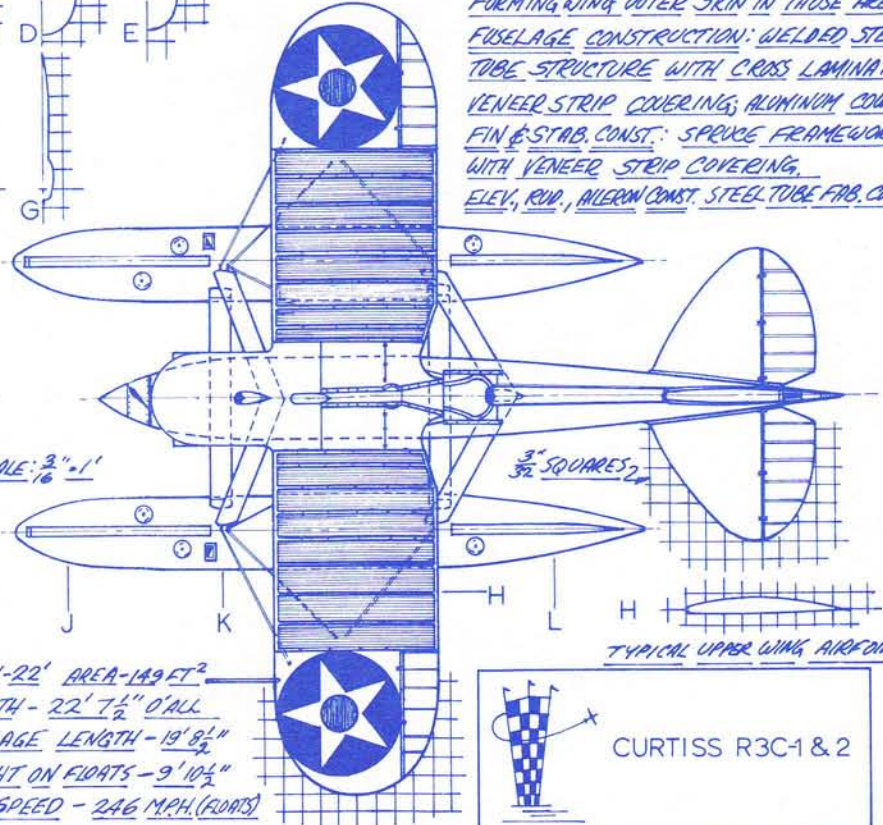


POWERPLANT: WRIGHT T-3 750 H.P. 1917 G.V.I.N. V-12 - WATER COOLED. ALL METAL HAMILTON GROUND ADJUSTABLE PROPELLER - 3 BLADED



EMPTY WEIGHT-1792 LBS.  
GROSS WEIGHT-2182 LBS.  
LANDING SPEED-80 MPH

SCALE: 3/8" = 1'



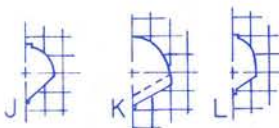
SPAN-22' AREA-149 FT<sup>2</sup>  
LENGTH-22' 7 1/2" O'ALL  
FUSELAGE LENGTH-19' 8 1/2"  
HEIGHT ON FLOATS-9' 10 1/2"  
MAX SPEED-246 MPH (FLOATS)

WING CONSTRUCTION: SPRUCE RIBS AND SPARS COVERED WITH PLYWOOD & FABRIC. BRASS RADIATOR LAID ON TOP OF THIS FORMING WING OUTER SKIN IN THOSE AREAS.  
FUSELAGE CONSTRUCTION: WELDED STEEL TUBE STRUCTURE WITH CROSS LAMINATED VENEER STRIP COVERING; ALUMINUM COILING.  
FIN & STAB. CONST.: SPRUCE FRAMEWORK WITH VENEER STRIP COVERING.  
ELEV., RUD., ALERON CONST. STEEL TUBE FAB. COVER.

TYPICAL UPPER WING AIRFOIL

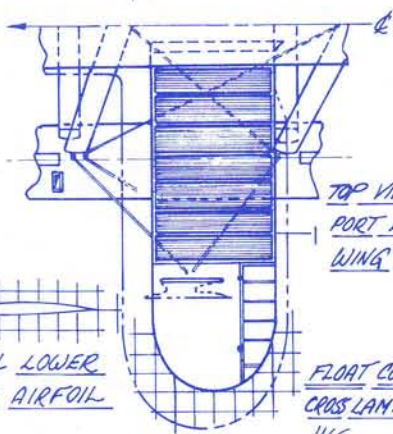


CURTISS R3C-1 & 2



POWERPLANT: CURTISS V-1400 V-12  
RATED @ 619 H.P. @ 2450 R.P.M.

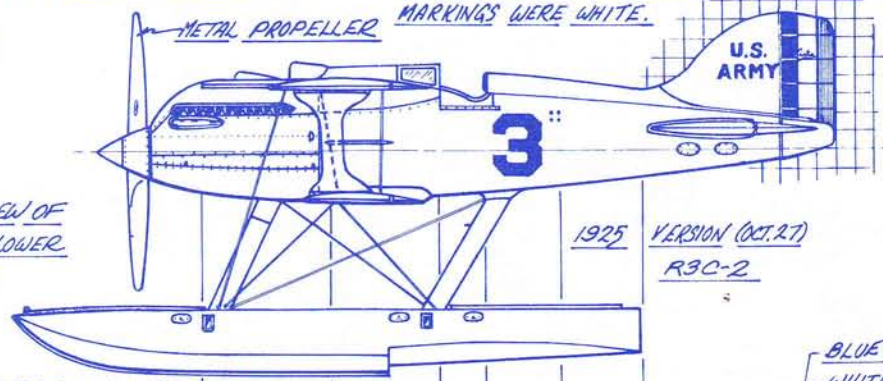
COLOR SCHEME: FUSELAGE & TAIL- BLUE-BLACK;  
WINGS-CHROME YELLOW; WING RADIATORS-BRASS;  
MARKINGS WERE WHITE.



TOP VIEW OF PORT LOWER WING

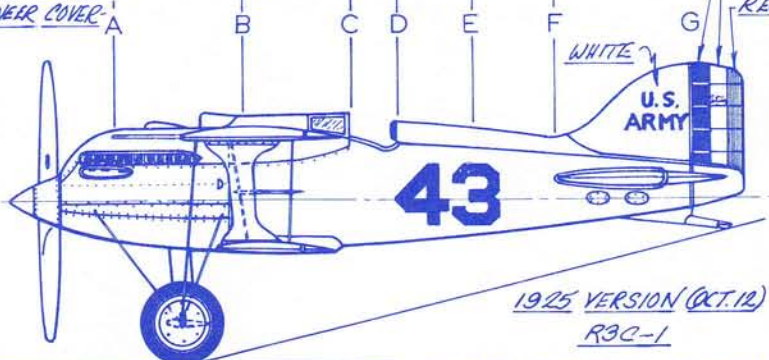
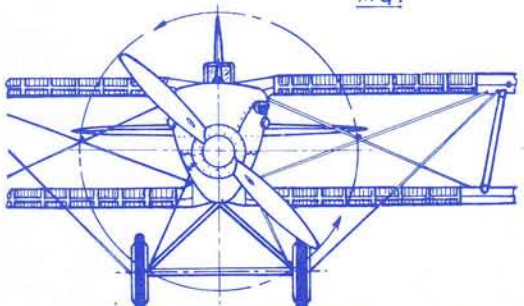
TYPICAL LOWER WING AIRFOIL

FLOAT CONST. ALL WOOD FRAMES;  
CROSS LAMINATED VENEER COVERING.



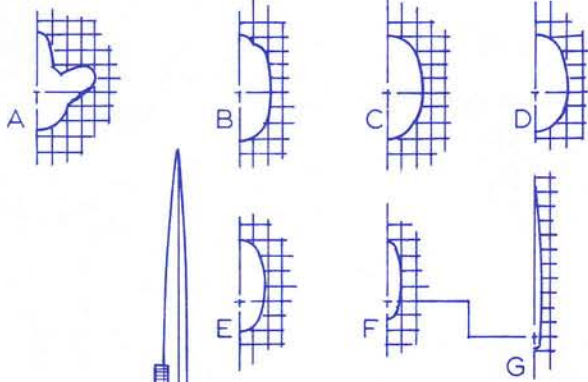
1925 VERSION (OCT. 27)  
R3C-2

BLUE  
WHITE  
RED



1925 VERSION (OCT. 12)  
R3C-1

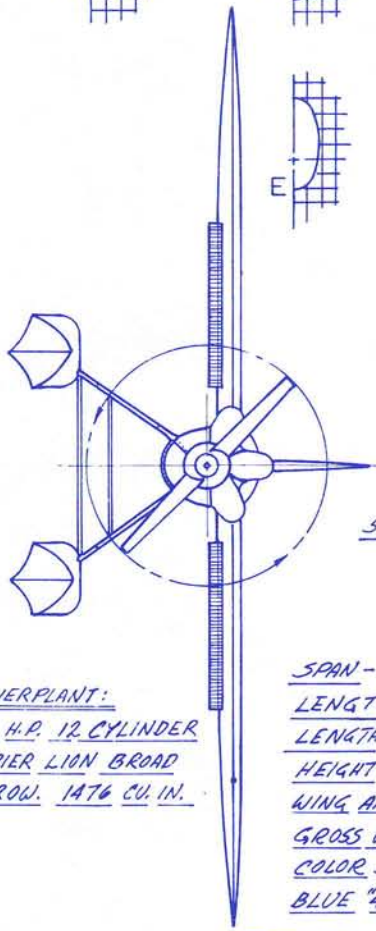
THE LAST OF FOUR R3Cs BUILT (1 FOR STATIC TESTING, 2 FOR THE NAVY, AND THE ABOVE FOR THE ARMY) THIS AIRCRAFT FITTED WITH WHEELS WON THE 1925 PULITZER RACE AT 248.99 MPH. IT WAS FLOWN BY LT. CYRUS BETTIS USARS. TWO WEEKS LATER LT. JIMMY DOOLITTLE WON THE 1925 SCHNEIDER CUP RACE WITH SAME PLANE ON FLOATS AT 232.573 MPH.



WING CONSTRUCTION: 2 SPRUCE SPARS WITH PLYWOOD RIBS. SEVERAL SPAN-WISE STRINGER WERE SET IN NOTCHES IN THE RIBS. THE WHOLE WOODEN FRAMEWORK COVERED TOP & BOTTOM WITH PLYWOOD WHICH BECAME THICKER FROM TIP TO CENTER.

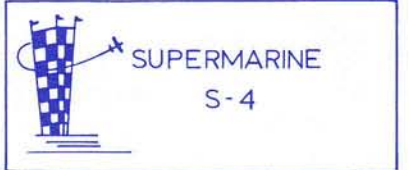
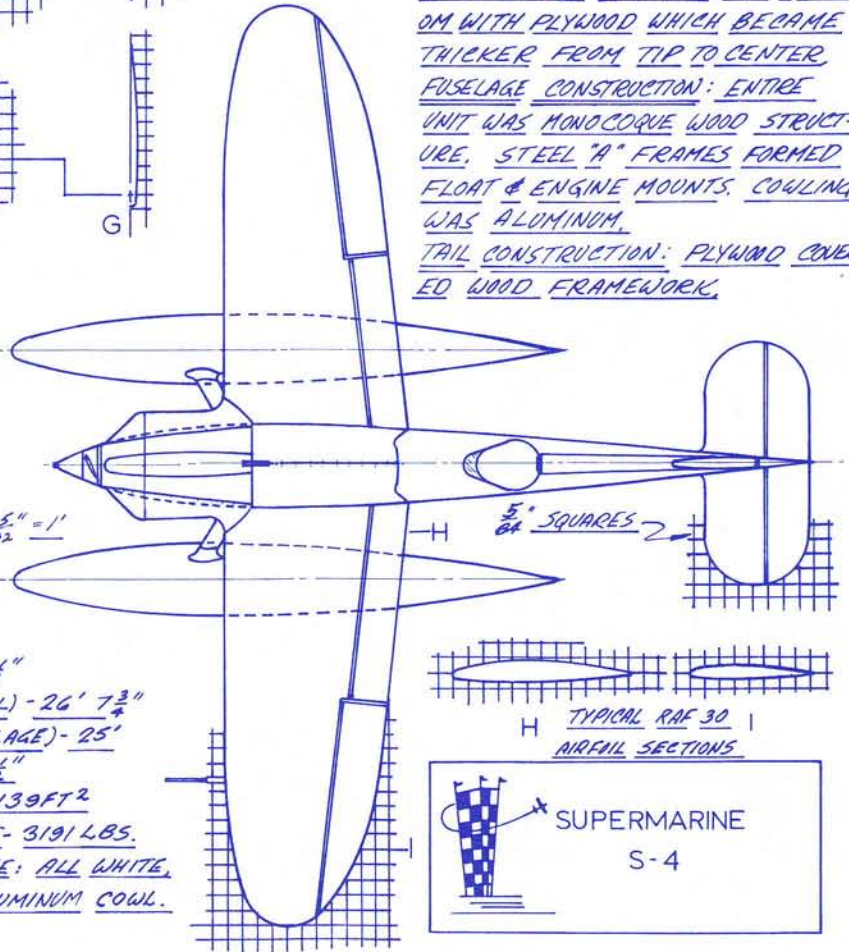
FUSELAGE CONSTRUCTION: ENTIRE UNIT WAS MONOCOQUE WOOD STRUCTURE. STEEL "A" FRAMES FORMED FLOAT & ENGINE MOUNTS. COWLING WAS ALUMINUM.

TAIL CONSTRUCTION: PLYWOOD COVERED WOOD FRAMEWORK.

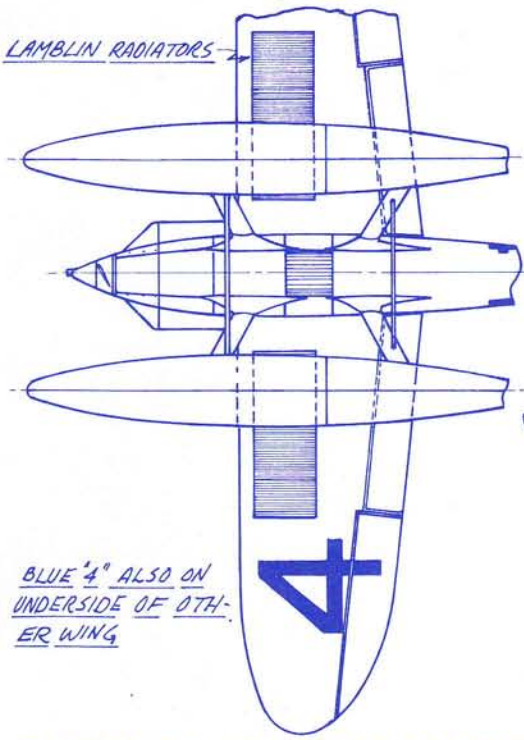


POWERPLANT:  
700 H.P. 12 CYLINDER  
NAPIER LION BROAD  
ARROW. 1476 CU. IN.

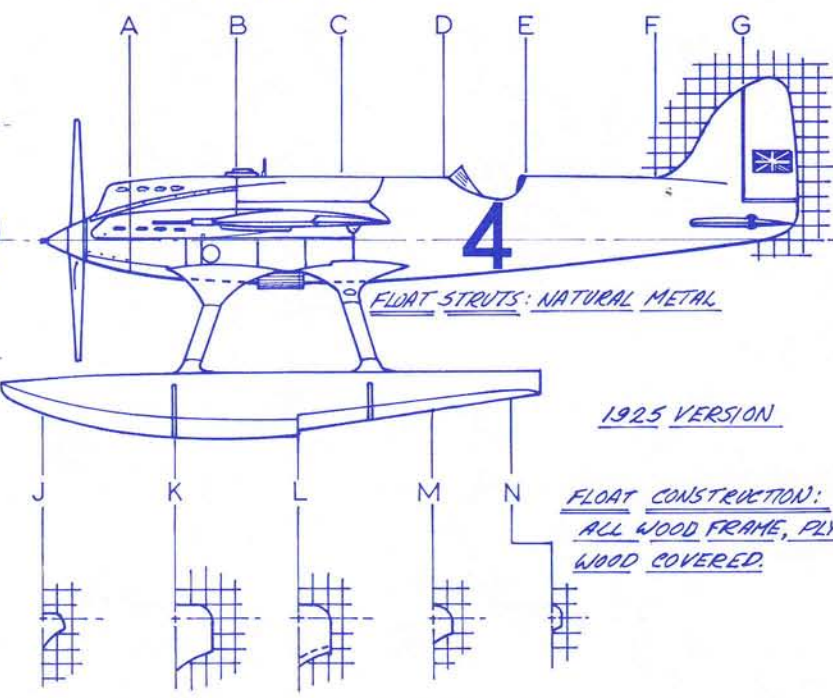
SCALE:  $\frac{5}{32}'' = 1'$



SPAN - 30' 7 1/2"  
LENGTH (O'ALL) - 26' 7 3/4"  
LENGTH (FUSELAGE) - 25'  
HEIGHT - 11' 8 1/2"  
WING AREA - 139 FT<sup>2</sup>  
GROSS WEIGHT - 3191 LBS.  
COLOR SCHEME: ALL WHITE,  
BLUE "A" - ALUMINUM COWL.



BLUE "4" ALSO ON  
UNDERSIDE OF OTHER WING

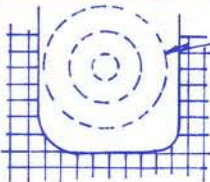


FLOAT STRUTS: NATURAL METAL

1925 VERSION

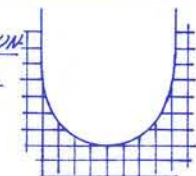
FLOAT CONSTRUCTION:  
ALL WOOD FRAME, PLYWOOD COVERED.

THE S-4 SET WORLD AIR SPEED RECORD FOR SEAPLANES AT 226.75 MPH. LATER TAKEN TO 1925 SCHNEIDER CUP RACE AT BALTIMORE U.S.A. CRAFT, FLOWN BY CAPT. HENRY BAIRD DEVELOPED FLUTTER & CRASHED.



LOWER WING TIP.

NOTE: LARGER ROUND-  
DEL ON LOWER WING.



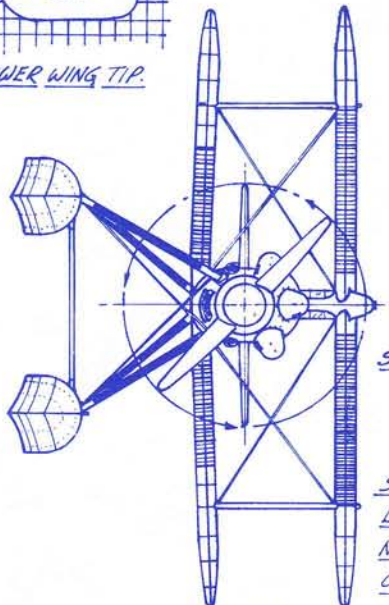
UPPER WING TIP.

WING CONSTRUCTION: ALL WOOD SPARS & RIBS  
WITH FABRIC COVERING. WING RADIATORS  
WERE BRASS

FUSELAGE CONSTRUCTION: LIGHT-WEIGHT  
RSH FRAMEWORK WITH 3 PLY PLYWOOD  
MONOCOQUE CONSTRUCTION. DURAL COUL.

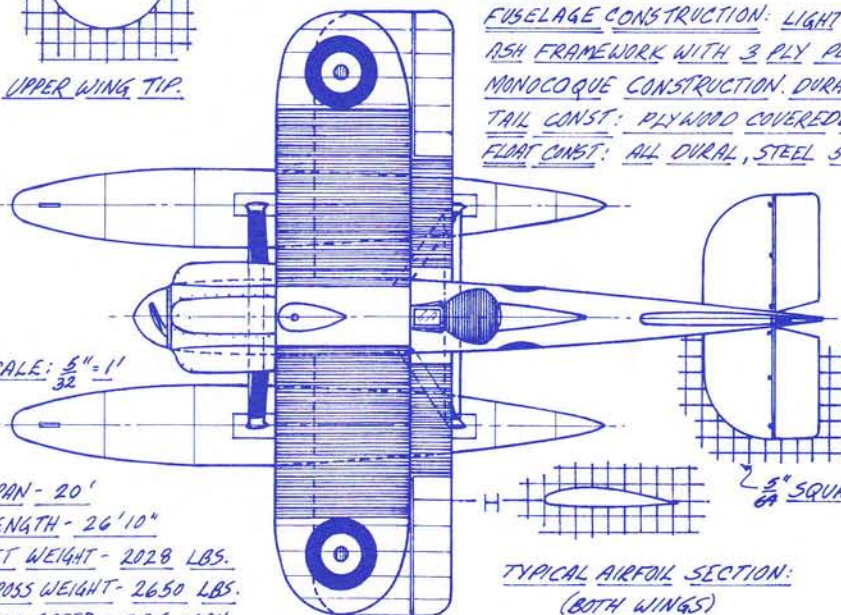
TAIL CONST: PLYWOOD COVERED WOOD FRAME

FLOAT CONST: ALL DURAL, STEEL STRUTS



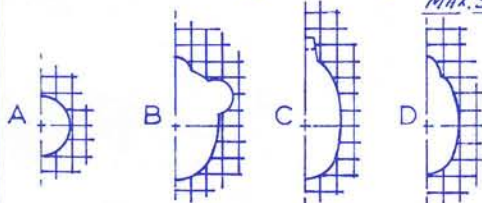
SCALE:  $\frac{5}{32}$ " = 1'

SPAN - 20'  
LENGTH - 26'10"  
NET WEIGHT - 2028 LBS.  
GROSS WEIGHT - 2650 LBS.  
MAX. SPEED - 225 MPH.



$\frac{5}{8}$ " SQUARES

TYPICAL AIRFOIL SECTION:  
(BOTH WINGS)

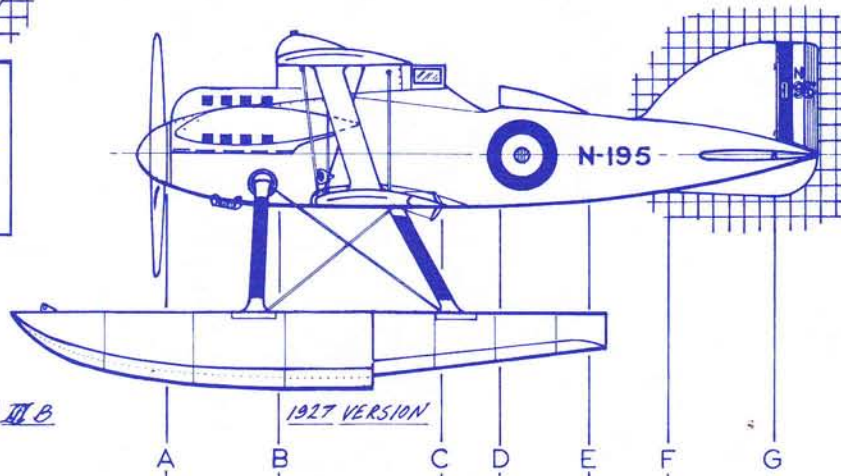


POWERPLANT: IIIA & B 670 HORSEPOWER LION III 12 CYLINDER (3  
BANKS OF 4 IN "W" FORM. WATER COOLED. - METAL PROP.

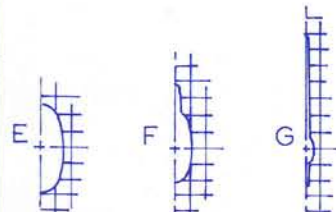
COLOR SCHEME: POWDER BLUE WITH RED, WHITE & BLUE ROUNDELS &  
STRIPES. BLACK LETTERING WITH WHITE OUTLINES.



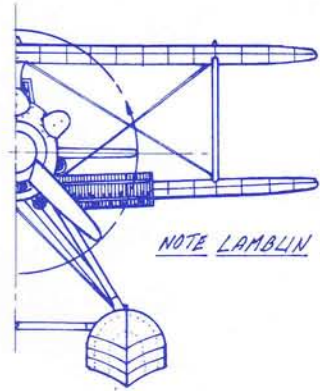
GLOSTER IIIA & B



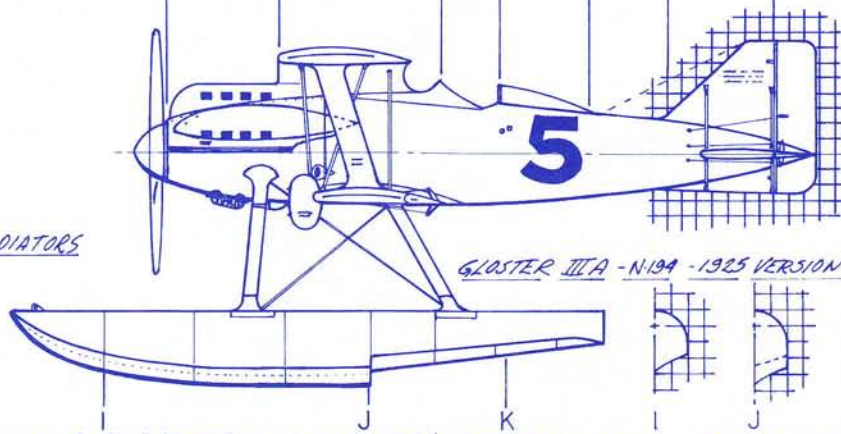
1927 VERSION



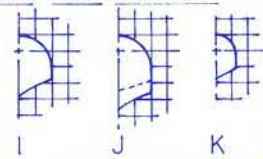
GLOSTER III B



NOTE LAMBLIN WING RADIATORS



GLOSTER IIIA - N-194 - 1925 VERSION



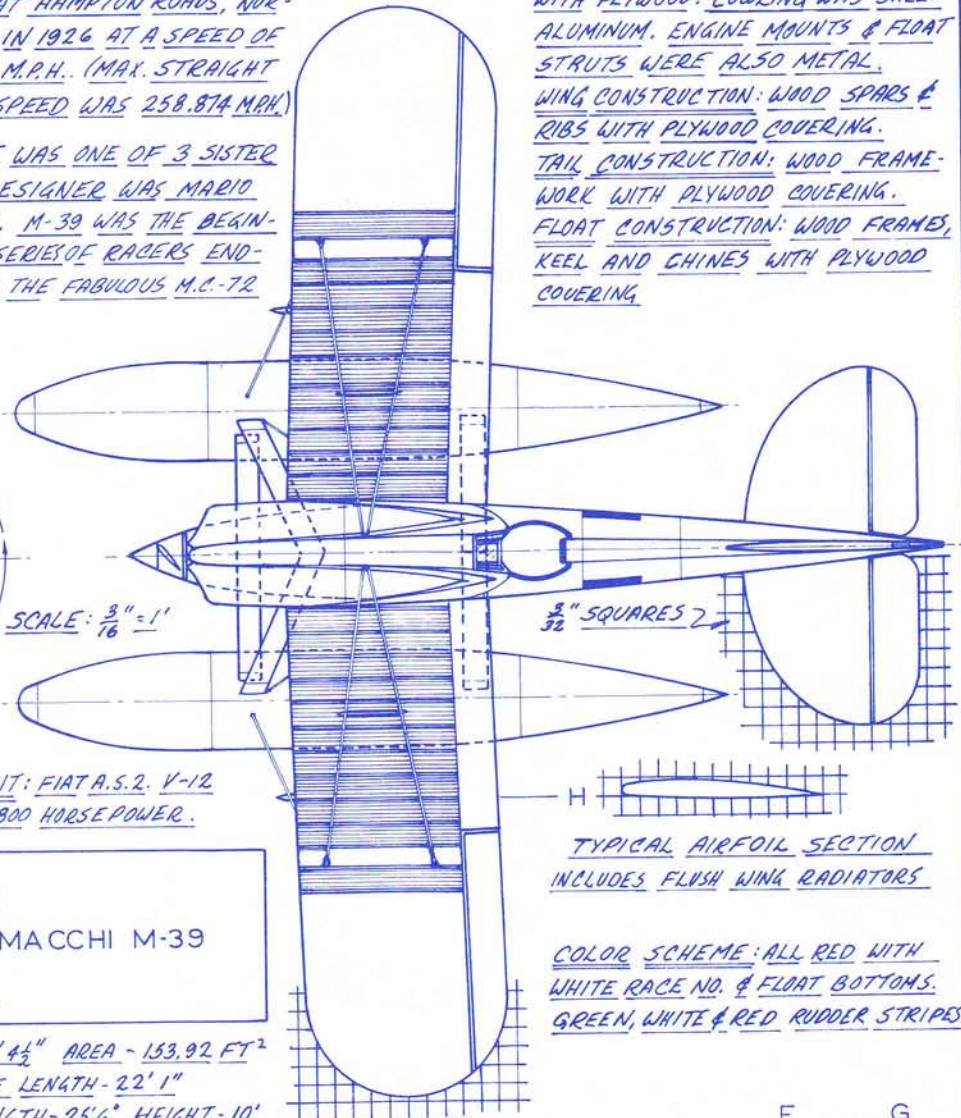
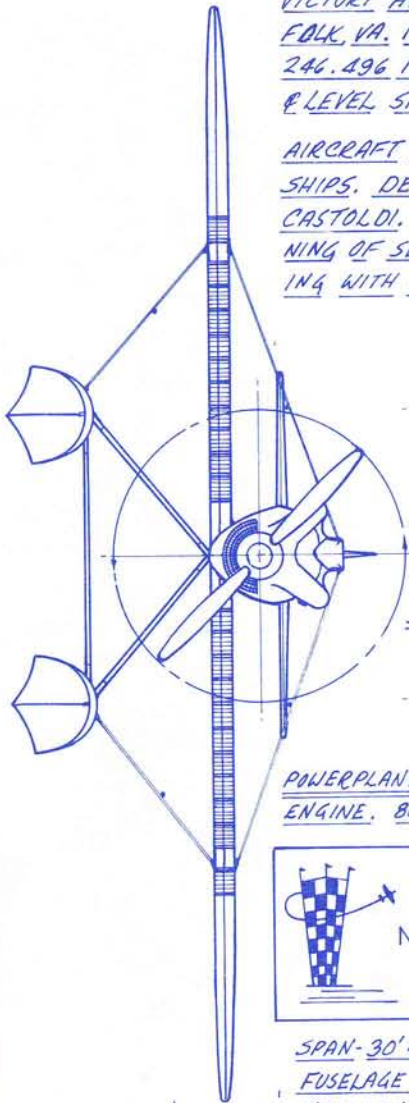
CRAFT N195 IN IIIA VERSION WAS FLOWN TO 2ND PLACE IN 1925 SCHNEIDER TROPHY RACE. SPEED WAS 199.169  
MPH. AND PILOT WAS CAPT. HUBERT BROAD. PLACE WAS BALTIMORE U.S.A. PLANE CONVERTED TO IIIB TRAINER IN 1927. CM



MAJOR MARIO DE BARNARDI FLEW THE M-39 TO A SCHNEIDER TROPHY VICTORY AT HAMPTON ROADS, NORFOLK, VA. IN 1926 AT A SPEED OF 246.496 M.P.H.. (MAX. STRAIGHT & LEVEL SPEED WAS 258.874 MPH.)

AIRCRAFT WAS ONE OF 3 SISTER SHIPS. DESIGNER WAS MARIO CASTOLDI. M-39 WAS THE BEGINNING OF SERIES OF RACERS ENDING WITH THE FABULOUS M.C.-72

FUSELAGE CONSTRUCTION: ALL WOOD FORMERS AND STRINGERS COVERED WITH PLYWOOD. COWLING WAS SHEET ALUMINUM. ENGINE MOUNTS & FLOAT STRUTS WERE ALSO METAL. WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING. TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING. FLOAT CONSTRUCTION: WOOD FRAMES, KEEL AND CHINES WITH PLYWOOD COVERING.



SCALE:  $\frac{3}{16}'' = 1'$

$\frac{5}{32}''$  SQUARES

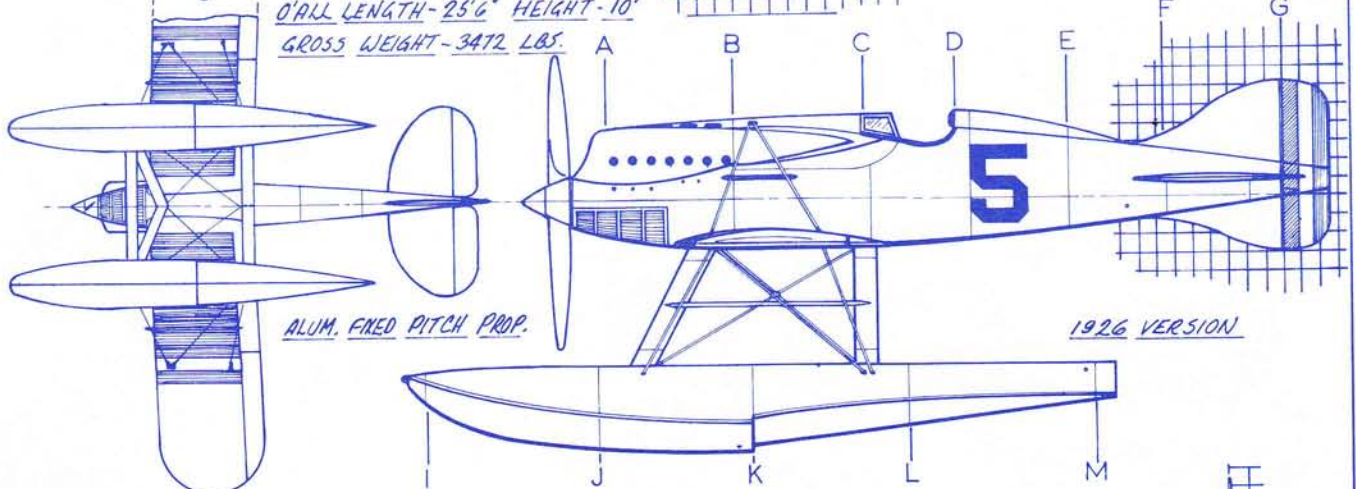
POWERPLANT: FIAT A.S.2. V-12 ENGINE. 800 HORSEPOWER.



TYPICAL AIRFOIL SECTION INCLUDES FLUSH WING RADIATORS

COLOR SCHEME: ALL RED WITH WHITE RACE NO. & FLOAT BOTTOMS. GREEN, WHITE & RED RUDDER STRIPES.

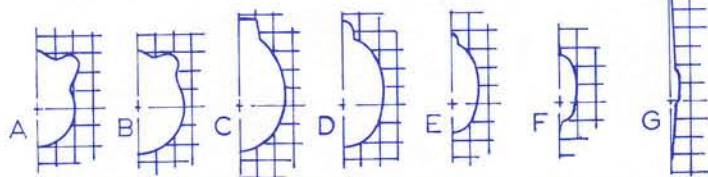
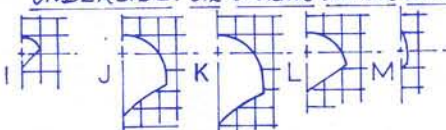
SPAN - 30' 4 1/2" AREA - 153.92 FT<sup>2</sup>  
 FUSELAGE LENGTH - 22' 1"  
 O'ALL LENGTH - 25' 6" HEIGHT - 10'  
 GROSS WEIGHT - 3472 LBS.



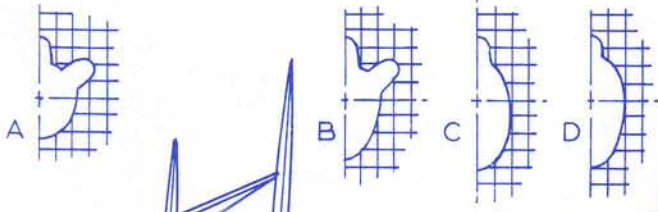
ALUM. FIXED PITCH PROP.

1926 VERSION

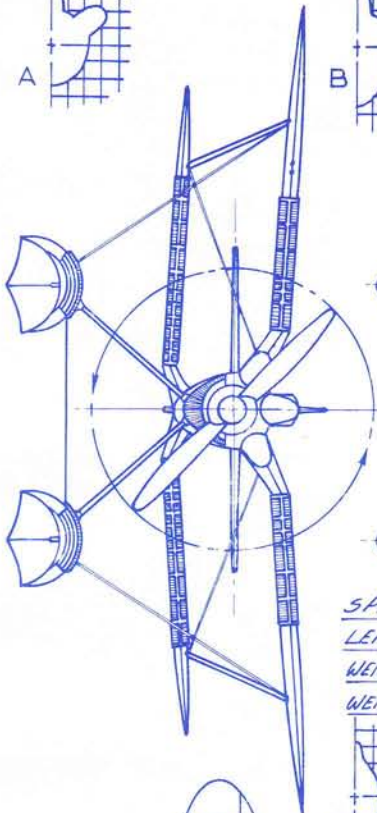
ABOVE VIEW SHOWS RIGGING ON UNDERSIDE. OIL COOLER UNDER ENGINE



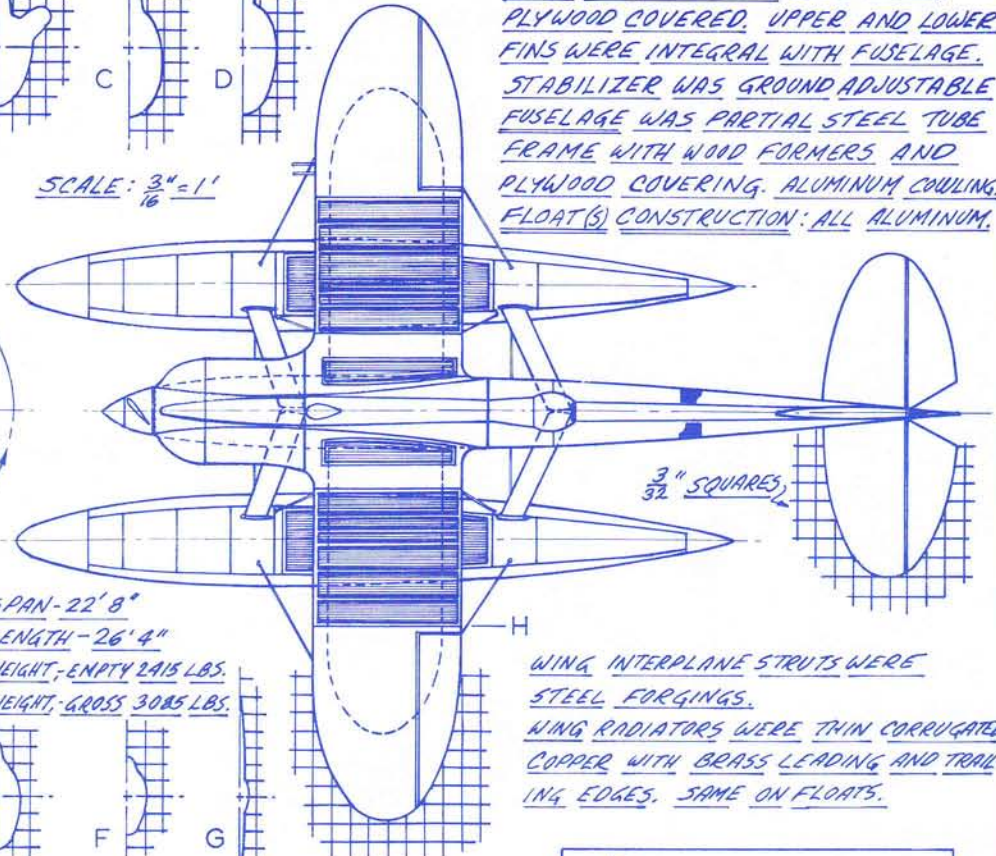
WING CONSTRUCTION: ALL WOOD WITH SPRUCE SPARS - PLYWOOD COVERED  
TAIL CONSTRUCTION: ALL WOOD; PLYWOOD COVERED. UPPER AND LOWER FINNS WERE INTEGRAL WITH FUSELAGE.  
STABILIZER WAS GROUND ADJUSTABLE  
FUSELAGE WAS PARTIAL STEEL TUBE FRAME WITH WOOD FORMERS AND PLYWOOD COVERING. ALUMINUM COUPLING.  
FLOAT(S) CONSTRUCTION: ALL ALUMINUM.



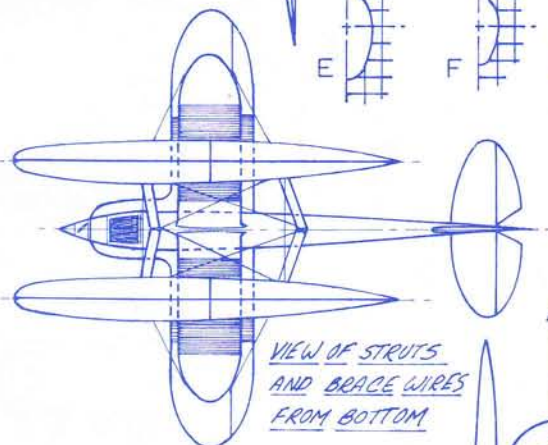
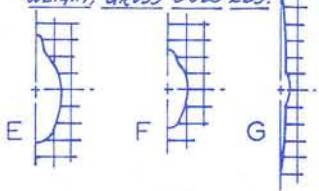
SCALE:  $\frac{3}{16}'' = 1'$



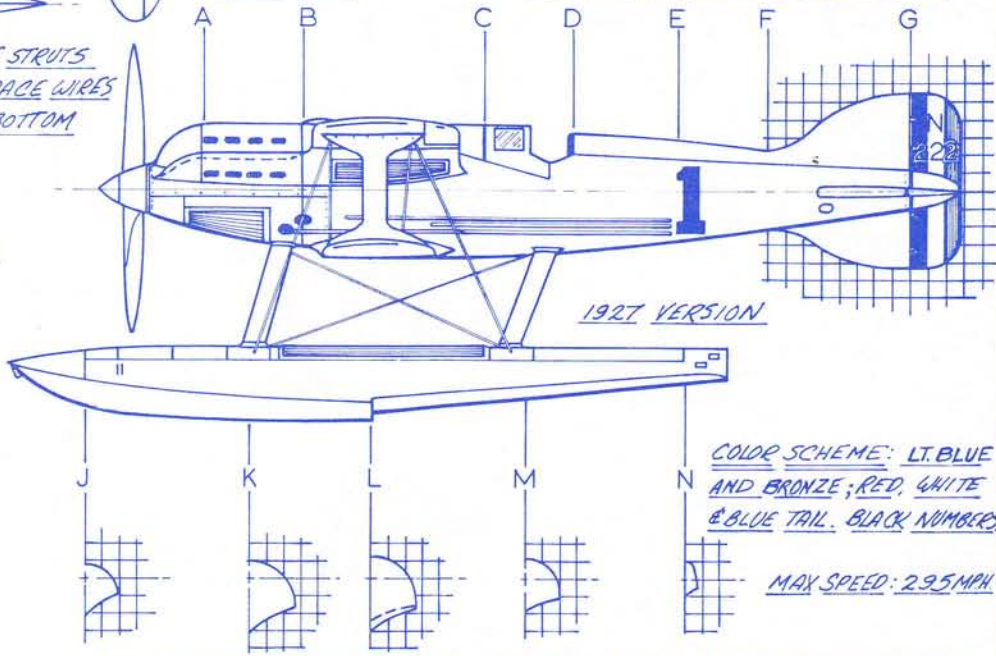
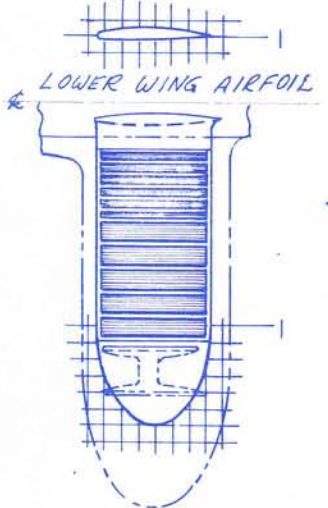
SPAN - 22' 8"  
 LENGTH - 26' 4"  
 WEIGHT - EMPTY 2415 LBS.  
 WEIGHT - GROSS 3085 LBS.



WING INTERPLANE STRUTS WERE STEEL FORGINGS.  
WING RADIATORS WERE THIN CORRUGATED COPPER WITH BRASS LEADING AND TRAILING EDGES. SAME ON FLOATS.



UPPER WING AIRFOIL  
 POWERPLANT: 875 H.P. NAPIER VII 12 CYLINDER 'N' BANKED



COLOR SCHEME: LT. BLUE AND BRONZE; RED, WHITE & BLUE TAIL. BLACK NUMBERS

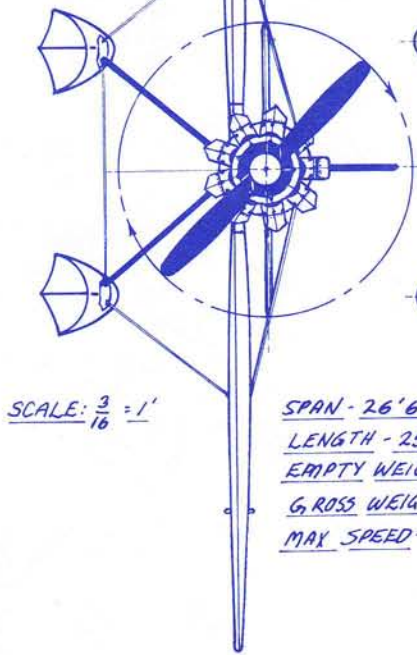
MAX SPEED: 225 MPH

TOP VIEW OF LOWER WING SHOWING RADIATORS

ONE OF THREE GLOSTER IVs, THIS SLEEK SCHNEIDER TROPHY RACER FLOWN BY FLT. LT. S.M. KINKAID DROPPED OUT IN 4TH LAP OF 1927 RACE.

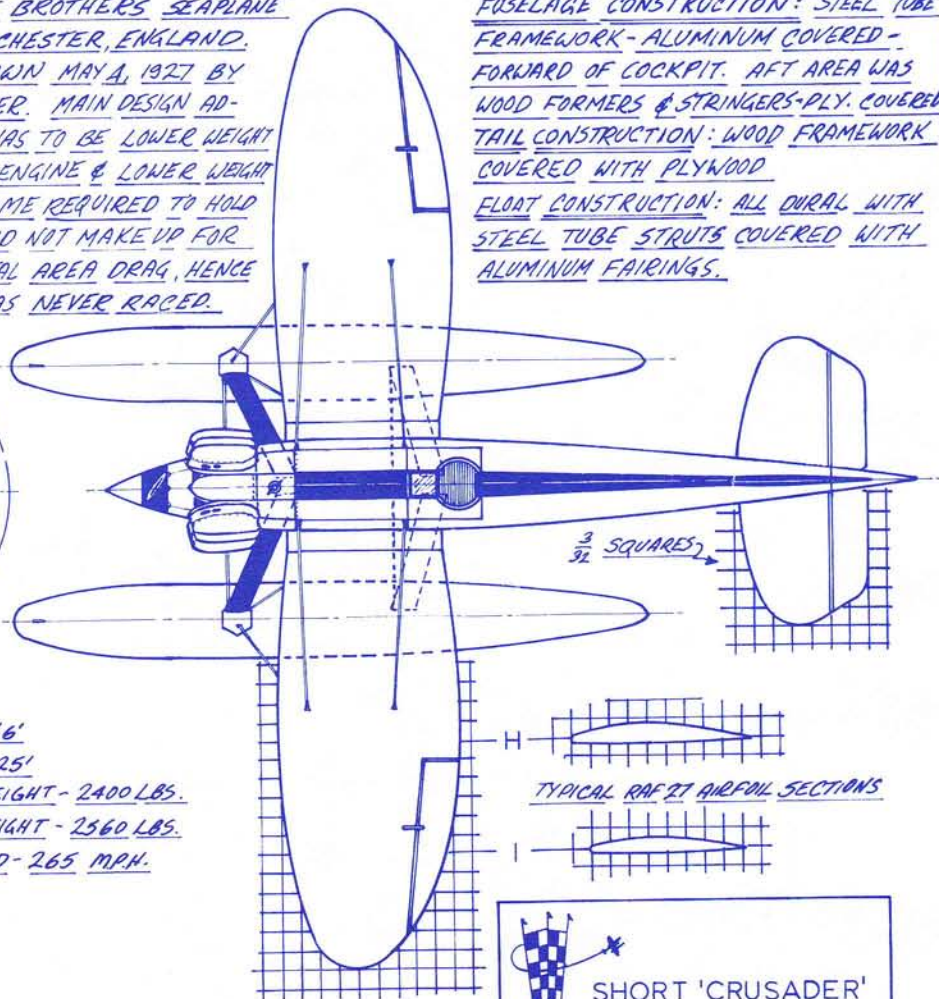
THE 'CRUSADER' WAS DESIGNED BY W.G. CARTER AND CONSTRUCTED BY SHORT BROTHERS SEAPLANE WORKS, ROCHESTER, ENGLAND. FIRST FLOWN MAY 4, 1927 BY H.A.L. HINKLER. MAIN DESIGN ADVANTAGE WAS TO BE LOWER WEIGHT OF RADIAL ENGINE & LOWER WEIGHT OF AIRFRAME REQUIRED TO HOLD IT. THIS DID NOT MAKE UP FOR HIGH FRONTAL AREA DRAG, HENCE CRAFT WAS NEVER RACED.

WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING. FUSELAGE CONSTRUCTION: STEEL TUBE FRAMEWORK - ALUMINUM COVERED - FORWARD OF COCKPIT. AFT AREA WAS WOOD FORMERS & STRINGERS - PLY. COVERED. TAIL CONSTRUCTION: WOOD FRAMEWORK COVERED WITH PLYWOOD. FLOAT CONSTRUCTION: ALL DURAL WITH STEEL TUBE STRUTS COVERED WITH ALUMINUM FAIRINGS.



SCALE:  $\frac{3}{16} = 1'$

SPAN - 26'6"  
 LENGTH - 25'  
 EMPTY WEIGHT - 2400 LBS.  
 GROSS WEIGHT - 2560 LBS.  
 MAX SPEED - 265 MPH.

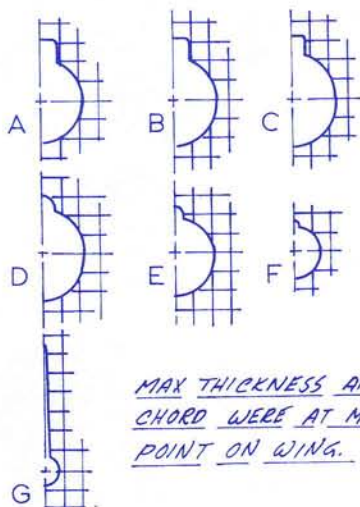


$\frac{3}{32}$  SQUARES

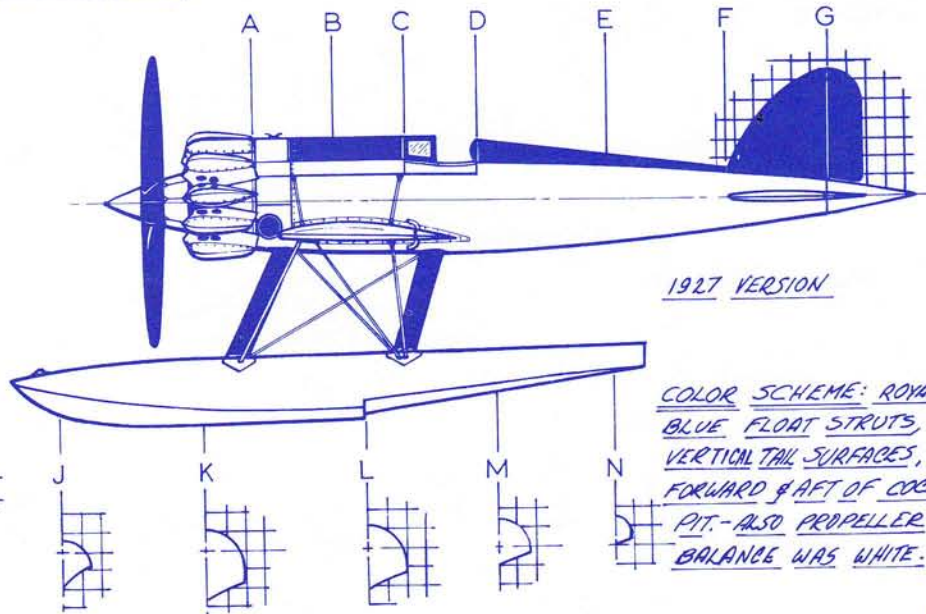
TYPICAL RAFT AIRFOIL SECTIONS



POWERPLANT: 9 CYLINDER AIR COOLED RADIAL MERCURY I ENGINE PRODUCING 850 HORSEPOWER. PROPELLER WAS WOOD. ENGINE WAS GEARED ALLOWING POINTED NOSE.

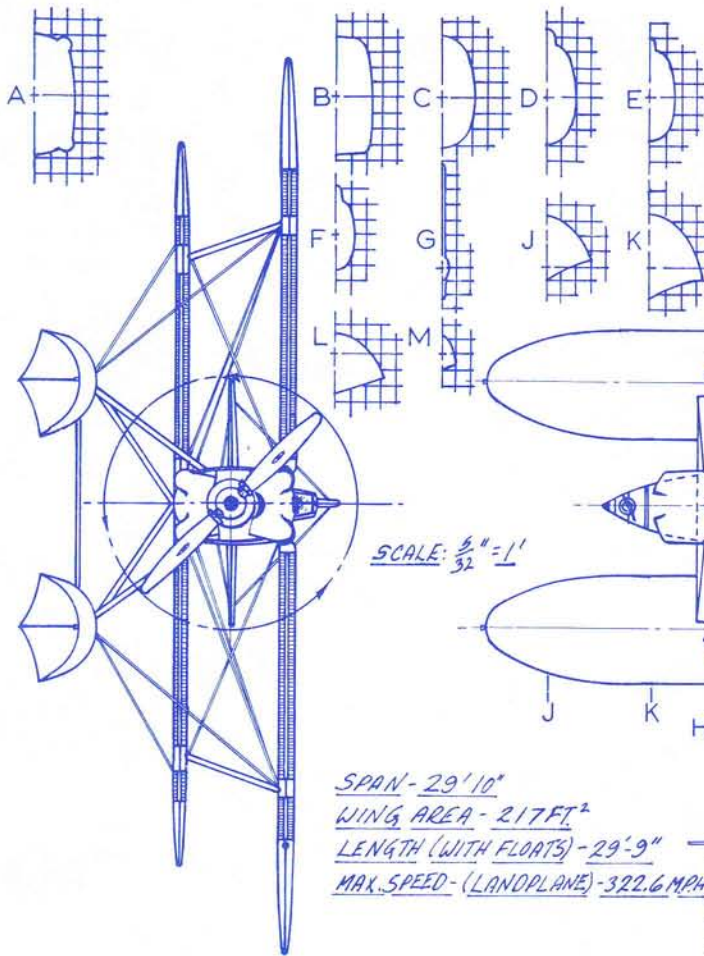


MAX THICKNESS AND CHORD WERE AT MID-POINT ON WING.



1927 VERSION

COLOR SCHEME: ROYAL BLUE FLOAT STRUTS, VERTICAL TAIL SURFACES, FORWARD & AFT OF COCKPIT - ALSO PROPELLER. BALANCE WAS WHITE.



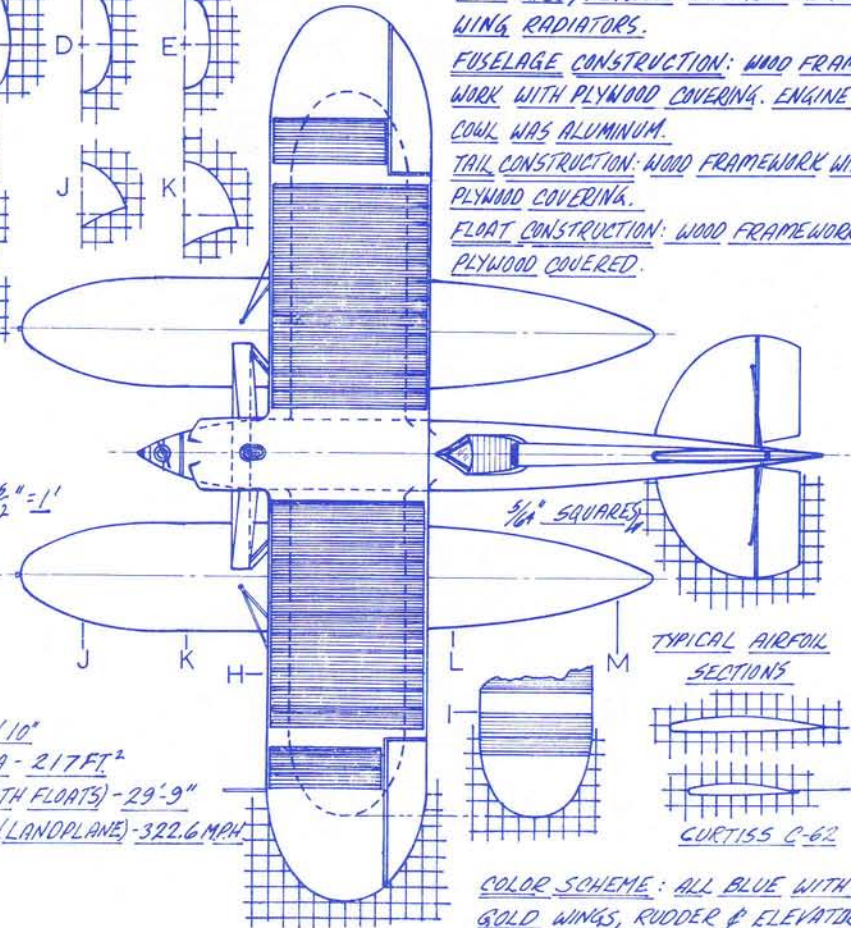
SCALE:  $\frac{5}{32}'' = 1'$   
 SPAN - 29' 10"  
 WING AREA - 217 FT<sup>2</sup>  
 LENGTH (WITH FLOATS) - 29' 9"  
 MAX. SPEED - (LANDPLANE) - 322.6 MPH

WING CONSTRUCTION: 2 SPRUCE SPARS, WOOD RIBS, PLYWOOD COVERED. BRASS WING RADIATORS.

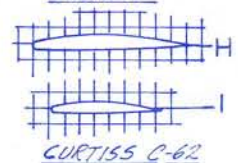
FUSELAGE CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING. ENGINE COOL WAS ALUMINUM.

TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING.

FLOAT CONSTRUCTION: WOOD FRAMEWORK, PLYWOOD COVERED.



TYPICAL AIRFOIL SECTIONS



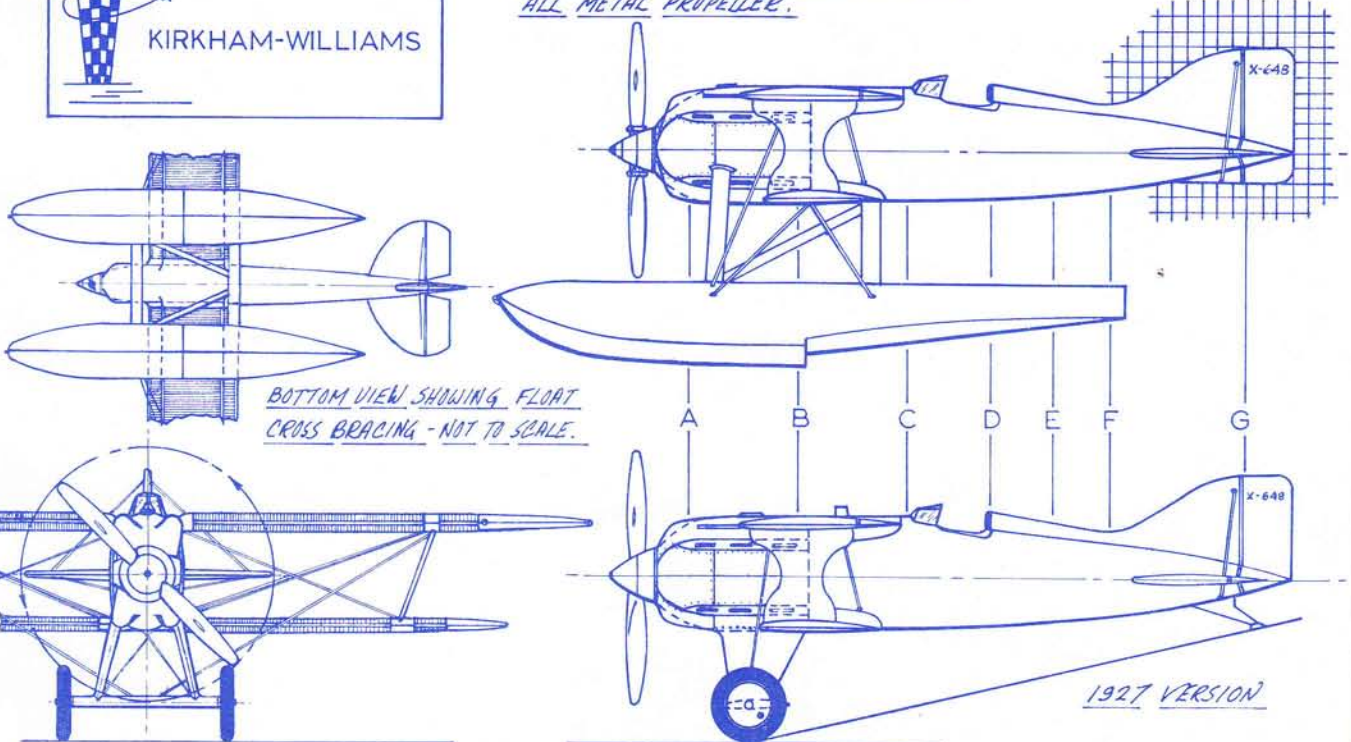
CURTISS C-62

COLOR SCHEME: ALL BLUE WITH GOLD WINGS, RUDDER & ELEVATORS.



KIRKHAM-WILLIAMS

POWERPLANT: PACKARD X-12, 1250 H.P.  
 ALL METAL PROPELLER.



BOTTOM VIEW SHOWING FLOAT CROSS BRACING - NOT TO SCALE.

1927 VERSION

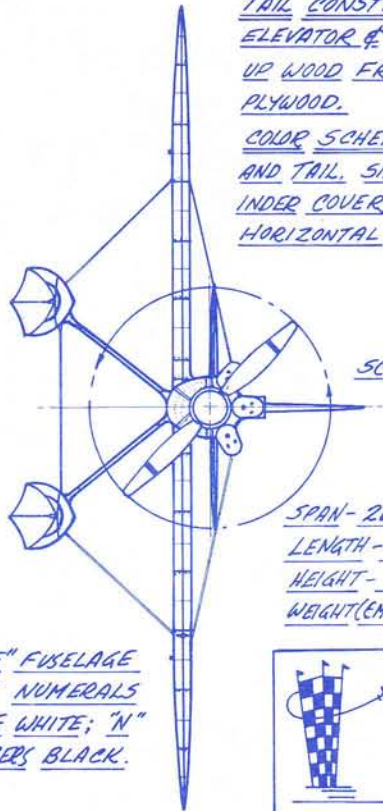
THE KIRKHAM-WILLIAMS WAS BUILT BY KIRKHAM PRODUCTS COMPANY. MAJOR EFFORT WAS MADE BY AL WILLIAMS TO MAKE CRAFT A 'GRASS ROOTS' ENTRY IN 1927 SCHNEIDER RACE. NOT READY IN TIME, CRAFT WAS CONVERTED TO LANDPLANE. CM

TAIL CONSTRUCTION: STABILIZER, ELEVATOR & RUDDER WERE BUILT UP WOOD FRAMES COVERED WITH PLYWOOD.

COLOR SCHEME: ALL BLUE FUSELAGE AND TAIL. SILVER SPINNER, ENGINE CYLINDER COVERS, FLOAT TOPS, STRUTS, WING & HORIZONTAL TAIL.

FUSELAGE CONSTRUCTION: ALL ALUMINUM SEMI-MONOCOQUE WITH SKIN ATTACHED TO 3/2" "U" SECTION FORMERS.

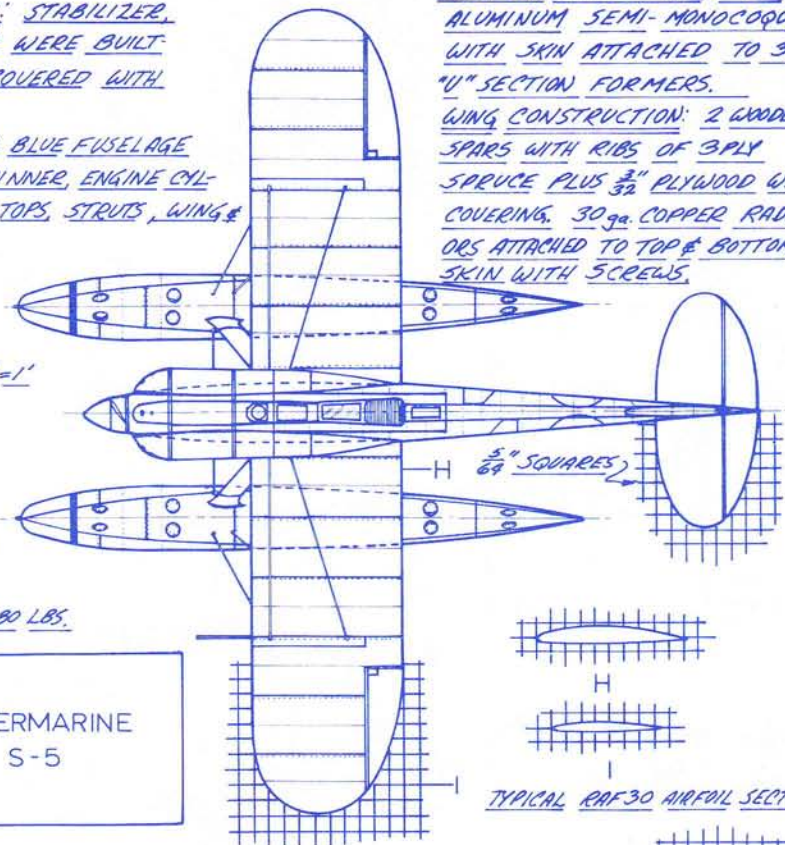
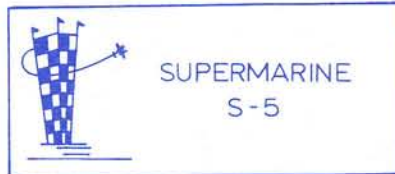
WING CONSTRUCTION: 2 WOODEN SPARS WITH RIBS OF 3PLY SPRUCE PLUS 3/2" PLYWOOD WING COVERING. 30 GA. COPPER RADIATORS ATTACHED TO TOP & BOTTOM SKIN WITH SCREWS.



SCALE: 5" = 1'

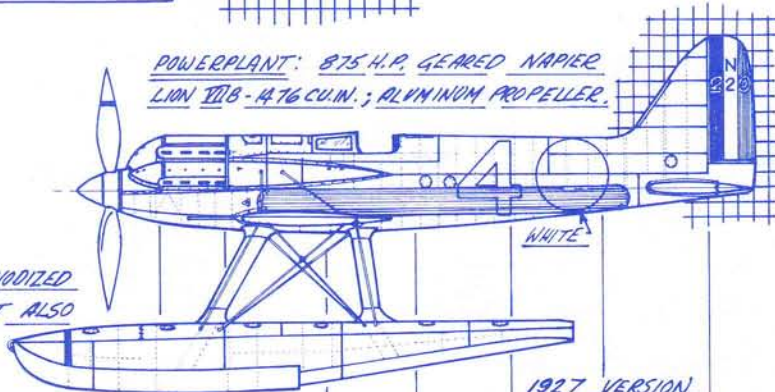
SPAN - 26' 9"  
LENGTH - 24' 3 1/2"  
HEIGHT - 11' 1"  
WEIGHT (EMPTY) - 2680 LBS.

"NOTE" FUSELAGE SIDE NUMERALS WERE WHITE; "N" NUMBERS BLACK.



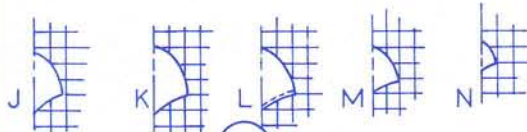
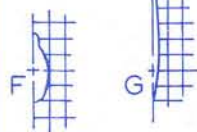
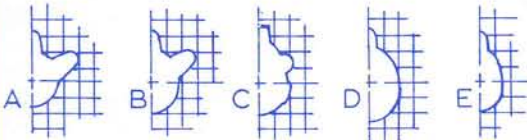
TYPICAL RAF30 AIRFOIL SECTIONS

POWERPLANT: 875 H.P. GEARED NAPIER LION IIB - 1476 CU. IN.; ALUMINUM PROPELLER.

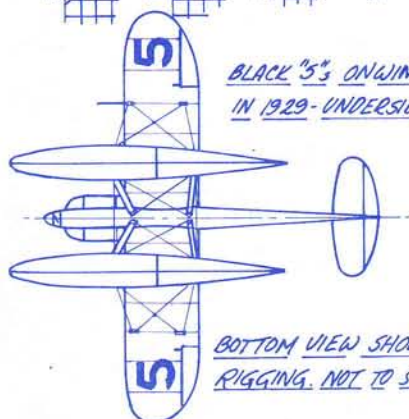


1927 VERSION

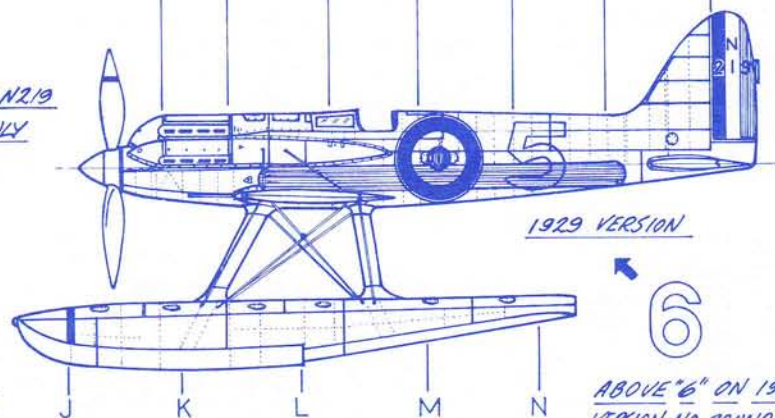
FLOAT CONSTRUCTION: ALL ANODIZED ALUMINUM. STARBOARD FLOAT ALSO HELD A TIN-PLATE FUEL TANK.



BLACK "5" ON WINGS OF N219 IN 1929 - UNDERSIDE ONLY



BOTTOM VIEW SHOWING RIGGING. NOT TO SCALE



1929 VERSION

6

ABOVE "6" ON 1927 VERSION - NO ROUND EL

N220 & N219 TOOK 1ST & 2ND PLACES IN THE 1927 SCHNEIDER CUP RACE AT LIDO ITALY. SPEEDS WERE 281.65 & 273.1 MPH.

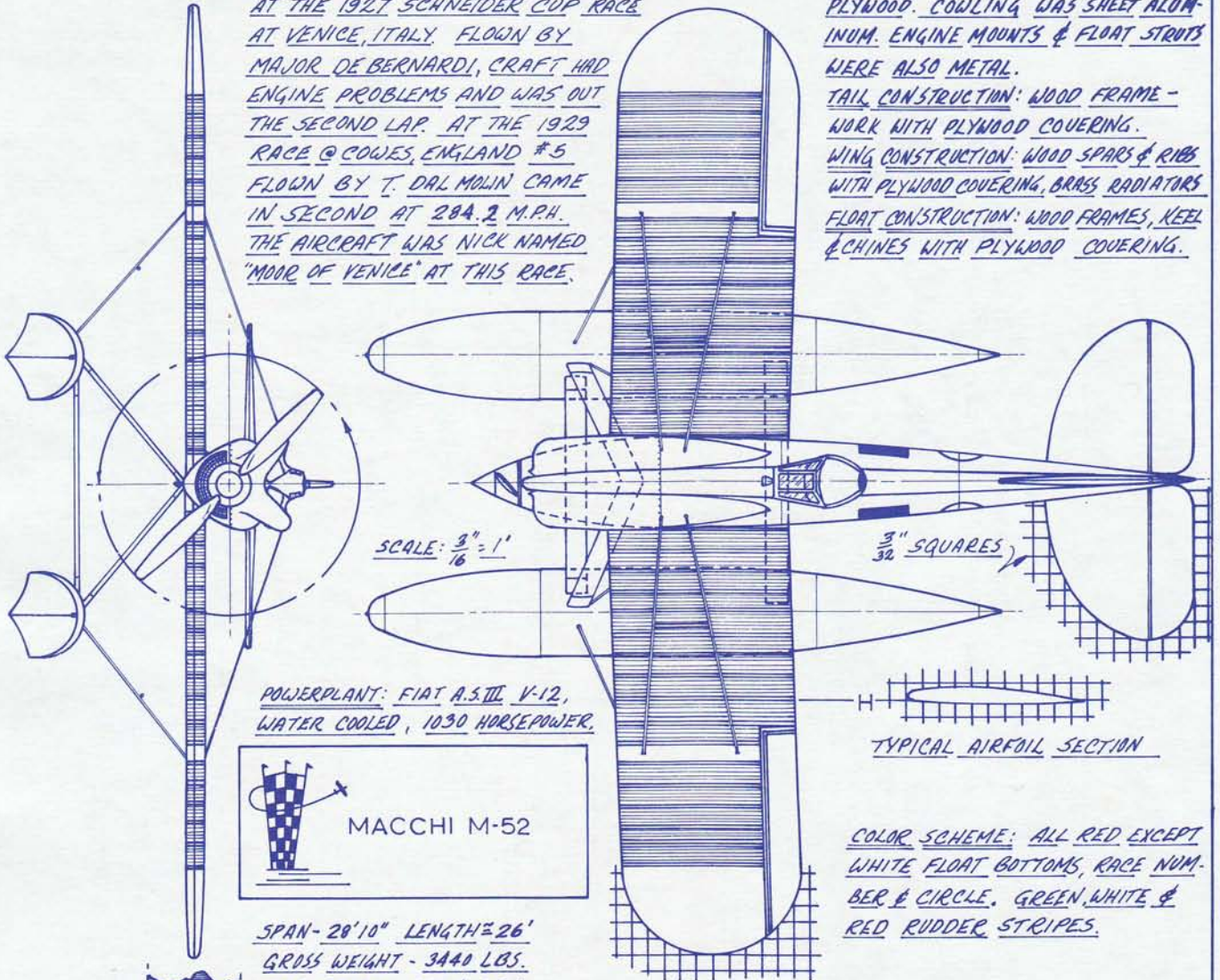
#5 WAS ONE OF 3 M-52 AIRCRAFT AT THE 1927 SCHNEIDER CUP RACE AT VENICE, ITALY. FLOWN BY MAJOR DE BERNARDI, CRAFT HAD ENGINE PROBLEMS AND WAS OUT THE SECOND LAP. AT THE 1929 RACE @ COWES, ENGLAND #5 FLOWN BY T. DAL MOLIN CAME IN SECOND AT 284.2 M.P.H. THE AIRCRAFT WAS NICK NAMED "MOOR OF VENICE" AT THIS RACE.

FUSELAGE CONSTRUCTION: ALL WOOD FORMERS & STRINGERS COVERED WITH PLYWOOD. COWLING WAS SHEET ALUMINUM. ENGINE MOUNTS & FLOAT STRUTS WERE ALSO METAL.

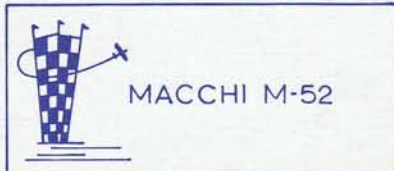
TAIL CONSTRUCTION: WOOD FRAME - WORK WITH PLYWOOD COVERING.

WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING, BRASS RADIATORS

FLOAT CONSTRUCTION: WOOD FRAMES, KEEL & CHINES WITH PLYWOOD COVERING.

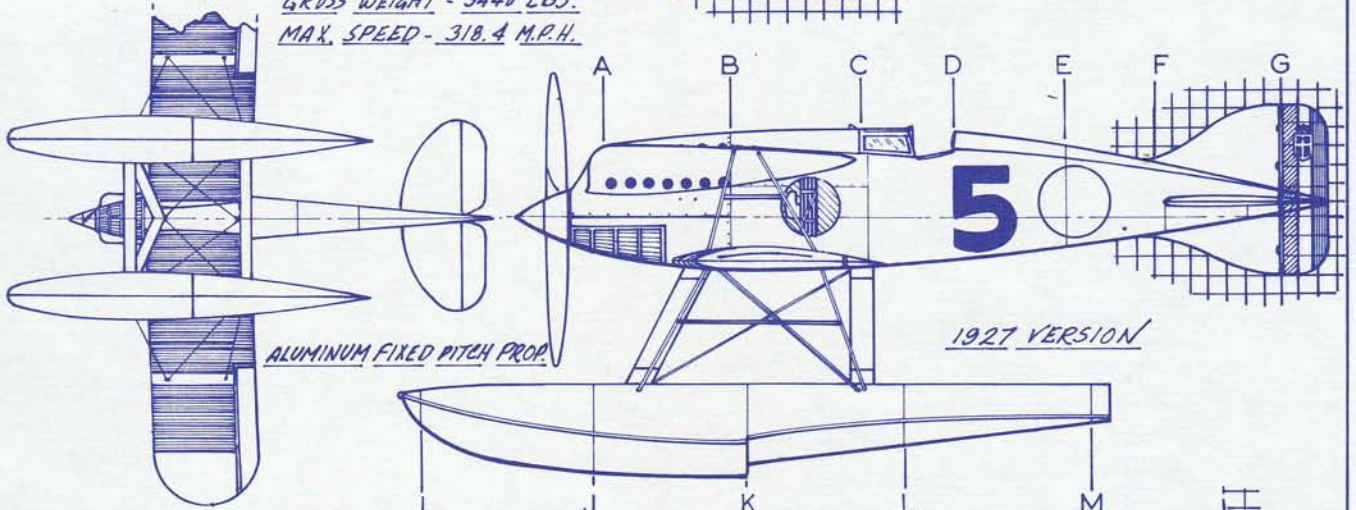


POWERPLANT: FIAT A.5.TE V-12, WATER COOLED, 1030 HORSEPOWER.

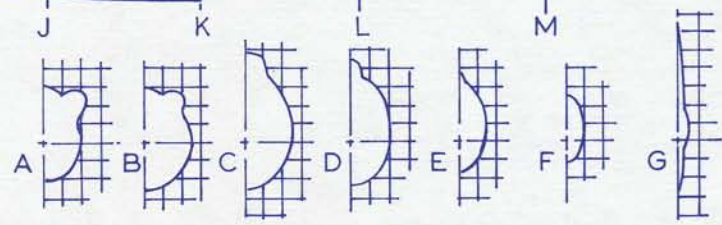
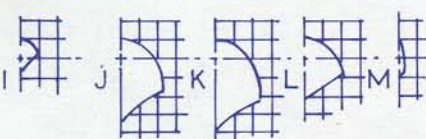


SPAN - 28'10" LENGTH - 26'  
GROSS WEIGHT - 3440 LBS.  
MAX. SPEED - 318.4 M.P.H.

COLOR SCHEME: ALL RED EXCEPT WHITE FLOAT BOTTOMS, RACE NUMBER & CIRCLE. GREEN, WHITE & RED RUDDER STRIPES.



VIEW SHOWING UNDERSIDE RIGGING



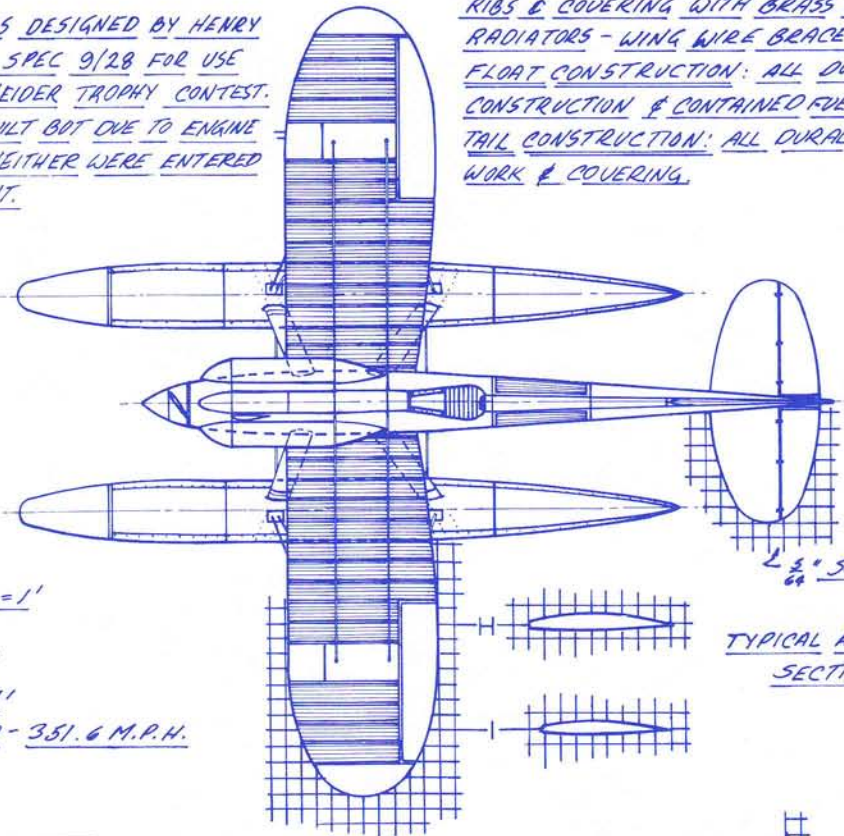
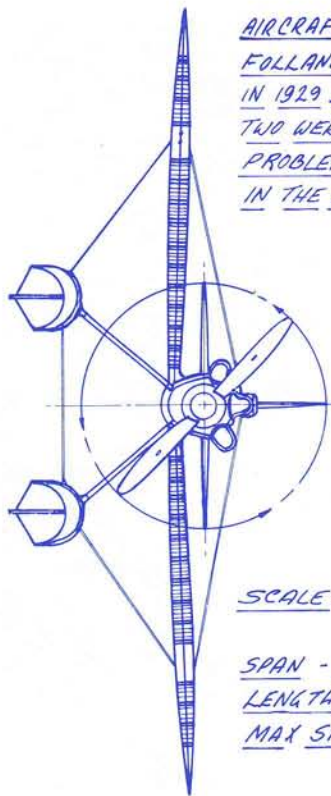
AIRCRAFT WAS DESIGNED BY HENRY FOLLAND TO SPEC 9/28 FOR USE IN 1929 SCHNEIDER TROPHY CONTEST. TWO WERE BUILT BUT DUE TO ENGINE PROBLEMS NEITHER WERE ENTERED IN THE EVENT.

FUSELAGE CONSTRUCTION: DURAL SEMI-MONOCOQUE WITH CURVED INTEGRAL WING ROOTS.

WING CONSTRUCTION: ALL WOOD SPARS, RIBS & COVERING WITH BRASS WING RADIATORS - WING WIRE BRACED.

FLOAT CONSTRUCTION: ALL DURAL CONSTRUCTION & CONTAINED FUEL TANKS.

TAIL CONSTRUCTION: ALL DURAL FRAMEWORK & COVERING.



SCALE:  $\frac{5}{32}'' = 1'$

SPAN - 26'

LENGTH - 27'

MAX SPEED - 351.6 M.P.H.

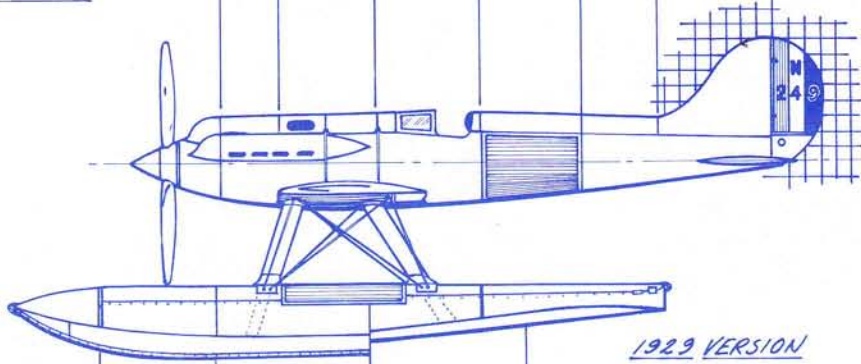
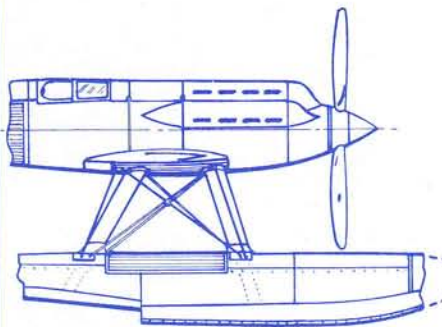
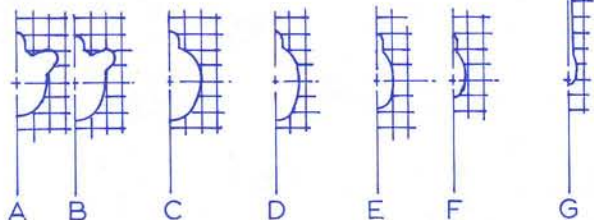
$2 \frac{3}{8}''$  SQUARES

TYPICAL AIRFOIL SECTIONS



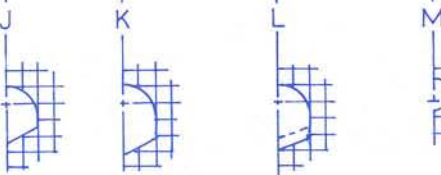
GLOSTER VI

POWERPLANT: 1320 HORSEPOWER NAPIER LION VII D - 3 BANKS OF 4 CYLINDERS (12 CYL.). ALL METAL FIXED PITCH PROPELLER.



1929 VERSION

LATE 1929 VERSION  
 ABOVE VIEW SHOWS OPTIONAL COCKPIT COVER. ALL RIVETING WAS FLUSH.  
 CRAFT NICKNAME WAS "GOLDEN ARROW."

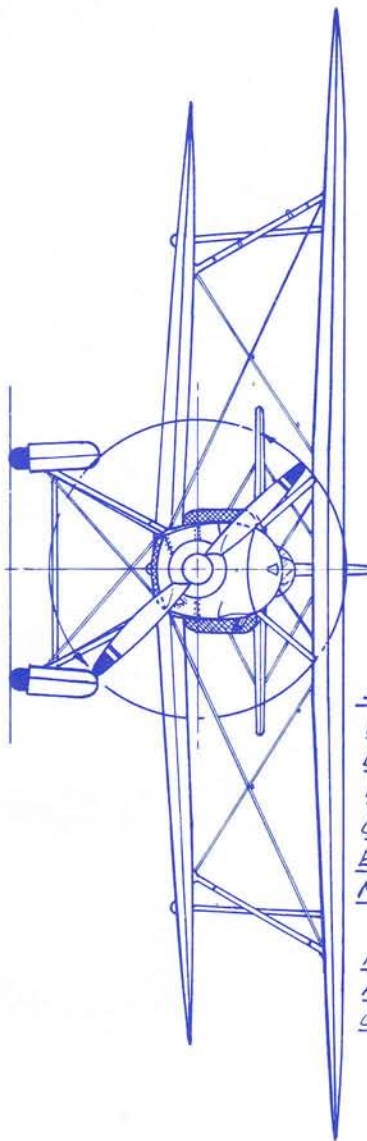


COLOR SCHEME: OLD GOLD OVERALL - BLUE, WHITE & RED RUDDER - BLACK NUMERALS

CRAFT SET WORLD SPEED RECORD OF 336.31 M.P.H. ON SEPT. 12, 1929 - BROKEN 2 DAYS LATER BY THE S-6!

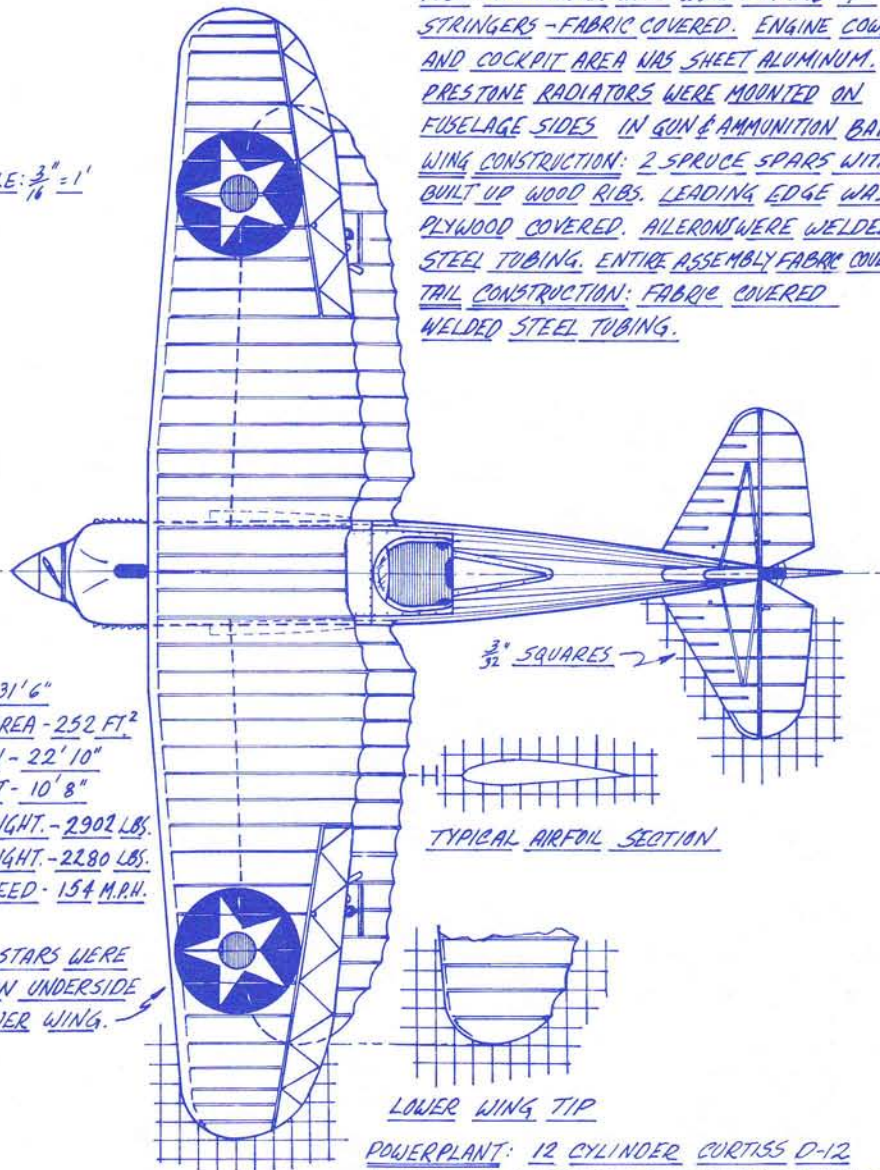
FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK WITH WOOD FORMERS & STRINGERS - FABRIC COVERED. ENGINE COWL AND COCKPIT AREA WAS SHEET ALUMINUM. PRESTONE RADIATORS WERE MOUNTED ON FUSELAGE SIDES IN GUN & AMMUNITION BAYS.  
WING CONSTRUCTION: 2 SPRUCE SPARS WITH BUILT UP WOOD RIBS. LEADING EDGE WAS PLYWOOD COVERED. ALERONS WERE WELDED STEEL TUBING. ENTIRE ASSEMBLY FABRIC COVERED  
TAIL CONSTRUCTION: FABRIC COVERED WELDED STEEL TUBING.

SCALE:  $\frac{3}{16}'' = 1'$



SPAN - 31' 6"  
 WING AREA - 252 FT<sup>2</sup>  
 LENGTH - 22' 10"  
 HEIGHT - 10' 8"  
 GROSS WGT. - 2902 LBS.  
 EMPTY WGT. - 2280 LBS.  
 MAX. SPEED - 154 M.P.H.

NOTE: STARS WERE ALSO ON UNDERSIDE OF LOWER WING.

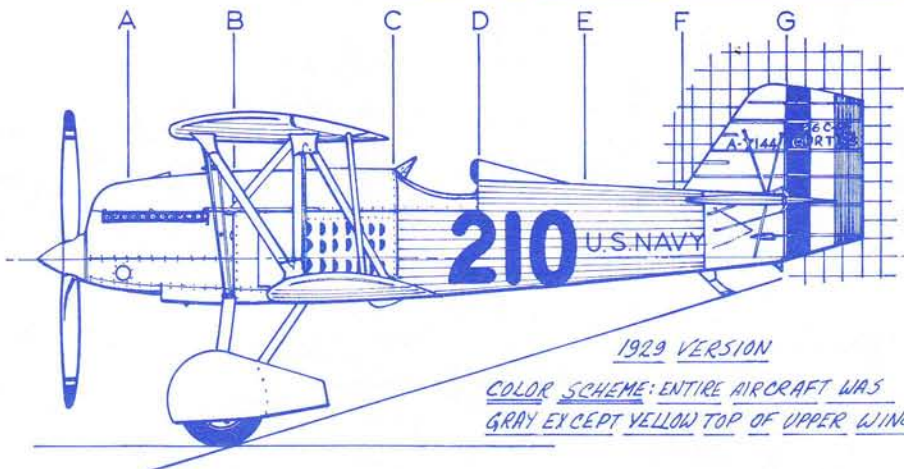
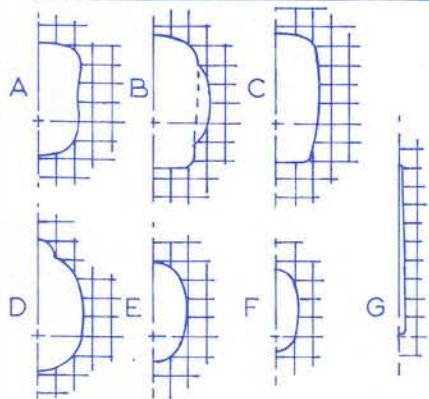


$\frac{3}{32}''$  SQUARES

TYPICAL AIRFOIL SECTION

LOWER WING TIP

POWERPLANT: 12 CYLINDER CURTISS D-12 V-1145; 435 HORSEPOWER; ALUMINUM PROPELLER



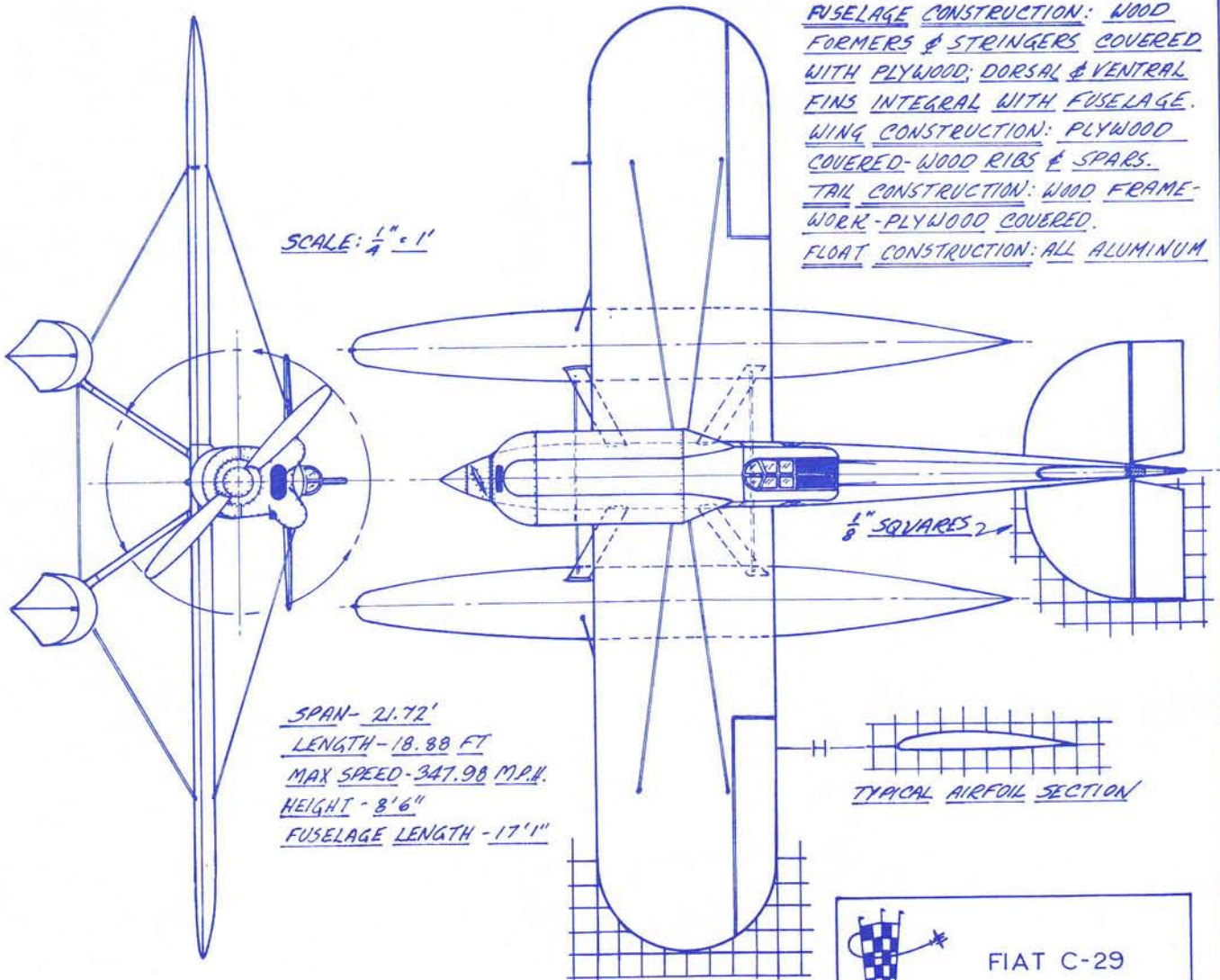
COLOR SCHEME: ENTIRE AIRCRAFT WAS GRAY EXCEPT YELLOW TOP OF UPPER WING.

THIS AIRCRAFT FLOWN BY COMDR. J.J. CLARK U.S.N. TO FOURTH PLACE IN 'FREE FOR ALL' RACE AT 1929 NATIONAL AIR RACES AT CLEVELAND. SPEED WAS 153.38 M.P.H. DODG DAVIS WON RACE WITH TRAVELAIR 'R' MYSTERY PLANE @ 194.9 M.P.H.



FUSELAGE CONSTRUCTION: WOOD FORMERS & STRINGERS COVERED WITH PLYWOOD; DORSAL & VENTRAL FINS INTEGRAL WITH FUSELAGE.  
WING CONSTRUCTION: PLYWOOD COVERED- WOOD RIBS & SPARS.  
TAIL CONSTRUCTION: WOOD FRAMEWORK- PLYWOOD COVERED.  
FLOAT CONSTRUCTION: ALL ALUMINUM

SCALE:  $\frac{1}{4}'' = 1'$

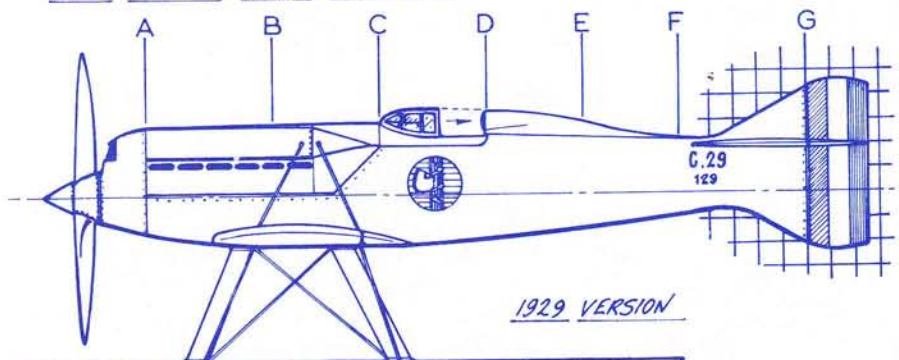
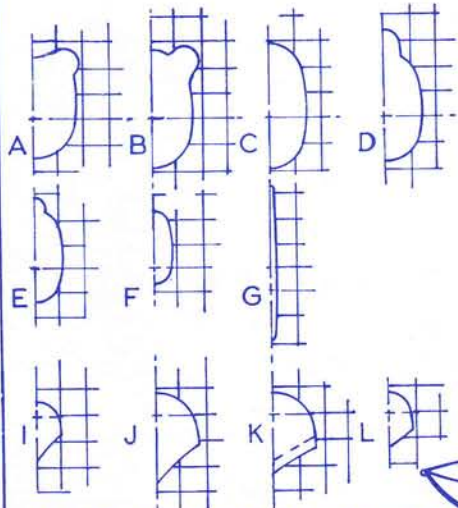


SPAN - 21.72'  
LENGTH - 18.88 FT  
MAX SPEED - 347.98 M.P.H.  
HEIGHT - 8'6"  
FUSELAGE LENGTH - 17'1"



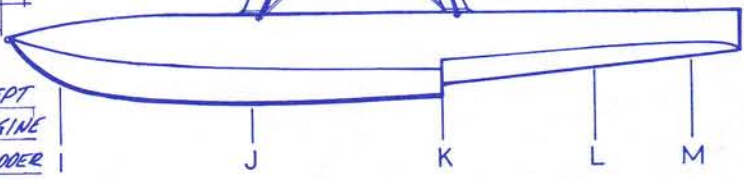
POWERPLANT: 1000 H.P. FIAT AS-5 V-12 LIQUID COOLED ENGINE. METAL PROPELLER.

NOTE: WINDSHIELD SLID REARWARD FORMING CANOPY ENCLOSURE.



1929 VERSION

COLOR SCHEME: ALL RED EXCEPT WHITE FLOAT BOTTOMS & ENGINE COUL TOP. GREEN, WHITE & RED RUDDER



A VERY 'HOT' AIRPLANE, "129" WAS ONE OF THREE BUILT WITH THE OTHER TWO CRASHING DURING TEST FLIGHTS. IT WAS BROUGHT TO '29 SCHNEIDER BUT DID NOT RACE DUE TO INSUFFICIENT TESTING BEING DONE. *CK*

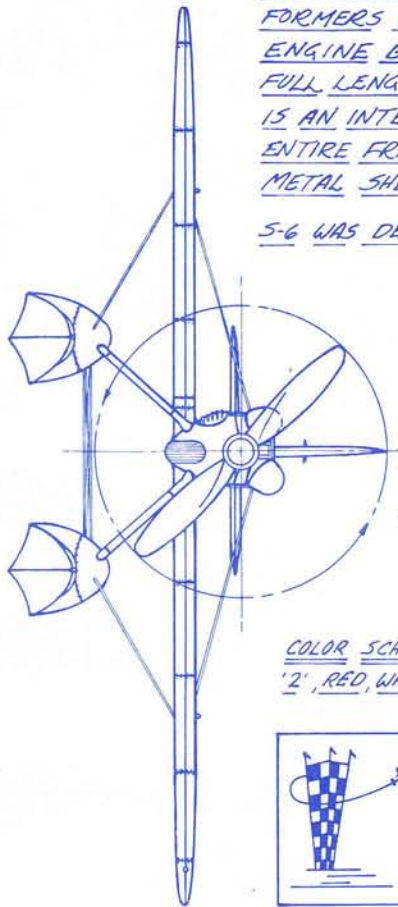
FUSELAGE CONSTRUCTION: SEMI-MONOCOQUE MADE UP OF 46 ALUMINUM FORMERS HELD IN PLACE BY ENGINE BEARERS RUNNING THE FULL LENGTH OF FUSELAGE. FIN IS AN INTEGRAL PART OF ASSEMBLY. ENTIRE FRAMEWORK COVERED WITH METAL SHEETING.

S-6 WAS DESIGNED BY R.T. MITCHELL

WING CONSTRUCTION: ALUMINUM SPARS (2) AND RIBS. COVERING WAS 2 SHEETS OF ALUMINUM HELD APART BY 1/16" SPACERS THUS FORMING WING RADIATORS

TAIL CONSTRUCTION: ALL METAL SPARS, RIBS & COVERING.

FLOAT CONSTRUCTION: ALL ALUMINUM KEEL, FORMERS, CHINES AND COVERING.

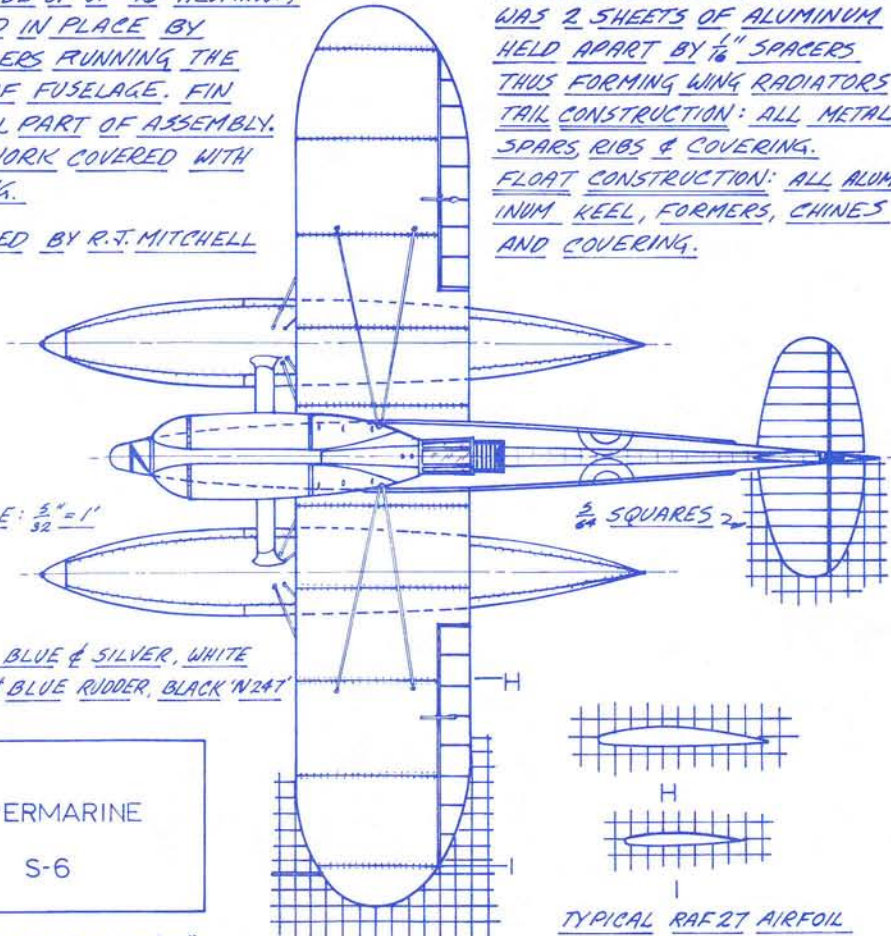


SCALE:  $\frac{5}{32}'' = 1'$

COLOR SCHEME: BLUE & SILVER, WHITE '2', RED, WHITE & BLUE RUDDER, BLACK 'N247'



S-6

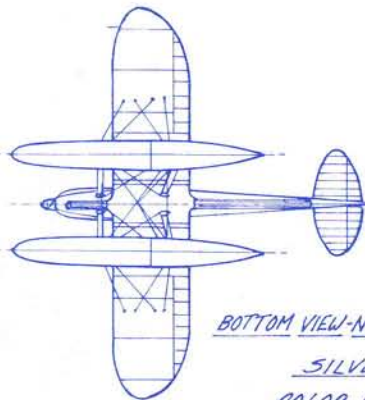


TYPICAL RAF 27 AIRFOIL

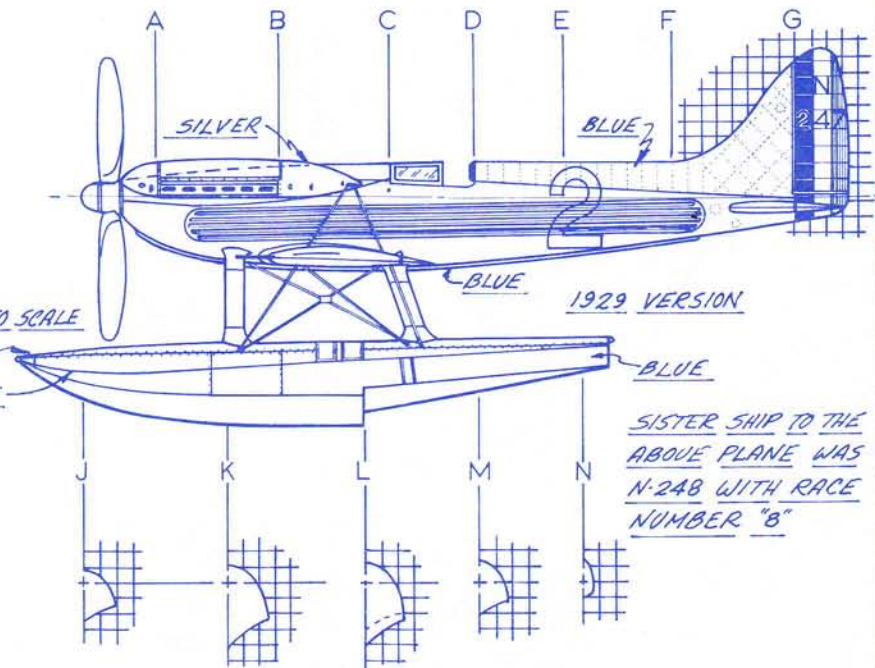
SPAN - 30' WING AREA - 145 FT<sup>2</sup> LENGTH - 26'10"  
FLOAT LENGTH - 19'5" WEIGHT EMPTY - 4471 LBS  
GROSS WEIGHT - 5771 LBS. MAX SPEED - 357.7 MPH

PROPELLER WAS FIXED PITCH

POWERPLANT: ROLLS-ROYCE "R" 12 CYLINDER "V" TYPE 1900 H.P.



BOTTOM VIEW - NOT TO SCALE

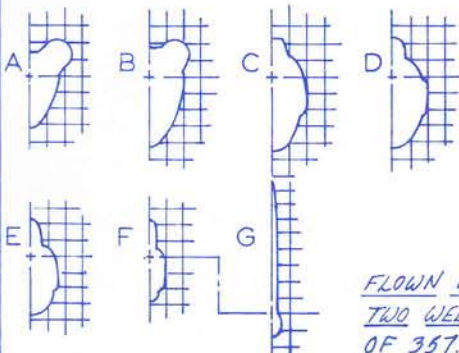


1929 VERSION

SILVER  
COLOR LINE

BLUE

SISTER SHIP TO THE ABOVE PLANE WAS N-248 WITH RACE NUMBER "8"

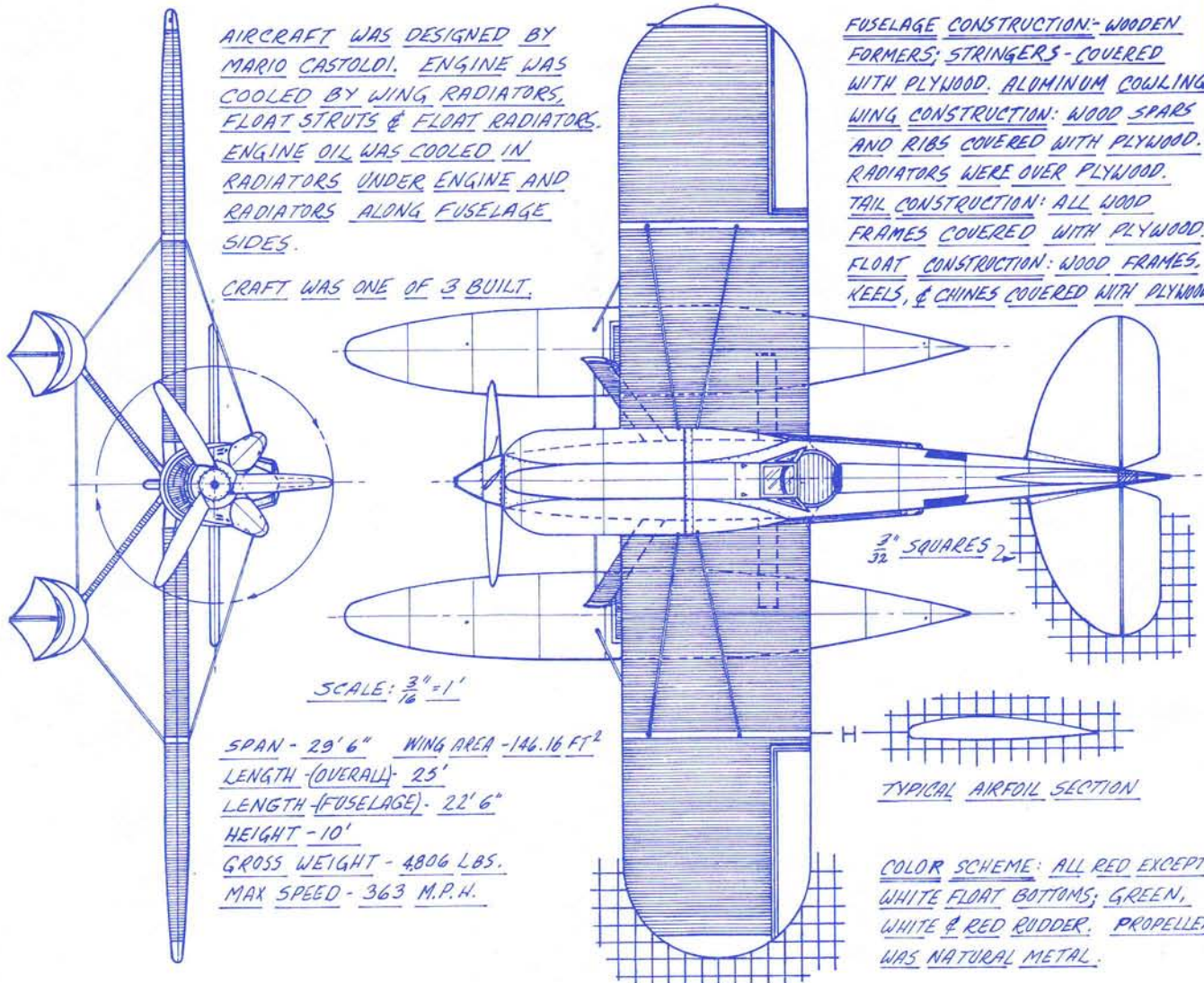


FLOWN BY F/O H.R.D. WAGHORN N-247 WON THE 1929 SCHNEIDER TROPHY CONTEST. TWO WEEKS LATER S/LDR. A.H. ORLEBAR SET A WORLD AIR SPEED RECORD OF 357.7 M.P.H. IN SAME AIRCRAFT.

AIRCRAFT WAS DESIGNED BY MARIO CASTOLDI. ENGINE WAS COOLED BY WING RADIATORS, FLOAT STRUTS & FLOAT RADIATORS. ENGINE OIL WAS COOLED IN RADIATORS UNDER ENGINE AND RADIATORS ALONG FUSELAGE SIDES.

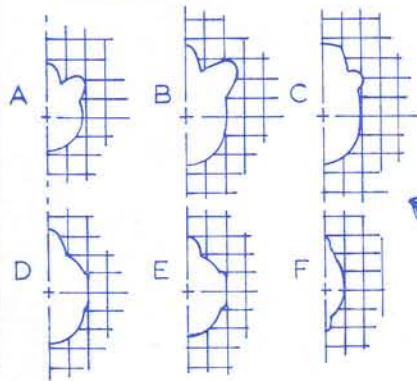
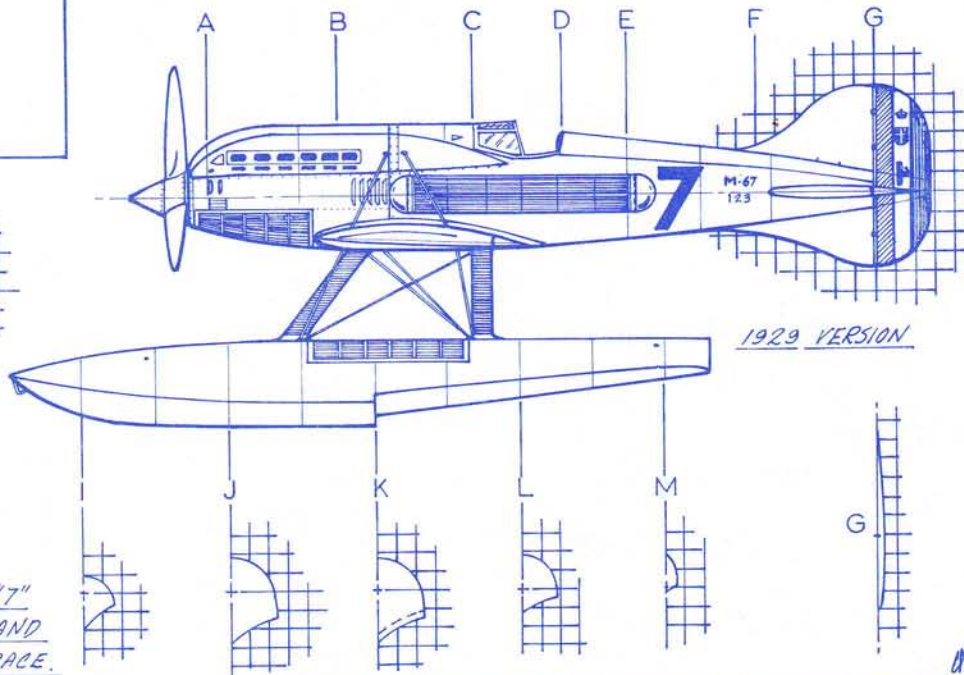
CRAFT WAS ONE OF 3 BUILT.

FUSELAGE CONSTRUCTION: WOODEN FORMERS; STRINGERS - COVERED WITH PLYWOOD. ALUMINUM COUPLING. WING CONSTRUCTION: WOOD SPARS AND RIBS COVERED WITH PLYWOOD. RADIATORS WERE OVER PLYWOOD. TAIL CONSTRUCTION: ALL WOOD FRAMES COVERED WITH PLYWOOD. FLOAT CONSTRUCTION: WOOD FRAMES, KEELS, & CHINES COVERED WITH PLYWOOD.



NOTE: OTHER TWO MACCHI 67s DID NOT HAVE RADIATORS ON FLOATS & STRUTS.

POWERPLANT: 1400 H.P. ISOTTA-FRASCINI ASSO 18 CYLINDER WATERCOOLED "W" TYPE ENGINE. 3 BLADE METAL FIXED PITCH PROP.



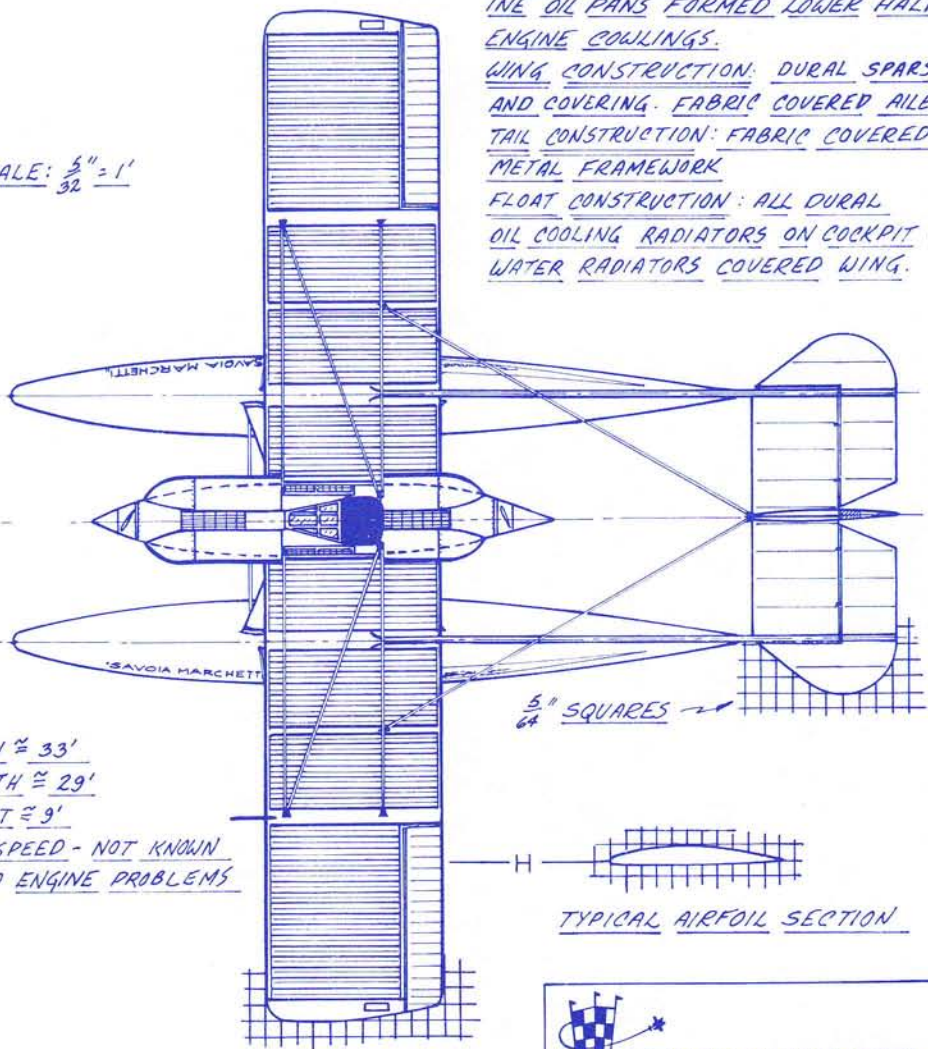
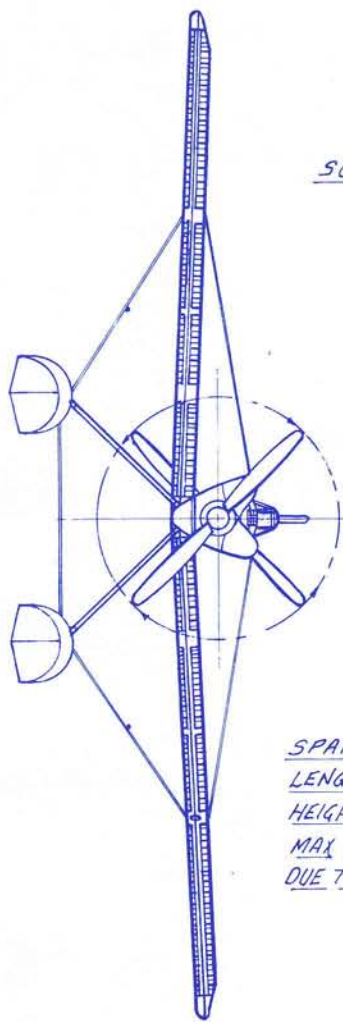
LT. REMO CADRINGHER FLEW "7" TO 5TH PLACE AT COWES, ENGLAND IN 1929 SCHNEIDER TROPHY RACE.

FUSELAGE CONSTRUCTION: ALL DURAL FORMERS, STRINGERS & COVERING. ENGINE OIL PANS FORMED LOWER HALF OF ENGINE COWLINGS.

WING CONSTRUCTION: DURAL SPARS, RIBS AND COVERING. FABRIC COVERED AILERONS. TAIL CONSTRUCTION: FABRIC COVERED METAL FRAMEWORK

FLOAT CONSTRUCTION: ALL DURAL OIL COOLING RADIATORS ON COCKPIT SIDES. WATER RADIATORS COVERED WING.

SCALE:  $\frac{5}{32} = 1'$



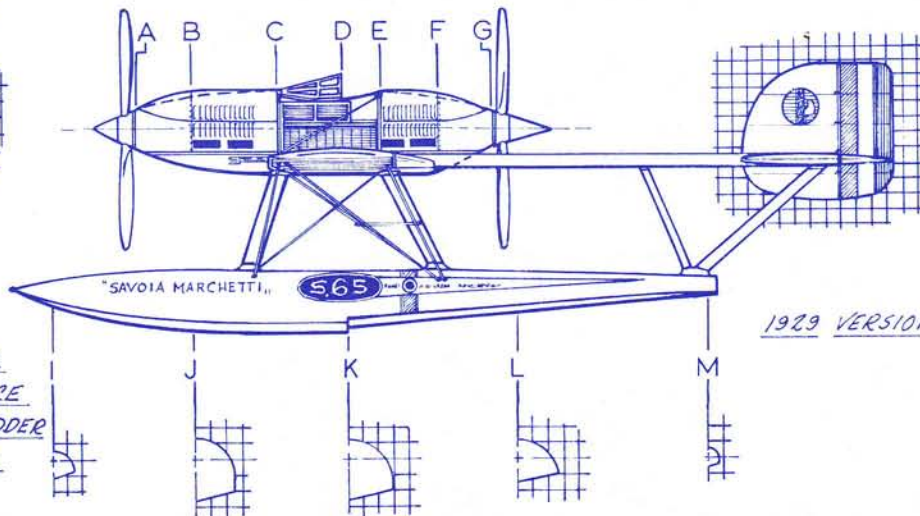
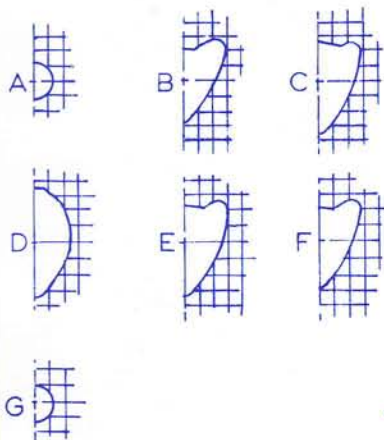
SPAN  $\approx 33'$   
 LENGTH  $\approx 29'$   
 HEIGHT  $\approx 9'$   
 MAX SPEED - NOT KNOWN  
 DUE TO ENGINE PROBLEMS

$\frac{5}{64}$  SQUARES

TYPICAL AIRFOIL SECTION



POWERPLANTS: 2 1000 HORSEPOWER ISOTTA FRASCHINI ENGINES TURNING METAL PROPELLERS IN OPPOSITE DIRECTIONS.

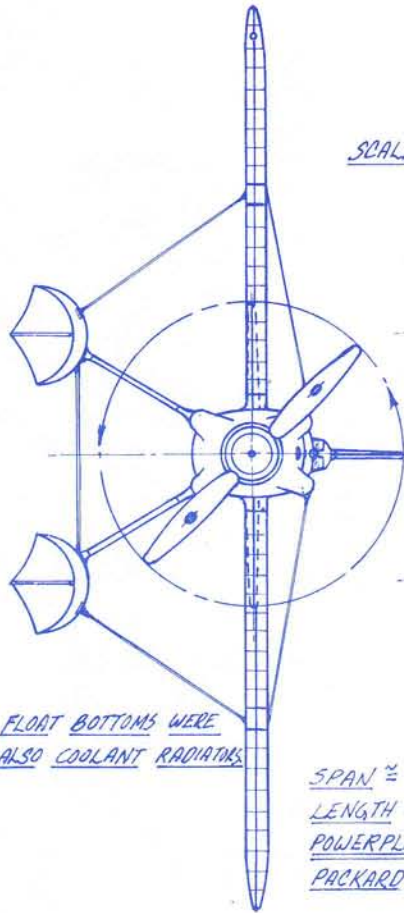


COLOR SCHEME: NATURAL DURAL FUSELAGE. BALANCE OF AIRCRAFT WAS RED. RUDDER WAS GREEN, WHITE & RED.

AIRCRAFT WAS WORKED ON BETWEEN 1929 AND 1931 IN HOPES OF DEVELOPING A SUCCESSFUL SCHNEIDER RACER BUT RADIATOR AREA WAS ONLY SUFFICIENT FOR ONE ENGINE TO BE RUN WIDE OPEN AT A TIME.

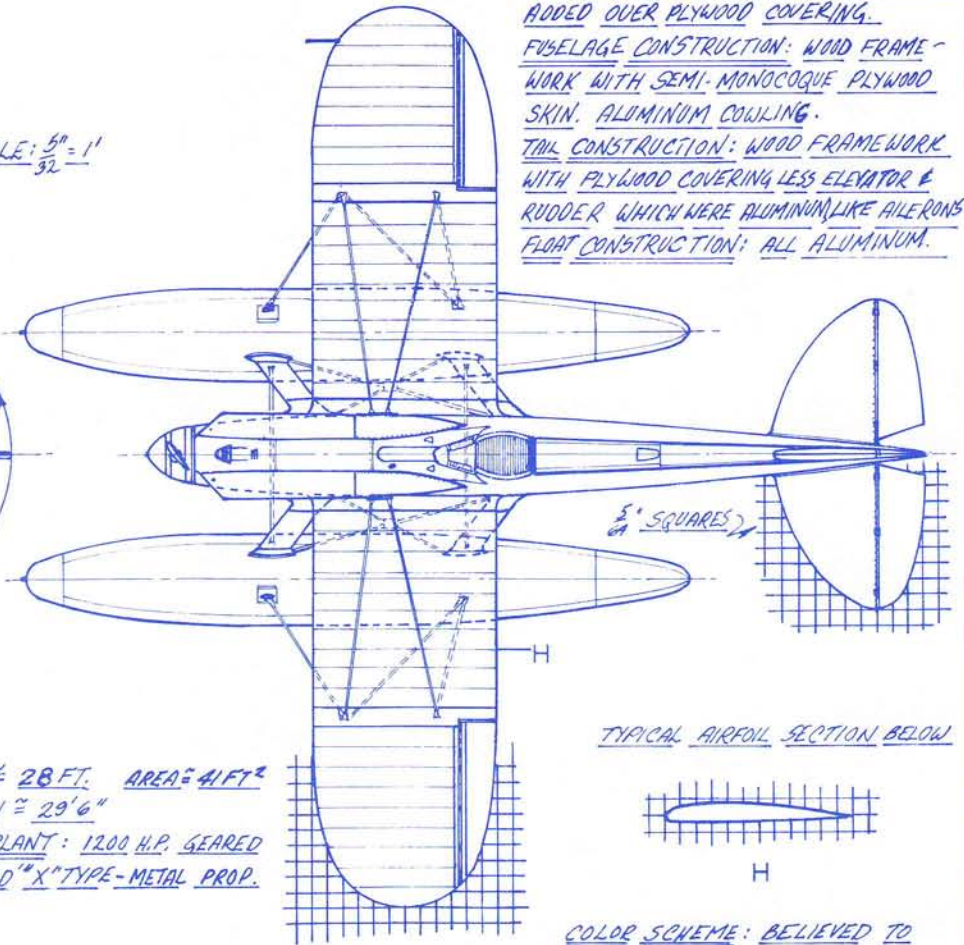
WING CONSTRUCTION: WOOD SPARS, RIBS & PLYWOOD COVERING. WATER RADIATORS ADDED OVER PLYWOOD COVERING.  
FUSELAGE CONSTRUCTION: WOOD FRAMEWORK WITH SEMI-MONOCOQUE PLYWOOD SKIN. ALUMINUM COWLING.  
TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING LESS ELEVATOR & RUDDER WHICH WERE ALUMINUM LIKE ALERONS  
FLOAT CONSTRUCTION: ALL ALUMINUM.

SCALE:  $\frac{5''}{32} = 1'$

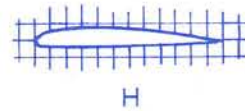


FLOAT BOTTOMS WERE ALSO COOLANT RADIATORS.

SPAN  $\approx$  28 FT. AREA  $\approx$  41 FT<sup>2</sup>  
 LENGTH  $\approx$  29'6"  
 POWERPLANT: 1200 H.P. GEARED  
 PACKARD "X" TYPE-METAL PROP.



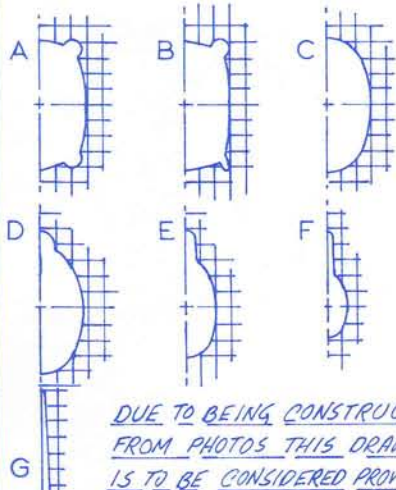
TYPICAL AIRFOIL SECTION BELOW



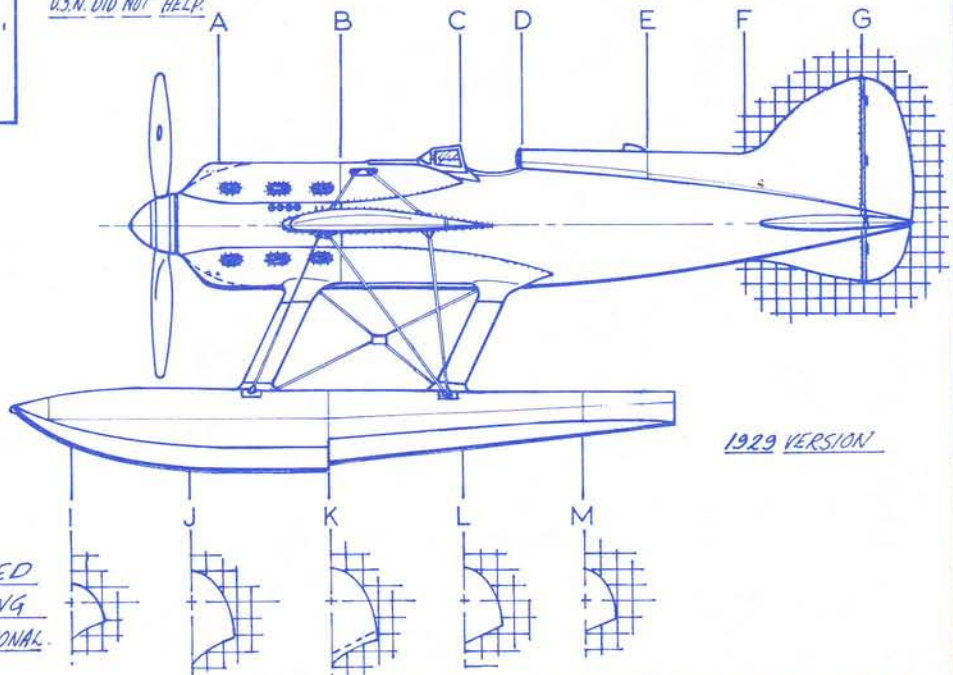
COLOR SCHEME: BELIEVED TO BE NAVY BLUE.



MEANT FOR THE 1929 SCHNEIDER RACE, 'MERCURY' WAS TO BE FITTED WITH 1500 H.P. PACKARD ENGINE & TRANSPORTED TO ENGLAND BY U.S.N. DESTROYER; U.S.N. DID NOT HELP.



DUE TO BEING CONSTRUCTED FROM PHOTOS THIS DRAWING IS TO BE CONSIDERED PROVISIONAL.



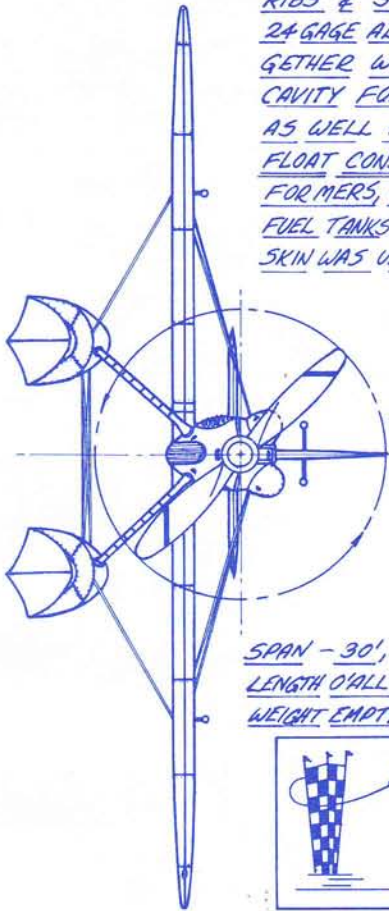
1929 VERSION

PRIVATELY FUNDED BY MERCURY FLYING CORP. & DIRECTED BY LT. AL WILLIAMS, CRAFT WAS DESIGNED BY BUREAU OF AERONAUTICS U.S.N. & BUILT BY THE NAVAL AIRCRAFT FACTORY. CRAFT WAS UNABLE TO TAKE OFF - OVERWEIGHT. *OK*

WING CONSTRUCTION: ALL ALUMINUM RIBS & SPARS (2) COVERED WITH 24 GAGE ALUMINUM SHEETS RIVETED TOGETHER WITH  $\frac{1}{16}$ " SPACERS FORMING CAVITY FOR USE AS WING RADIATORS AS WELL AS WING SURFACE.

FLOAT CONSTRUCTION: ALL ALUMINUM FORMERS, KEEL, CHINES AND COVERING. FUEL TANKS WERE IN FLOATS AND UPPER SKIN WAS USED AS RADIATOR AREA.

FUSELAGE CONSTRUCTION: SEMI-MONOCOQUE CONSISTING OF 46 FORMERS HELD IN PLACE BY 14 GAGE ANGLE SECTION ENGINE MOUNTS RUNNING FULL LENGTH OF FUSELAGE. FIN IS INTEGRAL WITH FUSELAGE AND ENTIRE FIN ASSY. COVERED WITH TINPLATE SHEETING. STAB, RUDDER & ELEVATOR CONST. ALUMINUM SPARS, RIBS & COVERING.

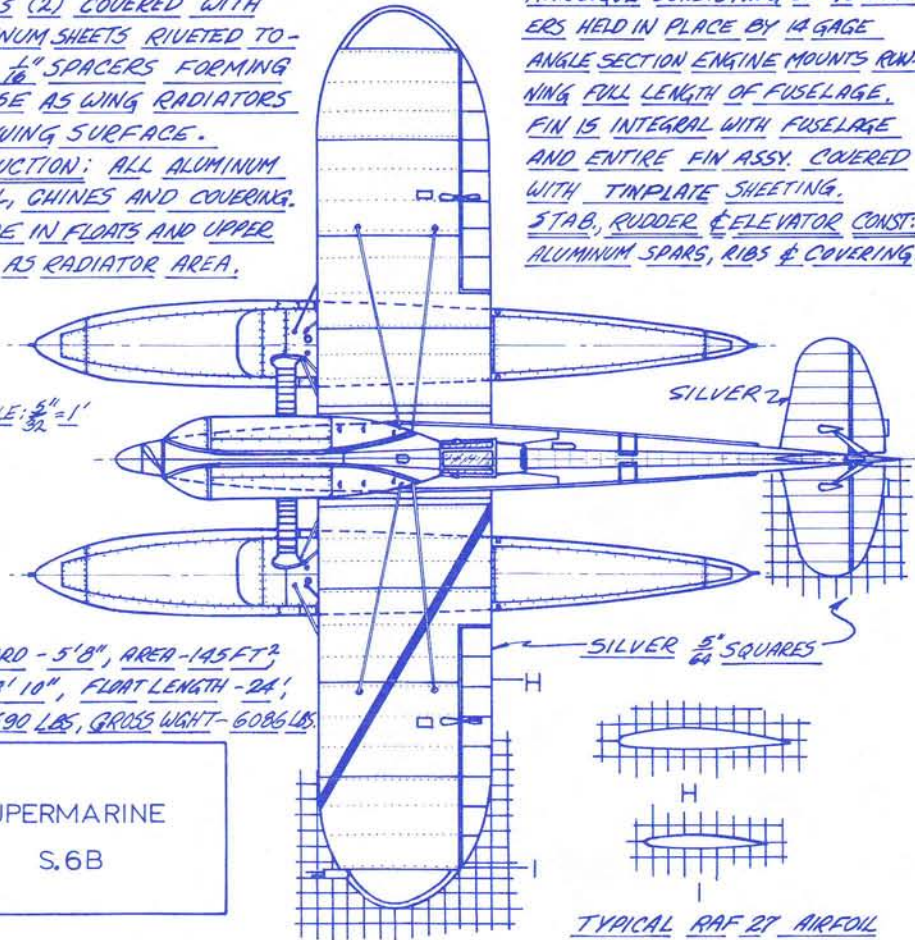


SCALE:  $\frac{5}{32}$ " = 1'

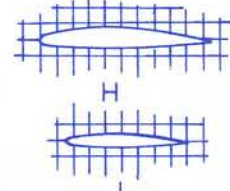
SPAN - 30', CHORD - 5'8", AREA - 145 FT<sup>2</sup>,  
LENGTH O'ALL - 28'10", FLOAT LENGTH - 24',  
WEIGHT EMPTY - 4590 LBS, GROSS WGT - 6086 LBS.



SUPERMARINE  
S.6B



SILVER  $\frac{5}{64}$ " SQUARES

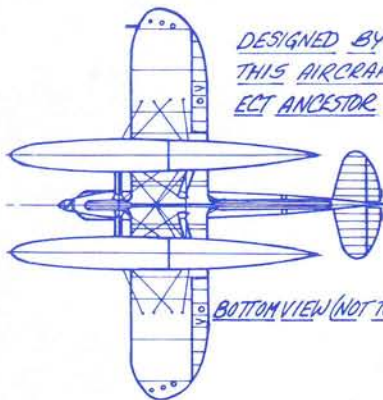


TYPICAL RAF 27 AIRFOIL

VIEW BELOW SHOWS RIGGING OF FLOATS TO WINGS AND FUSELAGE

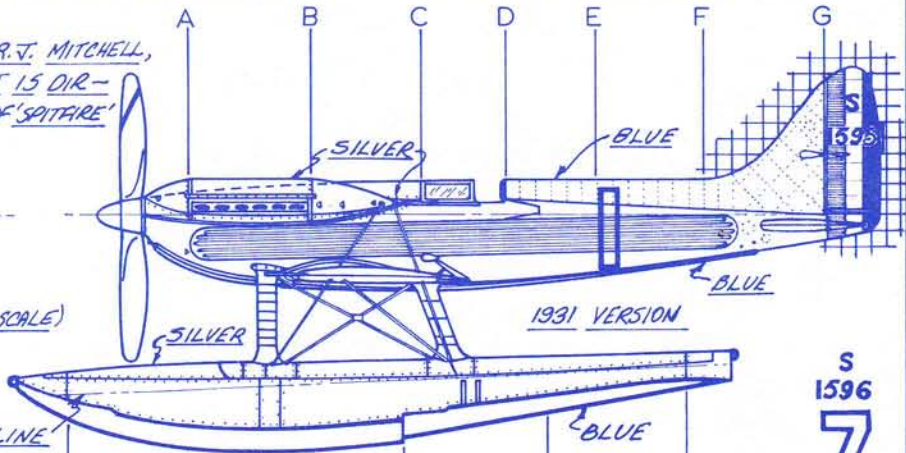
POWERPLANT: ROLLS-ROYCE 'R-29' 2950 H.P. FIXED PITCH PROP.

COLOR SCHEME: SILVER & BLUE WITH WHITE "1", RED, WHITE & BLUE RUDDER.



DESIGNED BY R.J. MITCHELL,  
THIS AIRCRAFT IS DIRECT ANCESTOR OF 'SPITFIRE'

BOTTOM VIEW (NOT TO SCALE)



SILVER

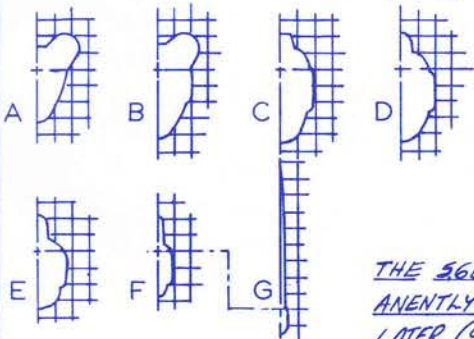
BLUE

1931 VERSION

SILVER

BLUE

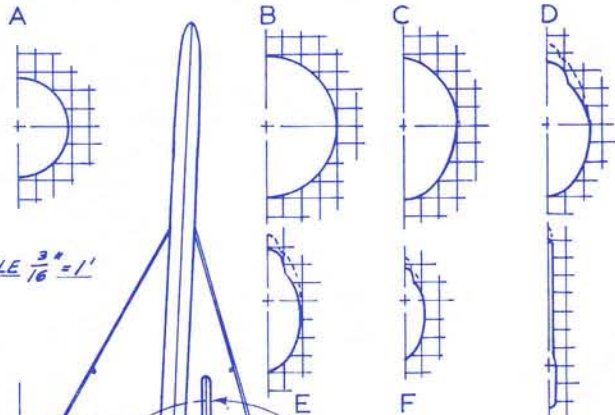
S  
1596  
7



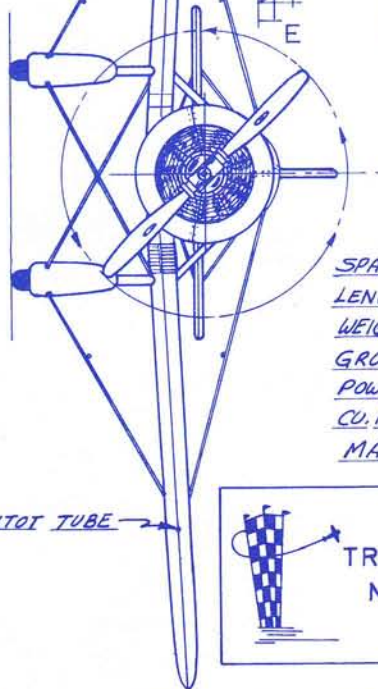
COLOR LINE

ABOVE NUMBERS WERE ON TAIL & FUSELAGE OF RESERVE PLANE

THE S.6B FLOWN BY FLT. LT. J. N. BOOTHMAN WON THE SCHNEIDER TROPHY PERMANENTLY FOR GREAT BRITAIN IN SEPT. 1931 @ 340 M.P.H. FLT. LT. G. H. STAINFORTH LATER (9-29-'31) TOOK WORLD SPEED RECORD OF 406.997 M.P.H. FOR ENGLAND.



SCALE  $\frac{3}{16}'' = 1'$



SPAN - 29' 2"  
 LENGTH - 20' 2"  
 WEIGHT EMPTY - 1475 LBS.  
 GROSS WEIGHT - 1940 LBS.  
 POWERPLANT - 400 HP 975  
 CU. IN. WRIGHT R-975  
 MAX SPEED - 235 MPH



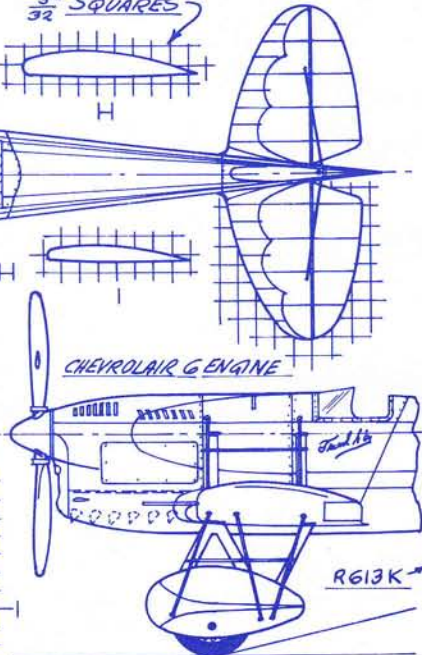
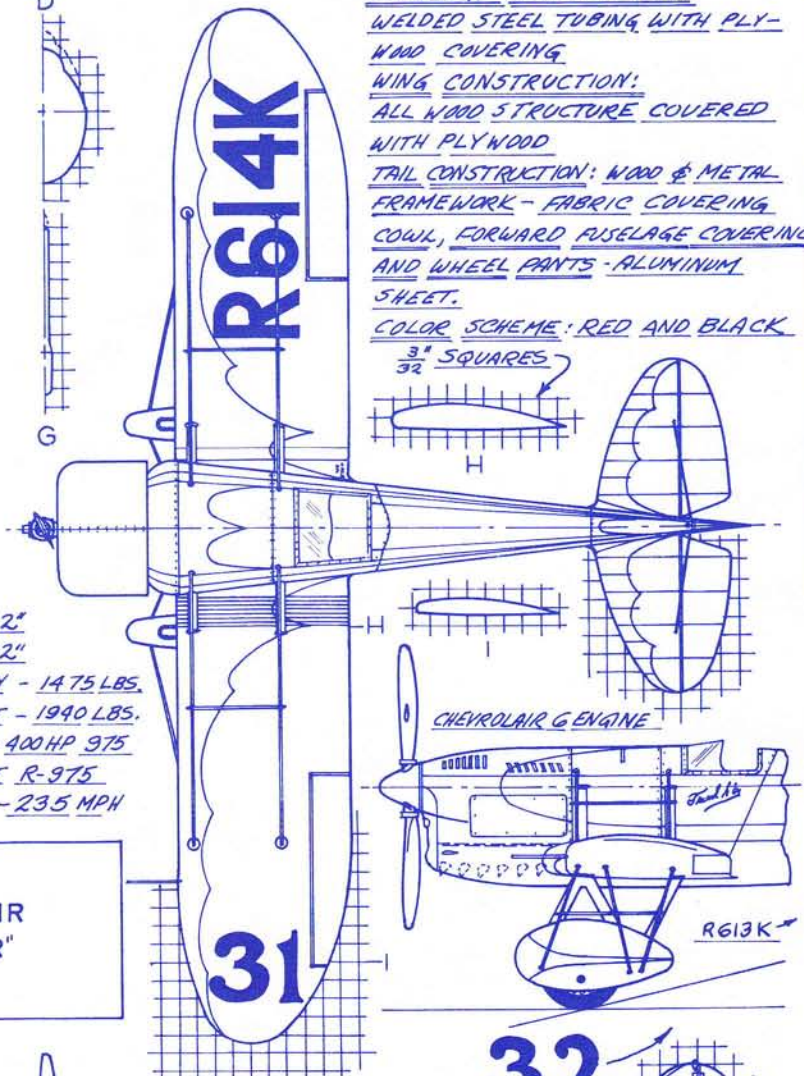
FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBING WITH PLYWOOD COVERING

WING CONSTRUCTION:  
 ALL WOOD STRUCTURE COVERED WITH PLYWOOD

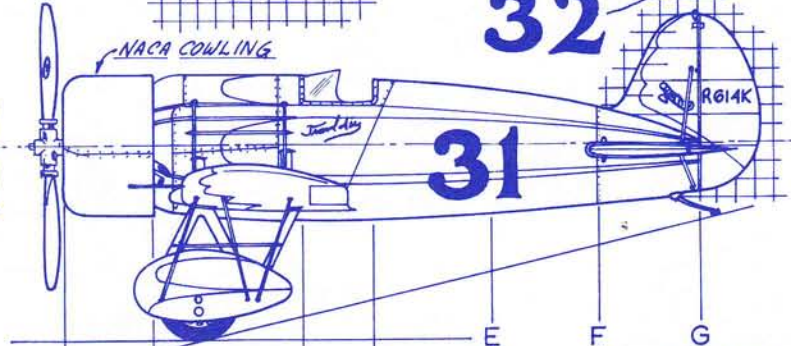
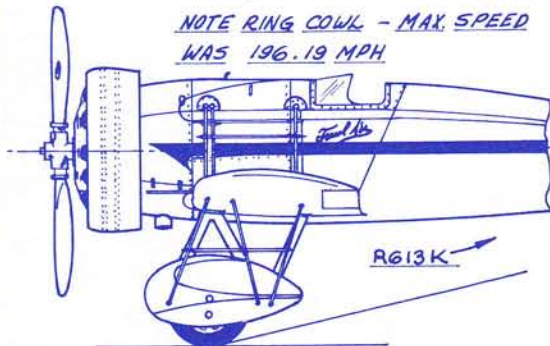
TAIL CONSTRUCTION: WOOD & METAL FRAMEWORK - FABRIC COVERING  
 COWL, FORWARD FUSELAGE COVERING AND WHEEL PANTS - ALUMINUM SHEET.

COLOR SCHEME: RED AND BLACK

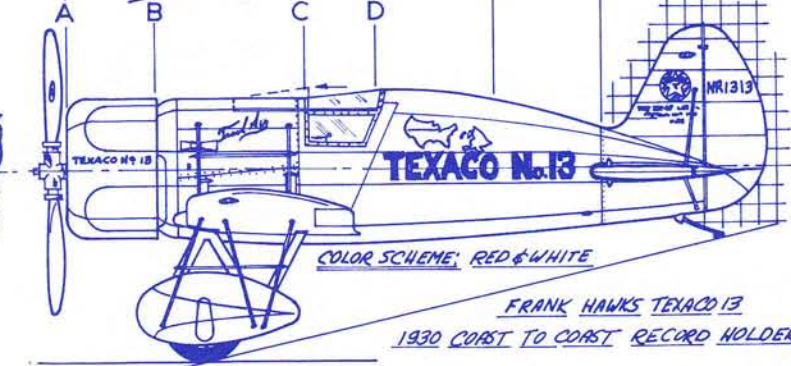
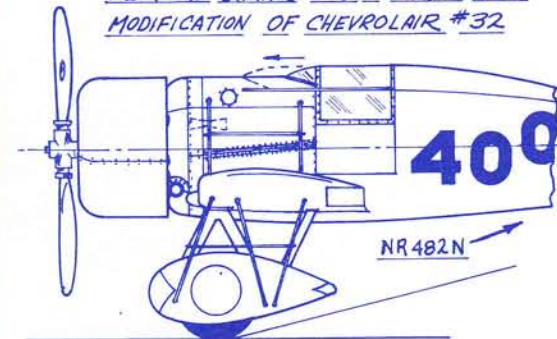
$\frac{3}{32}$ " SQUARES



NOTE RING COWL - MAX. SPEED WAS 196.19 MPH



FLORENCE BARNES 225 HP WRIGHT J-6-7 MODIFICATION OF CHEVROLAIR #32

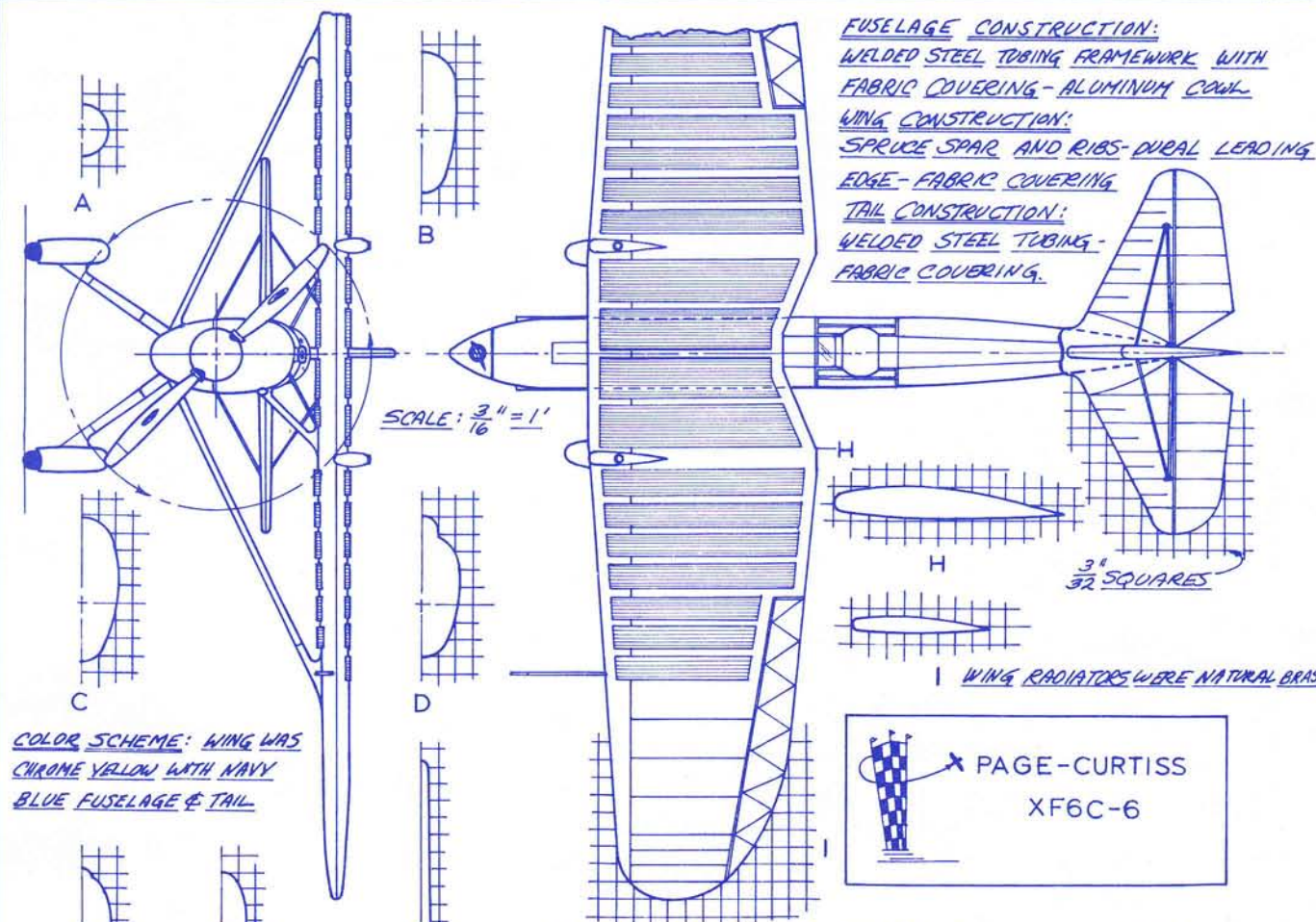


FRANK HAWKS TEXACO #13  
 1930 COAST TO COAST RECORD HOLDER

JIMMY DOOLITTLE'S RED & YELLOW SHELL OIL RACER  
 WON 2ND PLACE - 1930 THOMPSON - PILOT: JIM HAIZLIP

NUMBER 31 - OFTEN CALLED "TRAVEL AIR MYSTERY'S" WON 1929  
 THOMPSON CUP RACE - FLOWN BY DOUG DAVIS

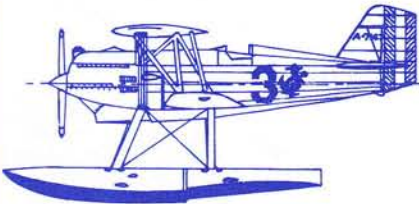
+13596



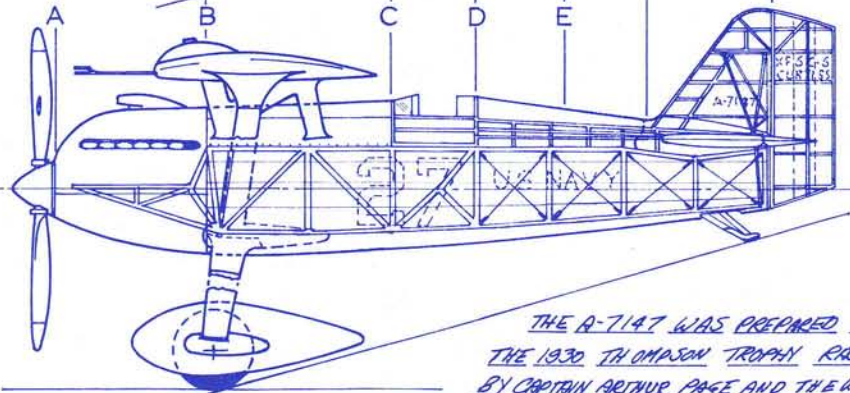
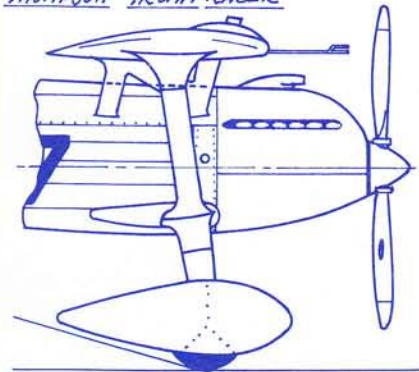
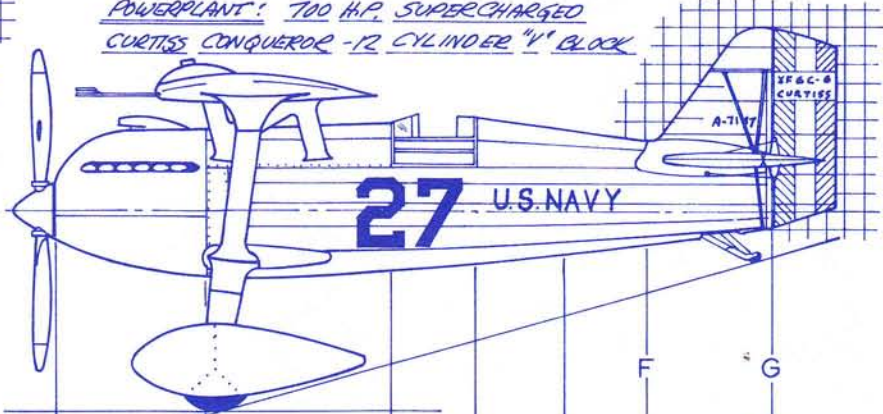
**COLOR SCHEME:** WING WAS CHROME YELLOW WITH NAVY BLUE FUSELAGE & TAIL



**POWERPLANT:** 700 H.P. SUPERCHARGED CURTISS CONQUEROR - 12 CYLINDER "V" BLOCK



ABOVE VIEW SHOWS BU NO. A-7147 USED IN MARINE TROPHY RACE BEFORE BEING CONVERTED TO PAGE'S THOMPSON TROPHY RACER



THE A-7147 WAS PREPARED FOR THE 1930 THOMPSON TROPHY RACE BY CAPTAIN ARTHUR PAGE AND THE U.S. NAVY

SPAN - 31'7" LENGTH 22'10"  
 THIS AIRCRAFT WAS LAST SERVICE RACER AT MAJOR NATIONAL AIR RACES.

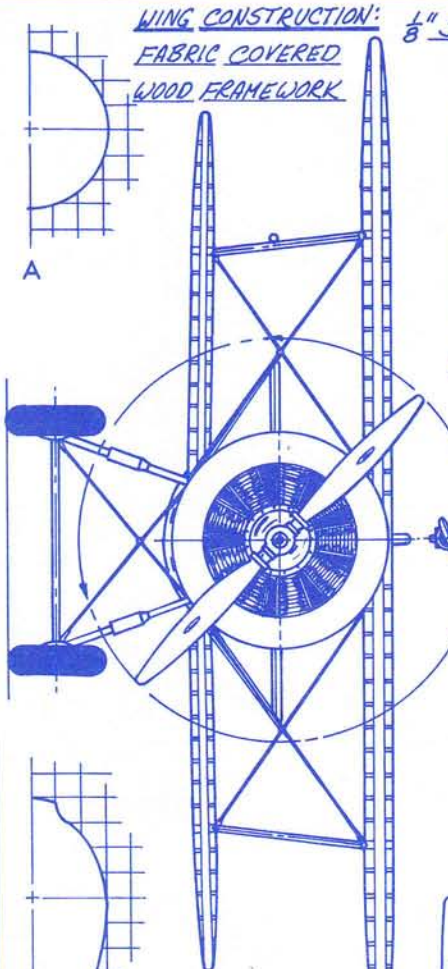
CAPT. PAGE AVERAGED 219 MPH FOR 17 LAPS OF THE THOMPSON BEFORE BEING OVERCOME BY CARBON MONOXIDE AND CRASHING. ESTIMATED TOP SPEED OF AIRCRAFT WAS CLOSE TO 250 MPH



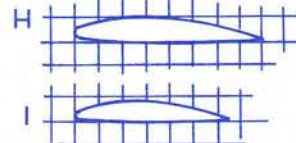
WING CONSTRUCTION:

FABRIC COVERED  
WOOD FRAMEWORK

$\frac{1}{8}$ " SQUARES



NR-10538



M-6 AIRFOIL

SPAN-UPPER-21'

SPAN-LOWER-10'

LENGTH 19' 6"

WING AREA - 112 FT<sup>2</sup>

EMPTY WEIGHT - 1580 LBS

GROSS WEIGHT - 1895 LBS

MAX SPEED - 202 MPH

COCKPIT SIDES  
FOLD DOWN

COLOR SCHEME: BLACK FUSELAGE, GOLD WING & TAIL



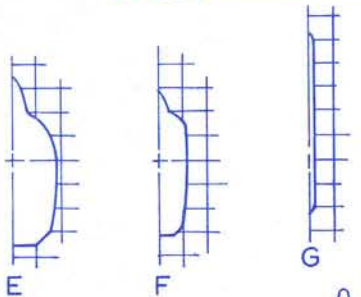
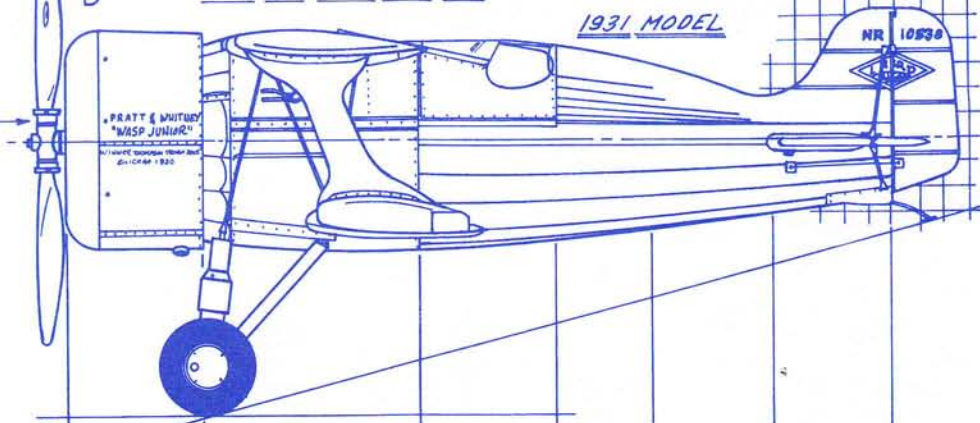
LAIRD LC-DW-300  
"SOLUTION"

POWERPLANT:

470 H.P. P.&W. WASP JR.

PROPELLER:  
8'5" DIA. FIXED  
PITCH

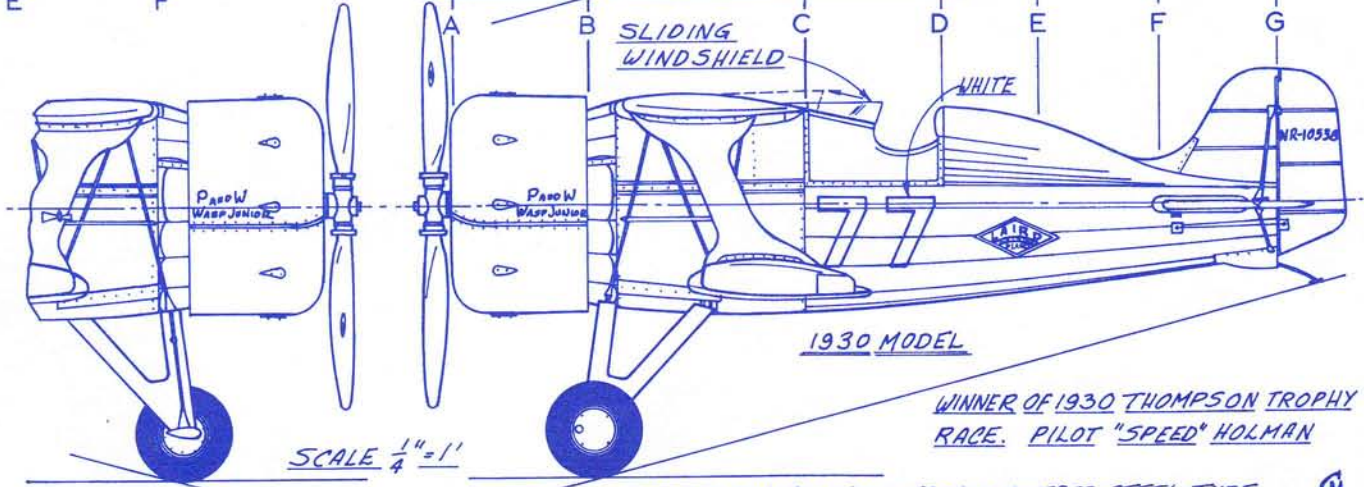
1931 MODEL



SLIDING  
WINDSHIELD

WHITE

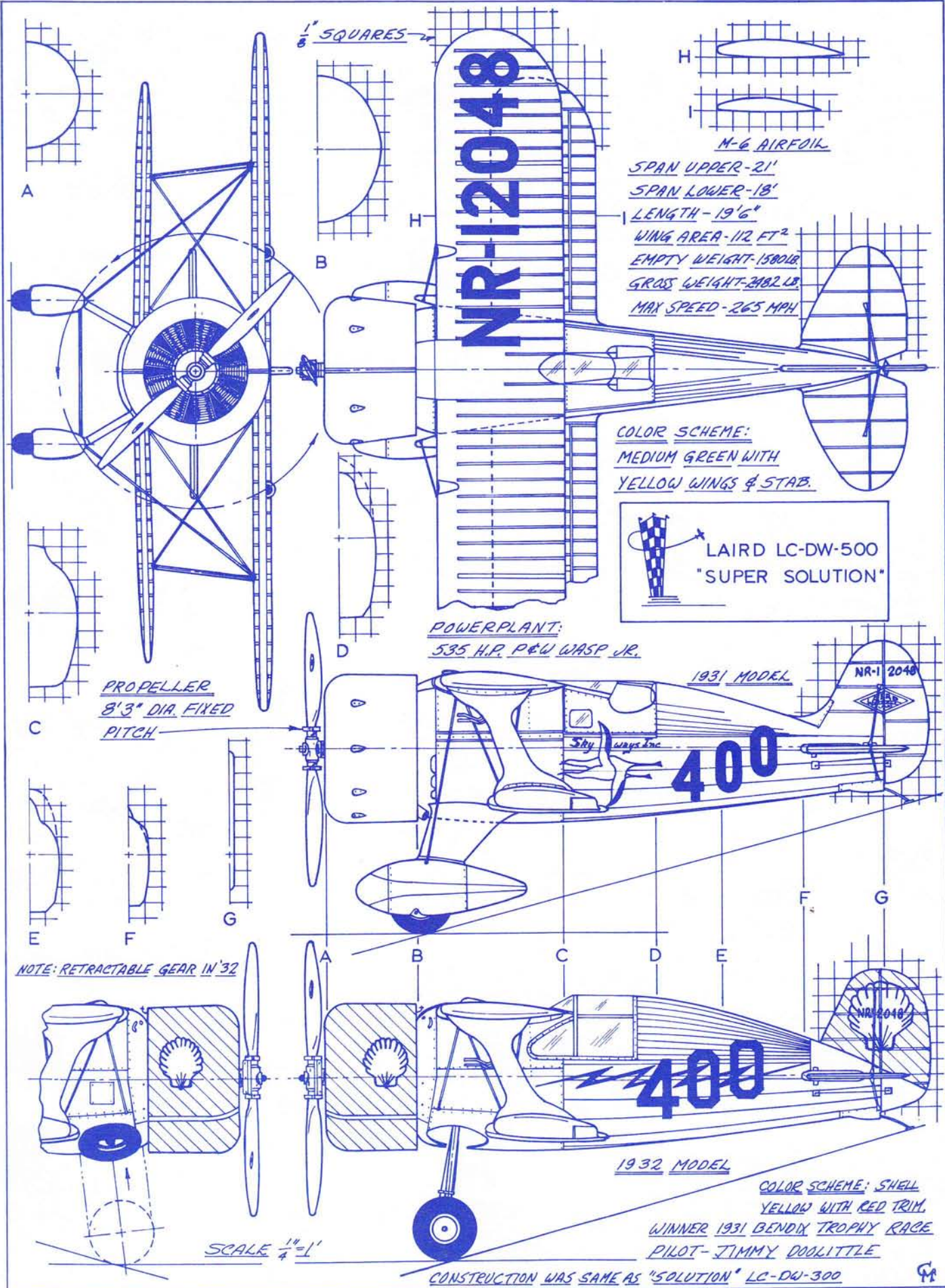
1930 MODEL



WINNER OF 1930 THOMPSON TROPHY  
RACE. PILOT "SPEED" HOLMAN

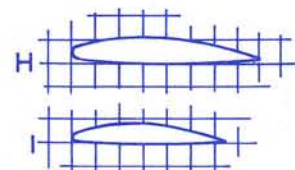
SCALE  $\frac{1}{4}$ " = 1'

FUSELAGE CONSTRUCTION: FABRIC COVERED STEEL TUBE



$\frac{1}{6}$  SQUARES

**NR-12048**



M-6 AIRFOIL

SPAN UPPER - 21'  
SPAN LOWER - 18'  
LENGTH - 19'6"  
WING AREA - 112 FT<sup>2</sup>  
EMPTY WEIGHT - 1580 LB  
GROSS WEIGHT - 2082 LB  
MAX SPEED - 265 MPH

COLOR SCHEME:  
MEDIUM GREEN WITH  
YELLOW WINGS & STAB.



POWERPLANT:  
535 H.P. P&W WASP JR.

PROPELLER  
8'3" DIA. FIXED  
PITCH

1931 MODEL

NR-12048

**400**

NOTE: RETRACTABLE GEAR IN '32

1932 MODEL

COLOR SCHEME: SHELL  
YELLOW WITH RED TRIM,  
WINNER 1931 BENDIX TROPHY RACE  
PILOT - JIMMY DOOLITTLE

SCALE  $\frac{1}{4}$ " = 1'

CONSTRUCTION WAS SAME AS "SOLUTION" LC-DW-300

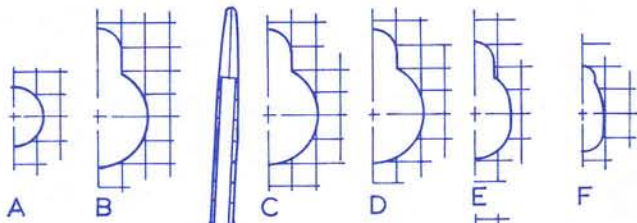


WING CONSTRUCTION: RECTANGULAR SPRUCE  
 SPARS - PLYWOOD RIBS - INTERNAL WIRE  
 BRACING - FABRIC COVERED EXCEPT TIPS  
 AND LEADING EDGE COVERED WITH  $\frac{1}{8}$ " PLYWOOD  
 FUSELAGE CONSTRUCTION - WELDED STEEL  
 TUBING - WOOD FORMERS & STRINGERS  
 FABRIC COVERED EXCEPT ALUMINUM  
 COOLING AND AREA AROUND COCKPIT  
 TAIL CONSTR.: STEEL TUBE - FABRIC COVERED

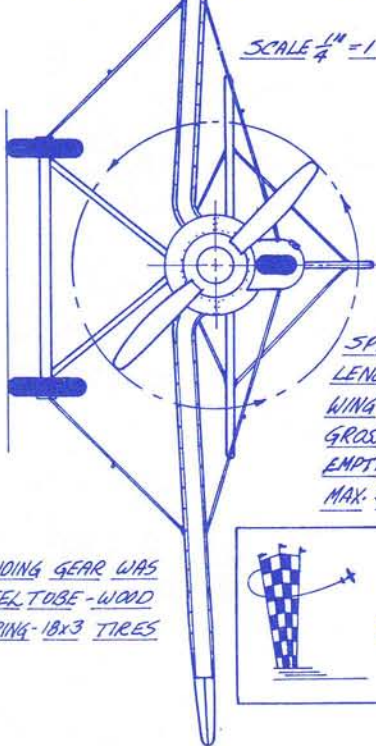
NOTE: PLYWOOD COVERING  
 ON TURTLE DECK.

$\frac{1}{8}$ " SQUARES

COLOR SCHEME: (INITIAL) SILVER-BLACK  
 NUMERALS - LICENCE NUMBER NR 601V  
 1930-'35 - ALL WHITE-BLACK NUMERALS  
 EDGED IN GOLD.

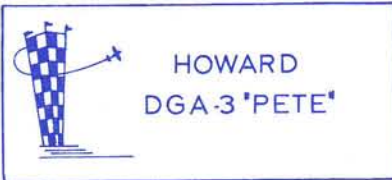


SCALE  $\frac{1}{4}$ " = 1'



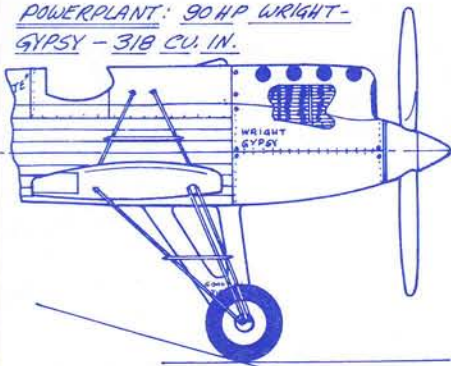
SPAN = 20' 1"  
 LENGTH = 17' 9"  
 WING AREA = 63 FT<sup>2</sup>  
 GROSS WT. = 900 LBS.  
 EMPTY WT. = 669 LBS.  
 MAX. SPEED = 194.6 MPH

LANDING GEAR WAS  
 STEEL TUBE - WOOD  
 FAIRING - 18x3 TIRES

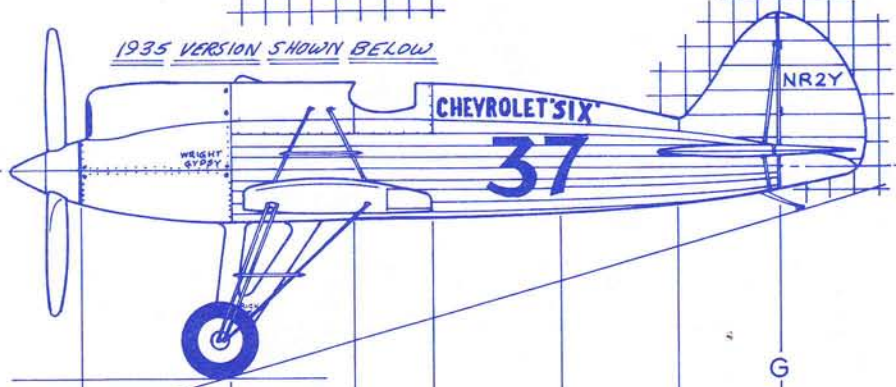


HOWARD  
 DGA-3 'PETE'

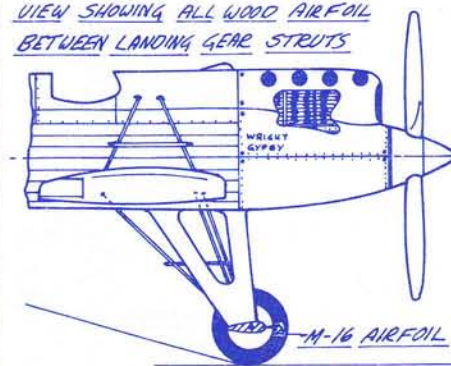
POWERPLANT: 90 HP WRIGHT-  
 GYPSY - 318 CU. IN.



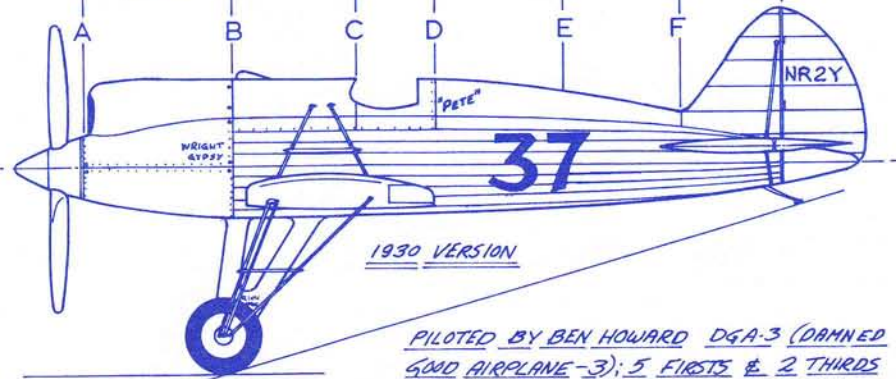
1935 VERSION SHOWN BELOW



VIEW SHOWING ALL WOOD AIRFOIL  
 BETWEEN LANDING GEAR STRUTS



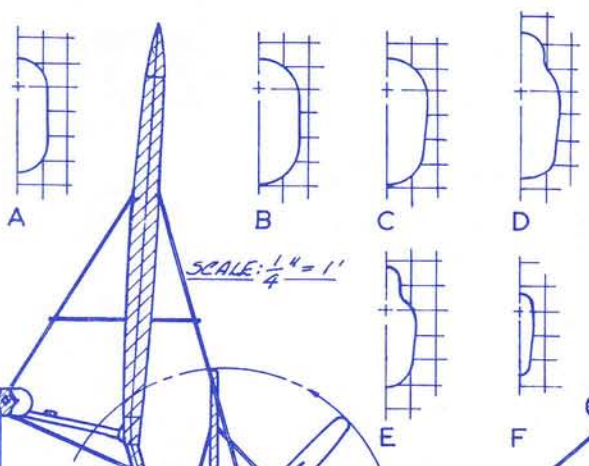
1930 VERSION



PILOTED BY BEN HOWARD DGA-3 (DAMNED  
 GOOD AIRPLANE-3); 5 FIRSTS & 2 THIRDS  
 AT 1930 NATIONAL AIR RACE EVENTS.

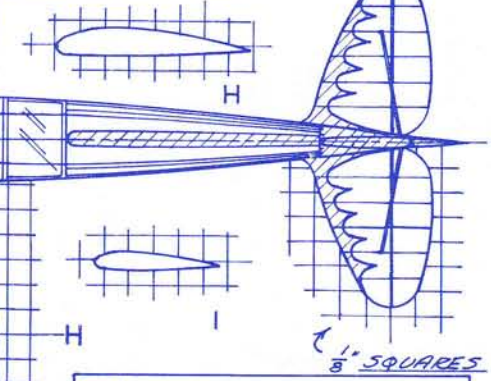
AIRCRAFT REBUILT IN 1947 AS "BAKER SPECIAL"  
 FOR GOODYEAR TROPHY RACES

AIRCRAFT WAS ACTIVELY RACED AT NATIONALS THRU 1935 TAKING  
 MANY PRIZE MONEY PLACES IN VARIOUS LOW POWERED EVENTS.



SCALE:  $\frac{1}{4}'' = 1'$

FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBING FRAME WITH  
 WOODEN FORMERS AND STRINGERS.  
 FABRIC COVERED EXCEPT PLYWOOD  
 COVERED TURTLE DECK, ALUMINUM  
 COUL AND UPPER DECK TO COCKPIT  
WING CONSTRUCTION:  
 SPRUCE SPARS, WOOD RIBS WITH  
 PLYWOOD COVERING.  
TAIL CONSTRUCTION:  
 WELDED STEEL TUBE FRAME WITH  
 FABRIC COVERING



SPAN  $\approx 21'6''$   
 LENGTH  $\approx 18'6''$   
 MAX SPEED - 221.7 MPH  
 POWERPLANT: MENASCO  
 544 CU. IN. 6 CYLINDER

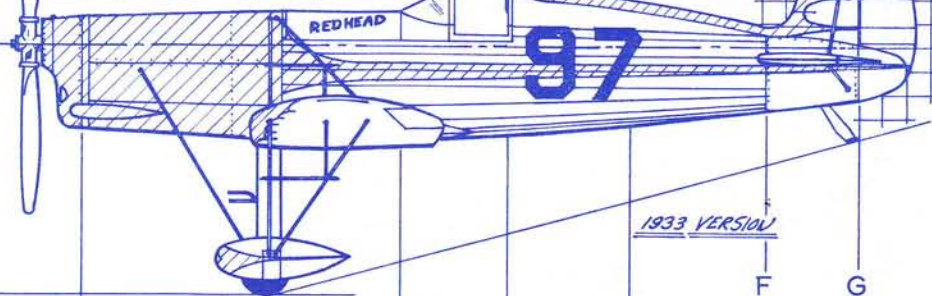
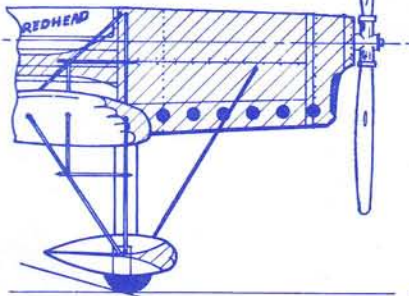
NOTE: INVERTED GULL WING  
 REMOVED IN 1934 - CG-3 AIRFOIL



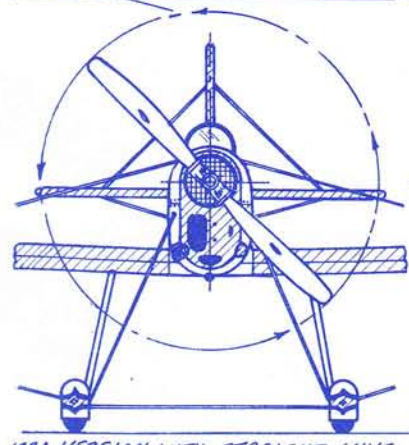
COLOR SCHEME: WHITE  
 WITH RED COUL. & TRIM

VIEW SHOWING ENGINE EXHAUSTS

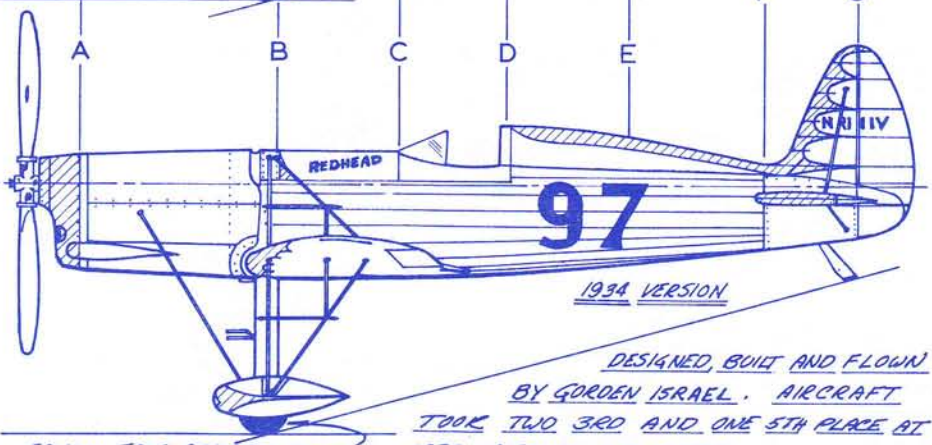
GROUND ADJUSTABLE PITCH PROPELLER



1933 VERSION



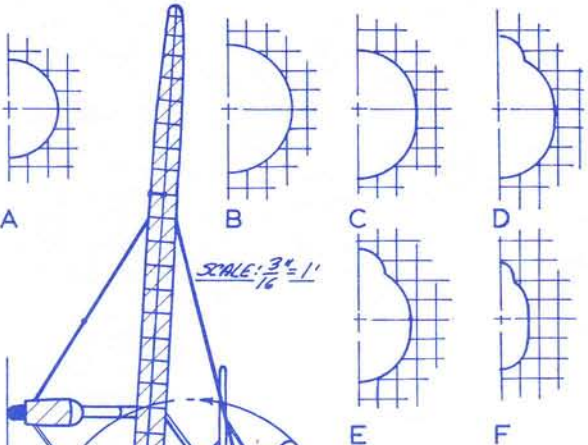
1934 VERSION WITH STRAIGHT WING



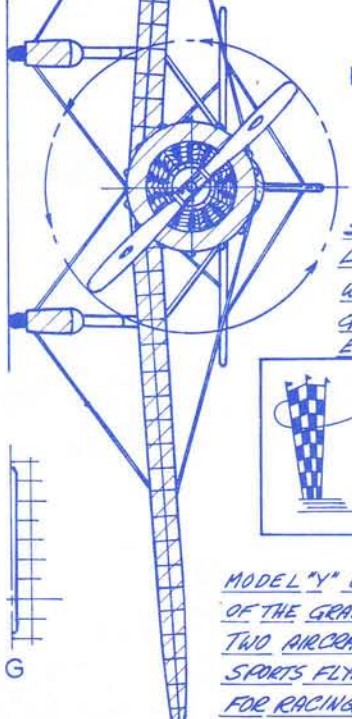
1934 VERSION

BALLOON TIRES ABSORBED SHOCK

DESIGNED, BUILT AND FLOWN  
 BY GORDEN ISRAEL. AIRCRAFT  
 TOOK 2ND 3RD AND ONE 5TH PLACE AT  
 1933 NATIONAL AIR RACES.



SCALE:  $\frac{3}{16} = 1'$



SPAN - 30'  
 LENGTH - 21'  
 WING AREA - 138 FT<sup>2</sup>  
 GROSS WEIGHT - 2000 LBS.  
 EMPTY WEIGHT - 1500 LBS.

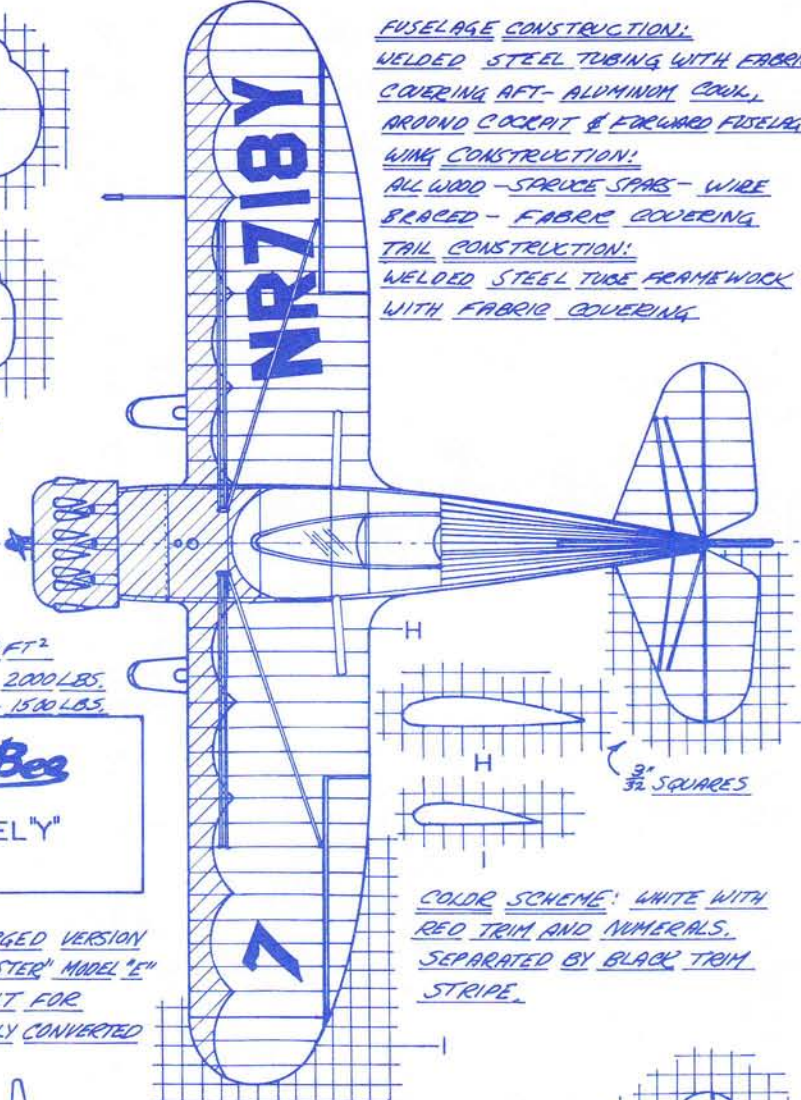


MODEL "Y" WAS AN ENLARGED VERSION OF THE GRANVILLE "SPORTSTER" MODEL "E" TWO AIRCRAFT WERE BUILT FOR SPORTS FLYING BUT RAPIDLY CONVERTED FOR RACING.

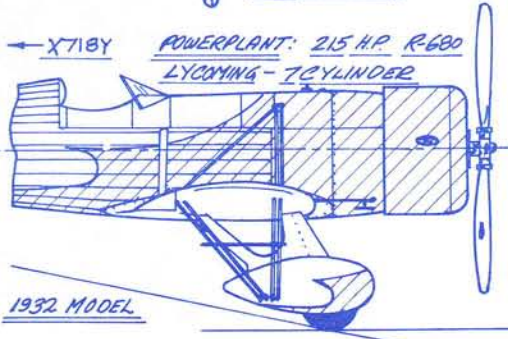
FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBING WITH FABRIC COVERING AFT - ALUMINUM CORNERS AROUND COCKPIT & FORWARD FUSELAGE

WING CONSTRUCTION:  
 ALL WOOD - SPRUCE SPARS - WIRE BRACED - FABRIC COVERING

TAIL CONSTRUCTION:  
 WELDED STEEL TUBE FRAMEWORK WITH FABRIC COVERING

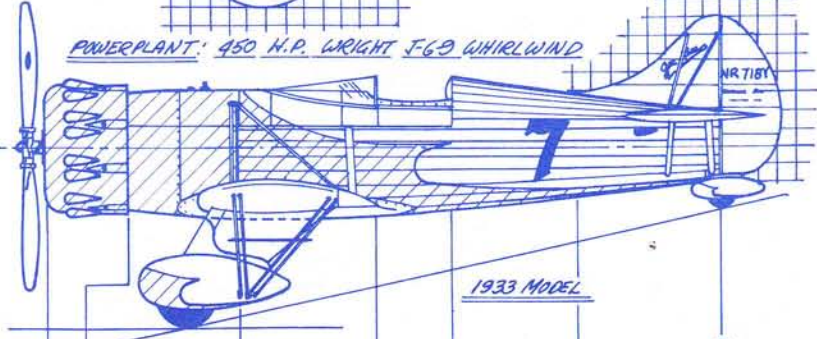


COLOR SCHEME: WHITE WITH RED TRIM AND NUMERALS, SEPARATED BY BLACK TRIM STRIPE.



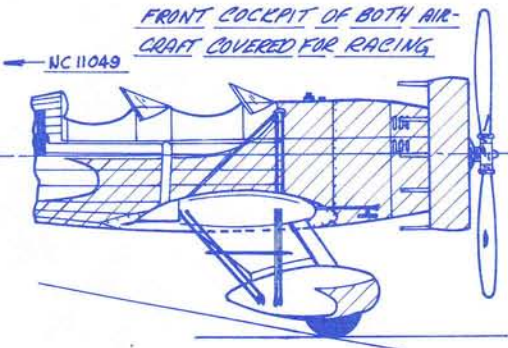
1932 MODEL

POWERPLANT: 215 H.P. R-600 LYCOMING - 7 CYLINDER



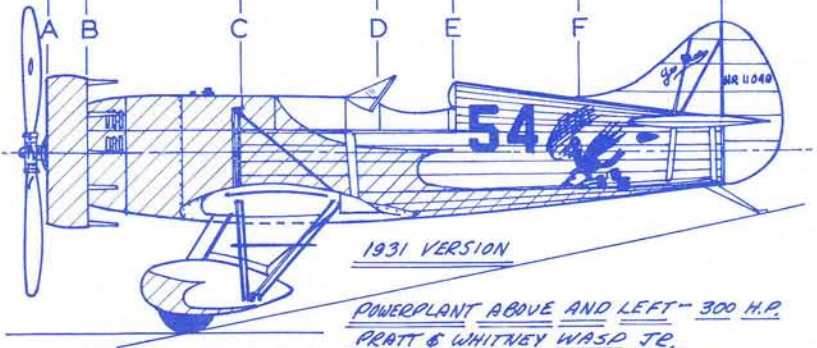
1933 MODEL

POWERPLANT: 450 H.P. WRIGHT F-69 WHIRLWIND



NC 11049

FRONT COCKPIT OF BOTH AIRCRAFT COVERED FOR RACING



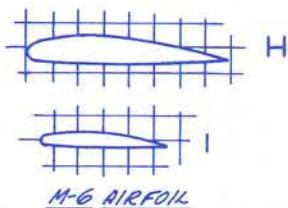
1931 VERSION

POWERPLANT ABOVE AND LEFT - 300 H.P. PRATT & WHITNEY WASP J2

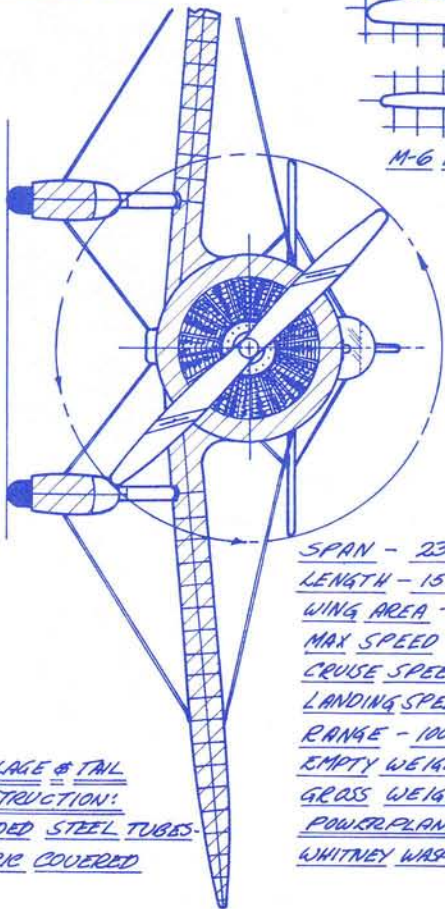
NR 11049 WAS LOST IN OCEAN OFF NEW YORK CITY WHEN PROP BLADE WAS LOST AND ENGINE VIBRATED LOOSE.

AIRCRAFT NR718Y WAS FLOWN TO SECOND PLACE IN WOMEN'S "FREE-FOR-ALL" AT 1933 CHICAGO NATIONAL AIR RACES BY KLINGENSMITH - LATER KILLED AT SAME NATIONALS DUE TO AIRCRAFT STRUCTURAL FAILURE.

SCALE:  $\frac{1}{4}'' = 1'$

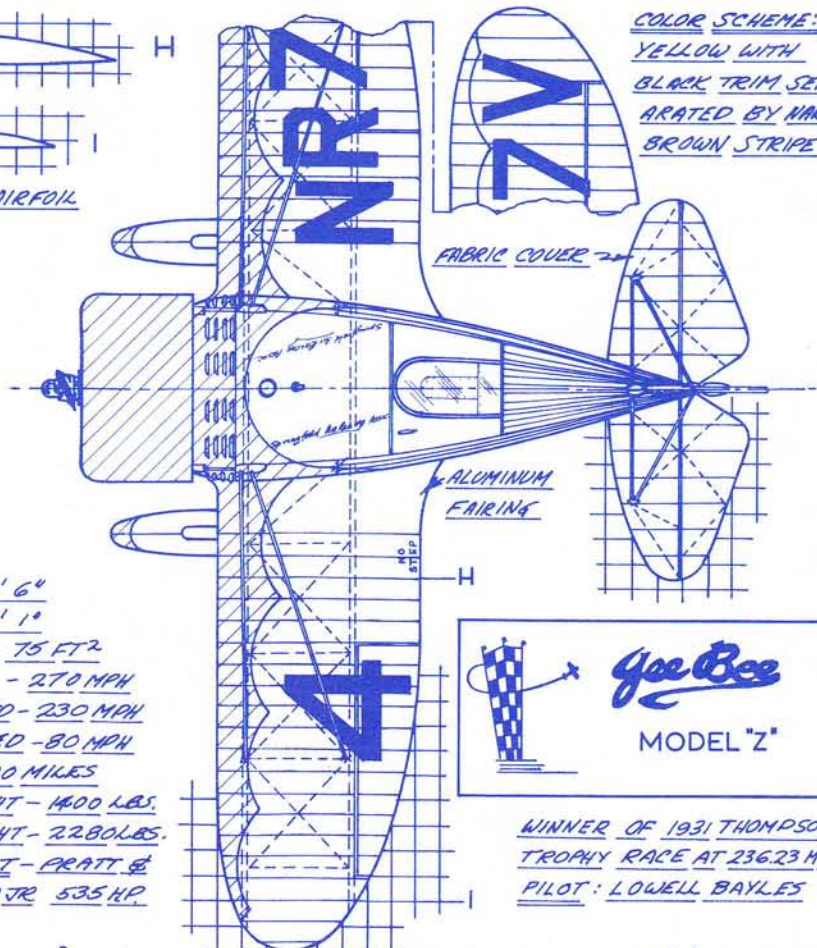


COLOR SCHEME:  
YELLOW WITH  
BLACK TRIM SEP-  
ARATED BY NARROW  
BROWN STRIPE



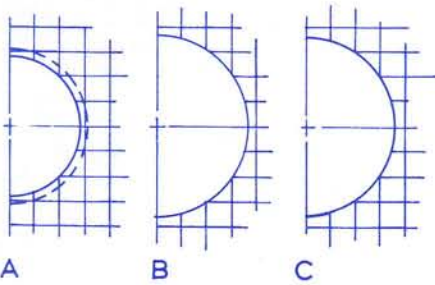
SPAN - 23' 6"  
LENGTH - 15' 1"  
WING AREA - 75 FT<sup>2</sup>  
MAX SPEED - 270 MPH  
CRUISE SPEED - 230 MPH  
LANDING SPEED - 80 MPH  
RANGE - 1000 MILES  
EMPTY WEIGHT - 1400 LBS.  
GROSS WEIGHT - 2200 LBS.  
POWERPLANT - PRATT &  
WHITNEY WASP JR. 535 H.P.

FUSELAGE & TAIL  
CONSTRUCTION:  
WELDED STEEL TUBES.  
FABRIC COVERED

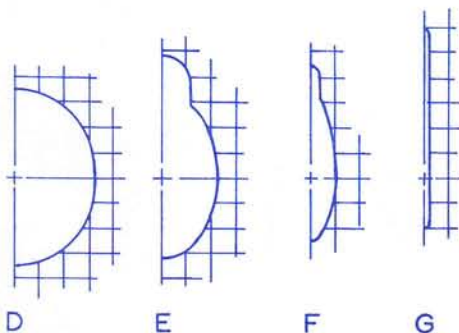


WINNER OF 1931 THOMPSON  
TROPHY RACE AT 236.23 MPH  
PILOT: LOWELL BAYLES

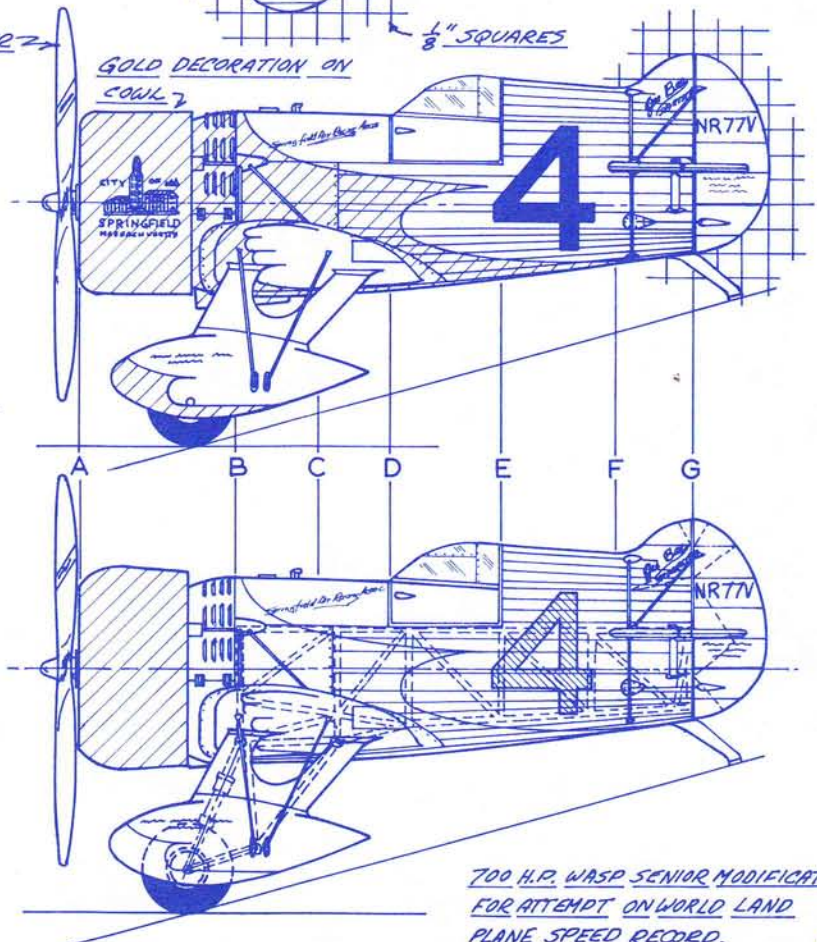
8'2" CURTISS FIXED PITCH (8") PROPELLER



WING CONSTRUCTION: ALL WOOD - SPRUCE  
SPARS - WIRE BRACED - FABRIC  
COVERING, TORQUE TUBE ALERONS



NOTE LARGE SIZE NACA COWLING  
ON VIEW AT RIGHT - MAX SPEED 300 MPH+

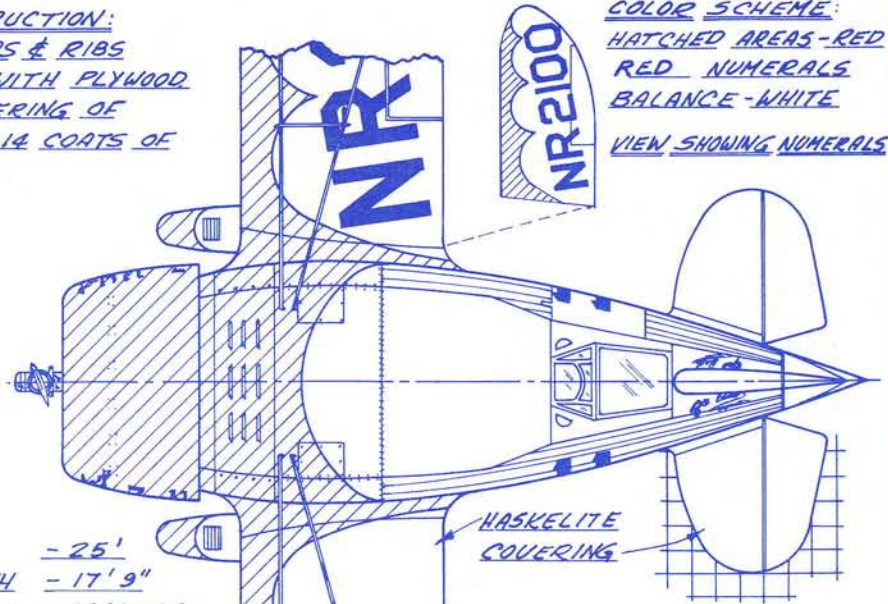
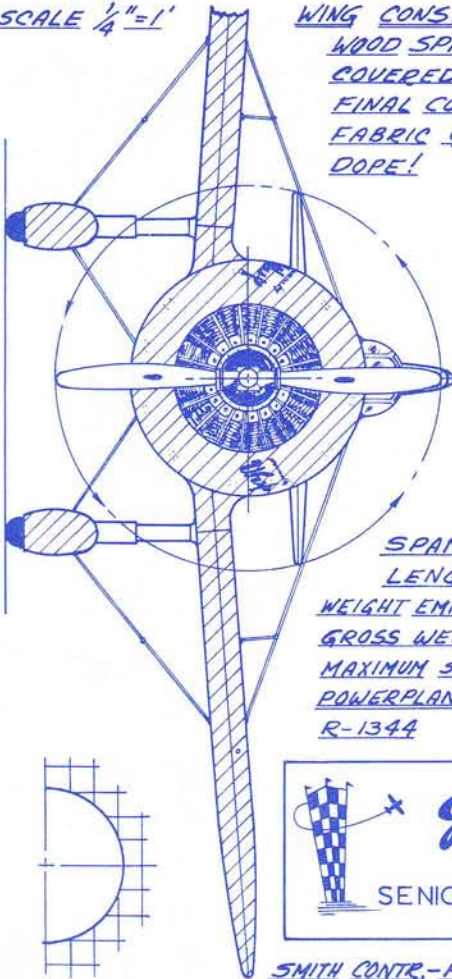


700 H.P. WASP SENIOR MODIFICATION  
FOR ATTEMPT ON WORLD LAND  
PLANE SPEED RECORD.

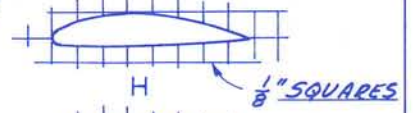
SCALE  $\frac{1}{4}'' = 1'$

WING CONSTRUCTION:  
WOOD SPARS & RIBS  
COVERED WITH PLYWOOD  
FINAL COVERING OF  
FABRIC & 14 COATS OF  
DOPE!

COLOR SCHEME:  
HATCHED AREAS - RED  
RED NUMERALS  
BALANCE - WHITE  
VIEW SHOWING NUMERALS



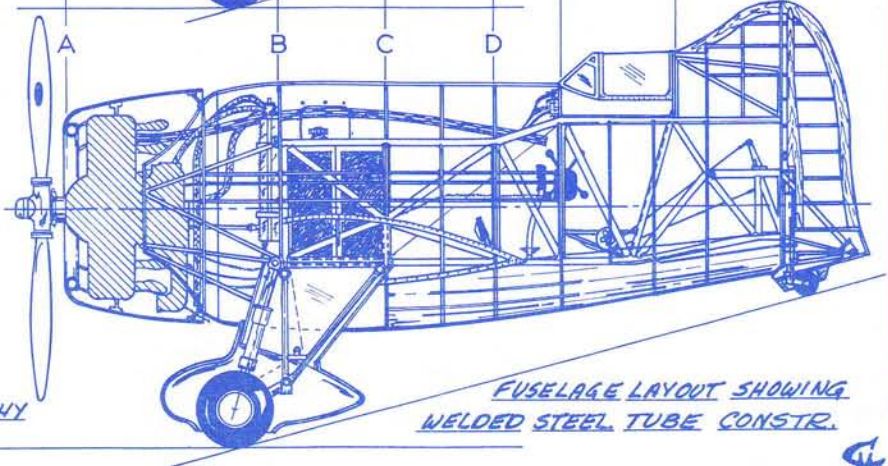
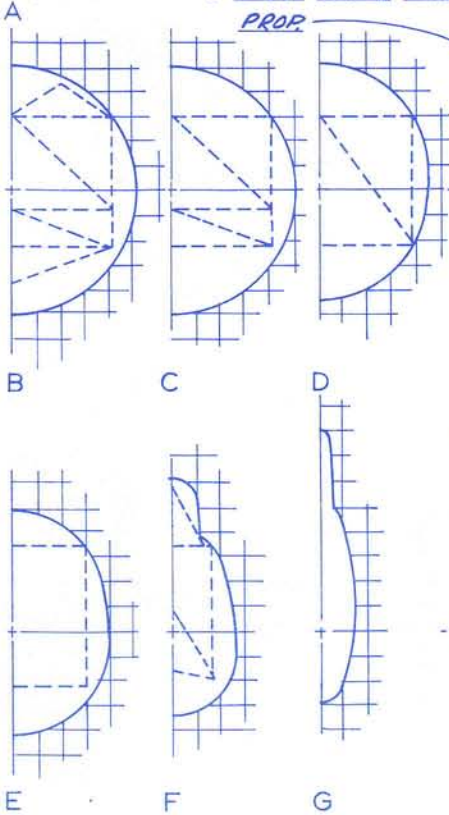
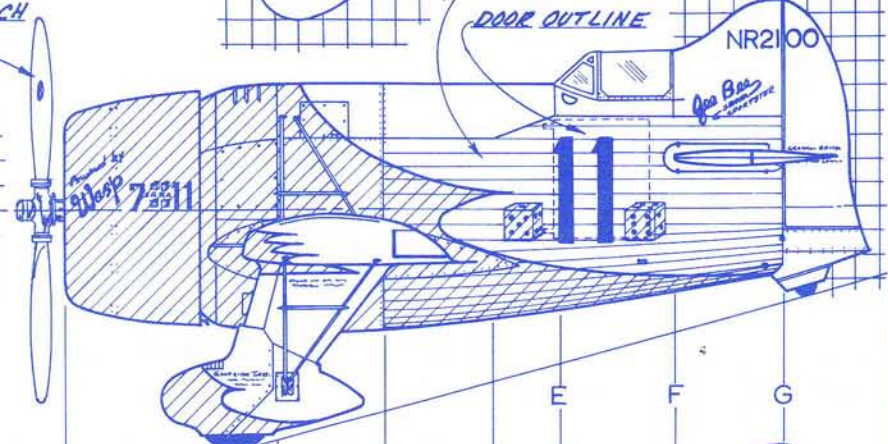
SPAN - 25'  
LENGTH - 17' 9"  
WEIGHT EMPTY - 1840 LBS.  
GROSS WEIGHT - 2415 LBS.  
MAXIMUM SPEED - 309 MPH  
POWERPLANT - 800 HP P&W WASP SR  
R-1344 PITOT TUBE



MODIFIED M-6 AIRFOIL

FABRIC COVER

DOOR OUTLINE



FUSELAGE LAYOUT SHOWING  
 WELDED STEEL TUBE CONSTR.

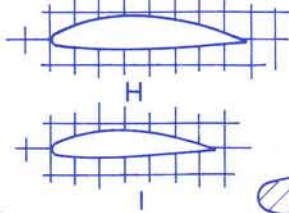
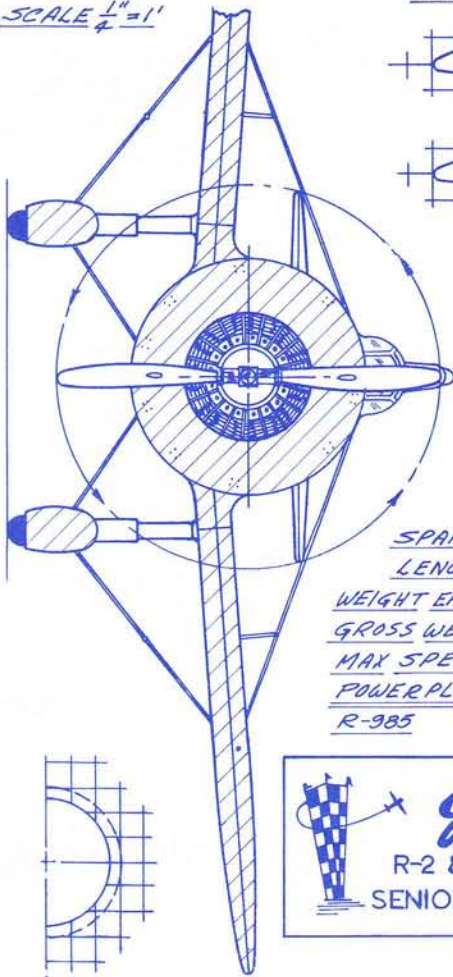
WINNER OF 1932 THOMPSON TROPHY  
RACE - FLOWN BY JIMMY  
DOOLITTLE.

SCALE  $\frac{1"}{4} = 1'$

MODIFIED M-6 AIRFOIL

COLOR SCHEME:  
RED & WHITE WITH  
RED NUMERALS  
SAME AS R-1

VIEW SHOWING NUMBER  
ING.



SPAN - 25'  
LENGTH - 17'9"  
WEIGHT EMPTY - 1796 LBS  
GROSS WEIGHT - 3803 LBS  
MAX SPEED - 225 MPH  
POWER PLANT - 550 HP PAW WASP TR.  
R-985 SPAR LOCATIONS

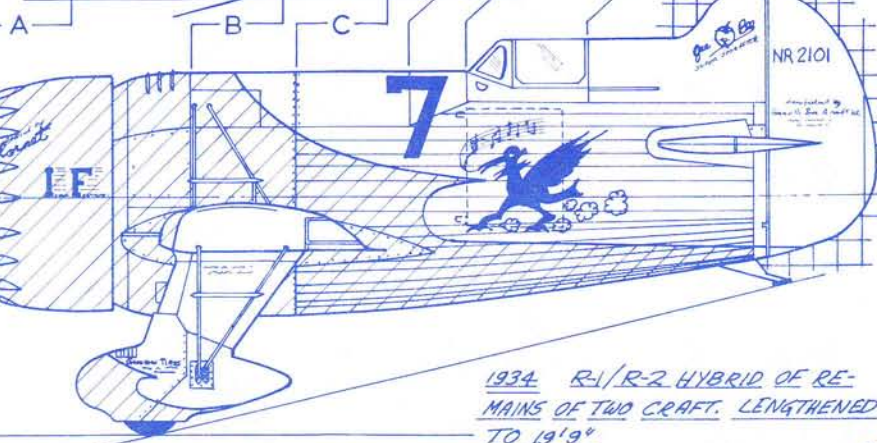
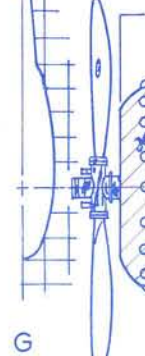
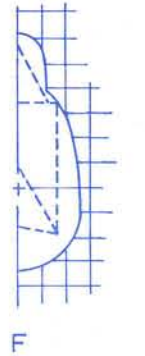
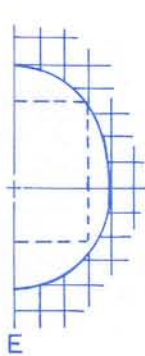
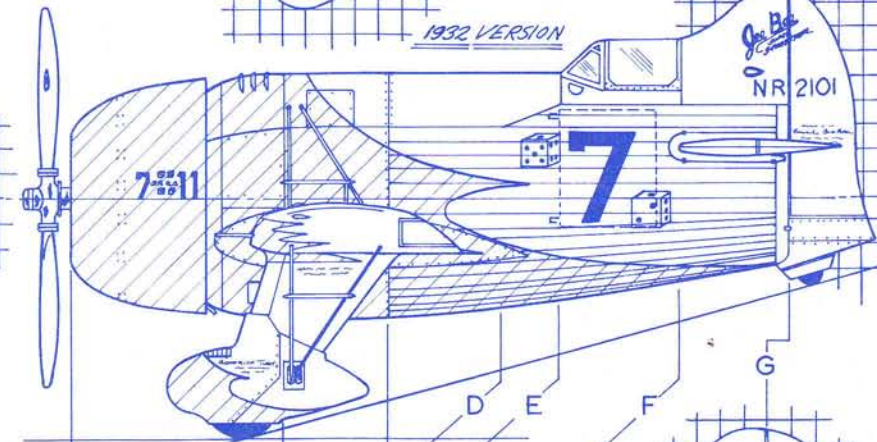
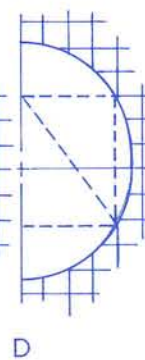
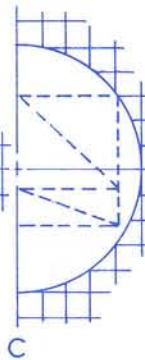
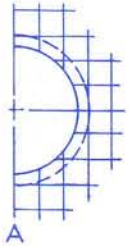


HASKELITE  
COVERING

$\frac{1}{8}$ " SQUARES

1933  
VERSION -  
ALSO R-1

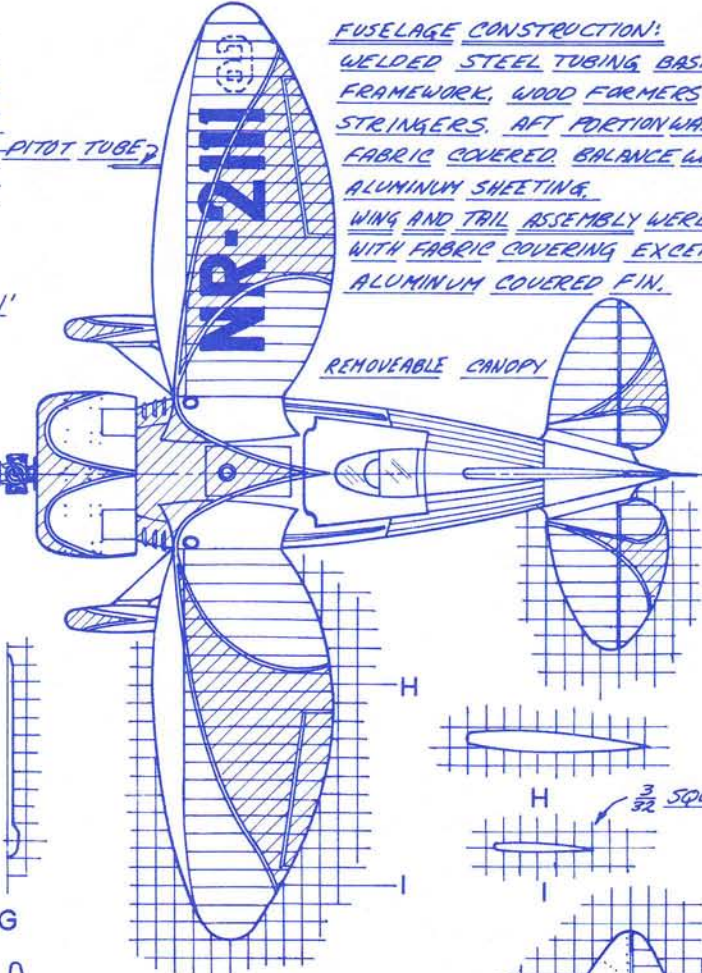
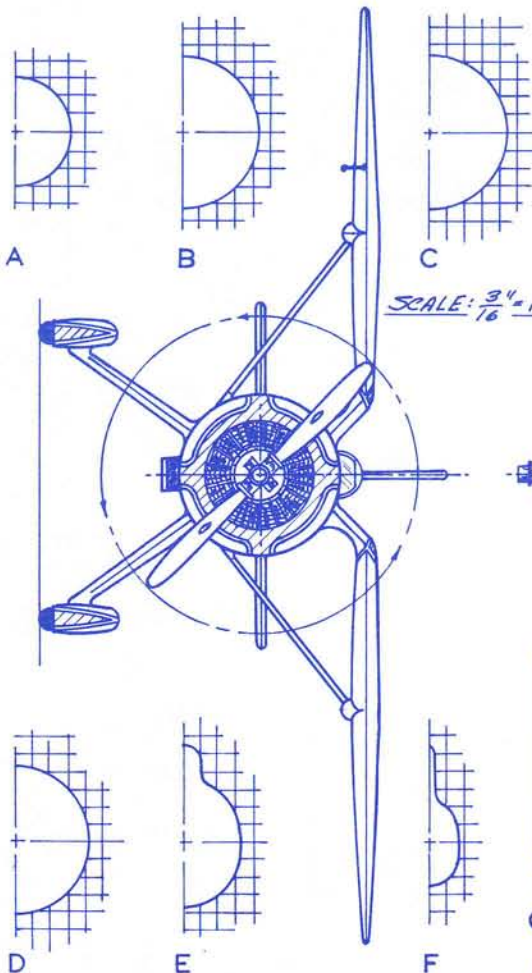
1932 VERSION



1934 R-1/R-2 HYBRID OF RE-  
MAINS OF TWO CRAFT. LENGTHENED  
TO 19'9"

A

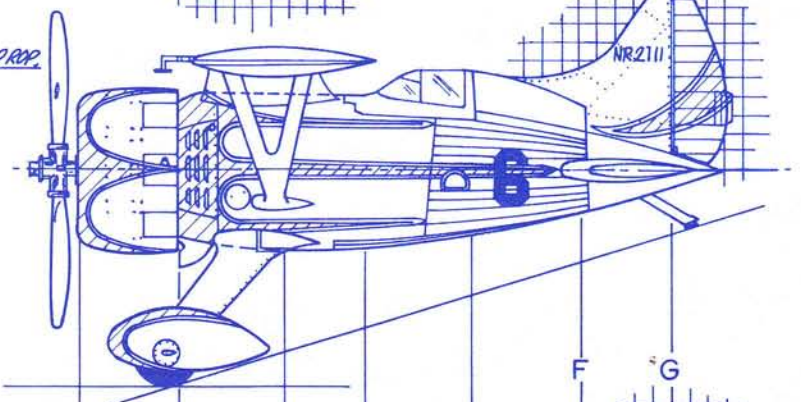
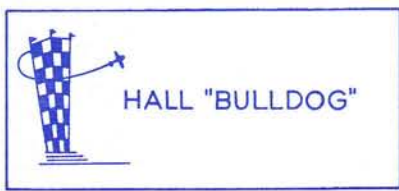




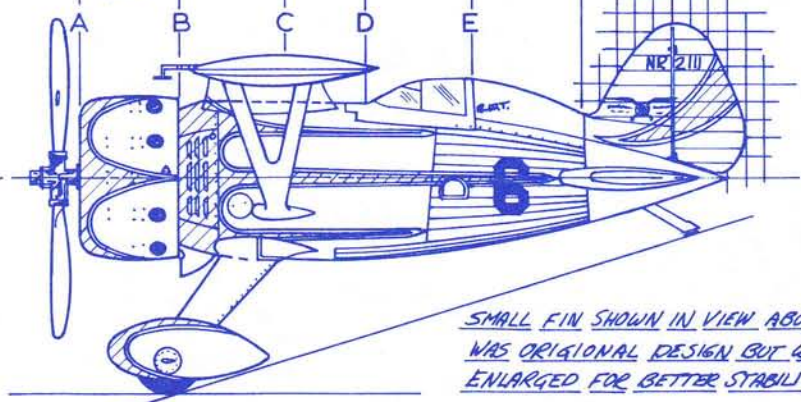
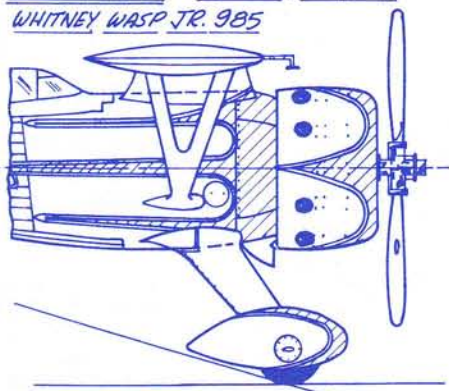
FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBING, BASIC  
FRAMEWORK, WOOD FARMERS AND  
STRINGERS. AFT PORTION WAS  
FABRIC COVERED. BALANCE WAS  
ALUMINUM SHEETING.  
WING AND TRAIL ASSEMBLY WERE WOOD  
WITH FABRIC COVERING EXCEPT FOR  
ALUMINUM COVERED FIN.

H  $\frac{3}{32}$  SQUARES

HAMILTON STANDARD CONTROLLABLE PROP.



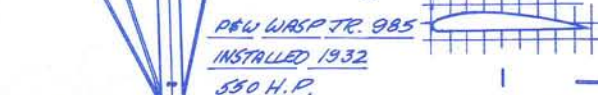
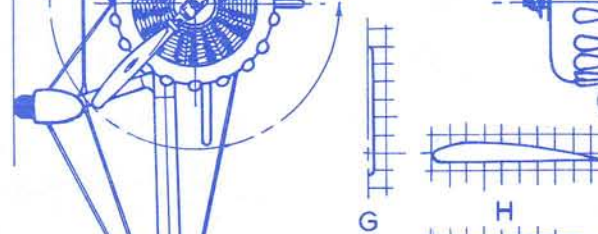
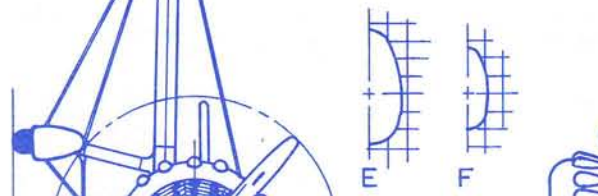
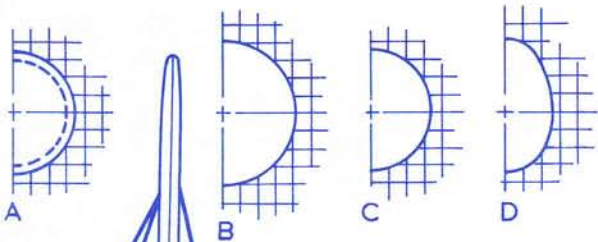
SPAN - 26'  
LENGTH - 19'  
MAX SPEED - 243.7 MPH  
POWERPLANT: 550 H.P. PRATT &  
WHITNEY WASP JR. 985



SMALL FIN SHOWN IN VIEW ABOVE  
WAS ORIGINAL DESIGN BUT WAS  
ENLARGED FOR BETTER STABILITY

COLOR SCHEME: ALL RED WITH BLACK  
TRIM SEPARATED BY A NARROW  
WHITE STRIPE, 16" ON RIGHT WING UNDERSIDE ONLY.

SHIP WAS DESIGNED BY ROBERT HALL AFTER LEAVING GRANVILLES.  
HE FLEW IT TO 6TH PLACE IN 1932 THOMPSON TROPHY RACE.  
PLANE WAS NEVER RACED AGAIN HOWEVER WAS FL OWN FOR SPORT.



WING CONSTRUCTION: SPRUCE SPARS - BUILT UP RIBS COVERED WITH FABRIC COATED PLYWOOD. ALLERONS FABRIC COVERED.

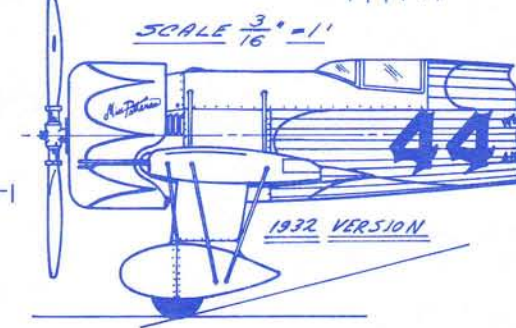
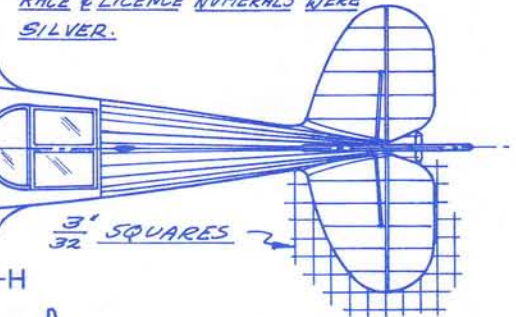
FUSELAGE CONSTRUCTION: WELDED STEEL TUBING - ALUMINUM COVERED FORWARD - FABRIC COVERED AFT.

TAIL ASSEMBLY CONSTRUCTION: WELDED STEEL TUBING WITH FABRIC COVERING.

COLOR SCHEME: BLACK WITH RED TRIM. YELLOW EDGE STRIPE. RACE & LICENCE NUMERALS WERE SILVER.

**NR-278V**

**44**

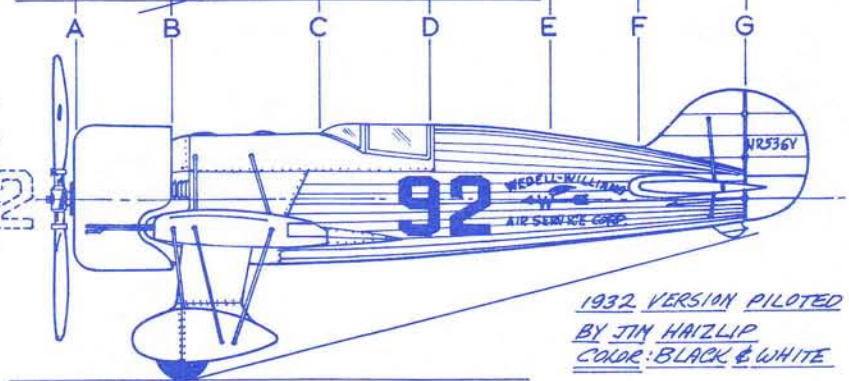
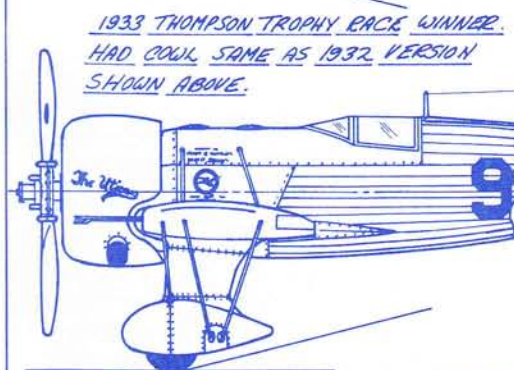
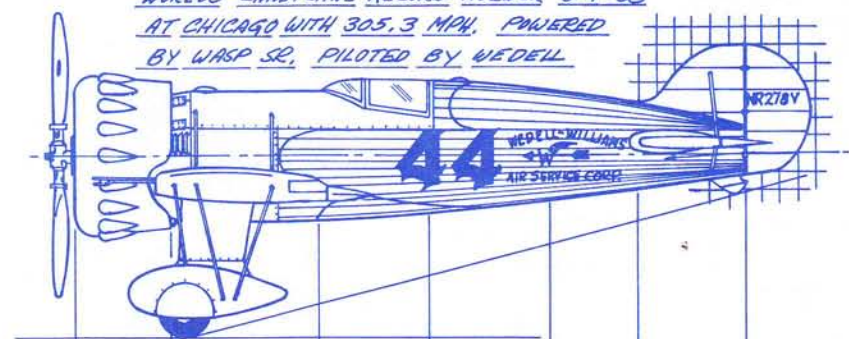
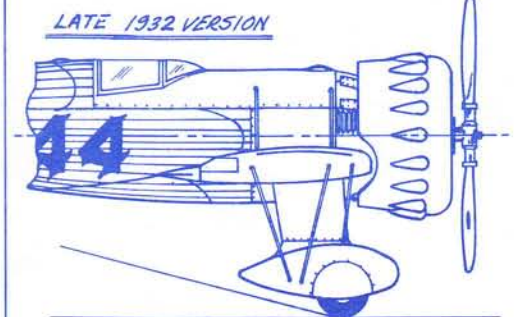


SPAN - 26' 2"  
 LENGTH - 21' 3"  
 WGT. EMPTY - 1510 LBS.  
 GROSS WGT. - 2266 LBS.  
 MAX SPEED - 237.9  
 WING LOAD - 17 LBS FT<sup>2</sup>

P&W WASP JR. 985  
 INSTALLED 1932  
 550 H.P.

WEDELL-WILLIAMS  
 '44' & '92'

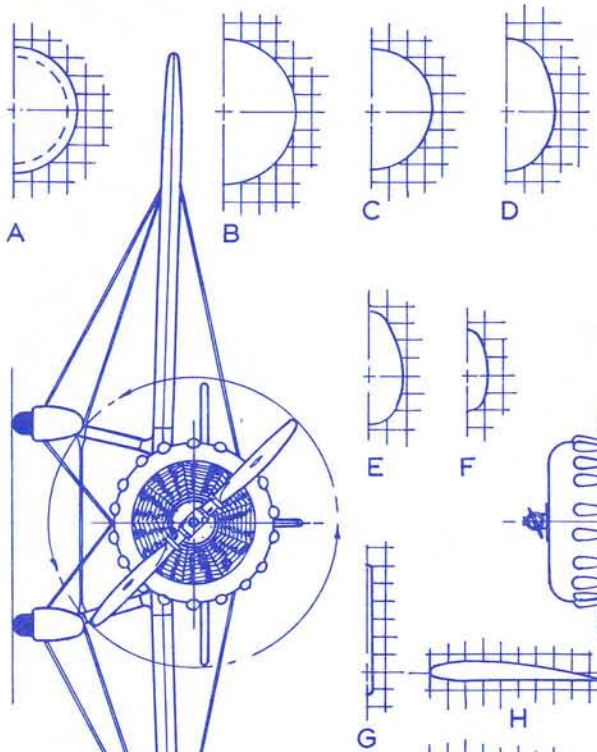
WORLD'S LANDPLANE RECORD HOLDER 9-9-'33  
 AT CHICAGO WITH 305.3 MPH, POWERED  
 BY WASP SR, PILOTED BY WEDELL



1938 BENDIX ENTRY BY JACK WRIGHT  
 ALL WHITE WITH BLACK TRIM.

1932 VERSION PILOTED  
 BY JIM HAZLIP  
 COLOR: BLACK & WHITE

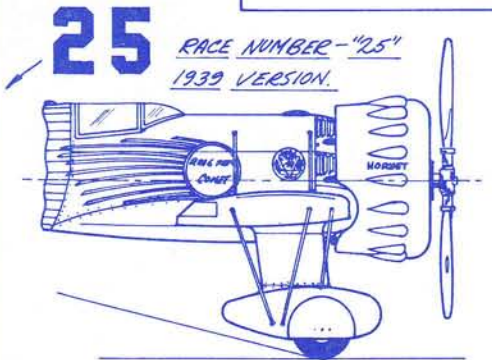
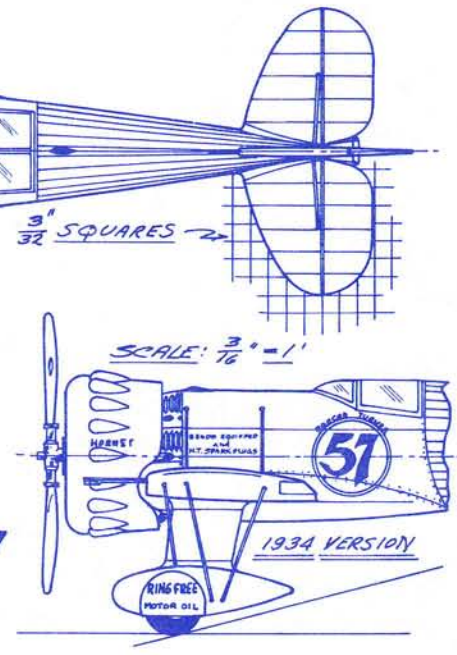
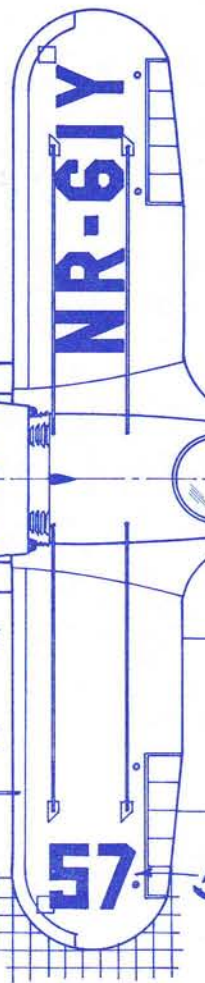
"44" VERSION WON THOMPSON TROPHY RACE PILOTED BY  
 DESIGNER JIMMY WEDELL.



WING CONSTRUCTION: SPRUCE SPARS  
 BUILT UP RIBS COVERED WITH FABRIC  
 COATED PLYWOOD. AILERONS FABRIC  
 COVERED.  
FUSELAGE CONSTRUCTION: WELDED  
 STEEL TUBING- ALUMINUM COVERED  
 FORWARD- FABRIC COVERED AFT.  
TAIL ASSEMBLY CONSTRUCTION:  
 WELDED STEEL TUBING WITH FABRIC  
 COVERING.  
COLOR SCHEME: 1934-1939 GOLD  
 WITH BLACK LETTERING

SPAN - 26'2"  
 LENGTH - 21'3"  
 WHGT EMPTY - 1805#  
 GROSS WHGT - 2511#  
 MAX SPEED - 232 MPH  
 WING LOAD - 192 #/FT<sup>2</sup>

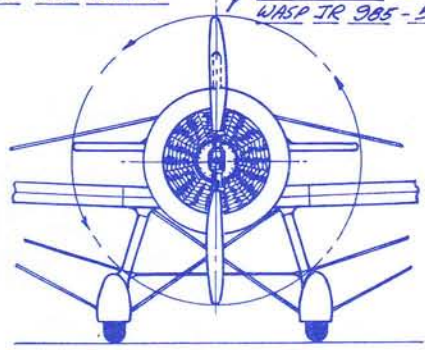
P&W HORNET ENGINE  
 INSTALLED 1934  
 1000 H.P.



RACE NUMBER - "25"  
 1933 VERSION.

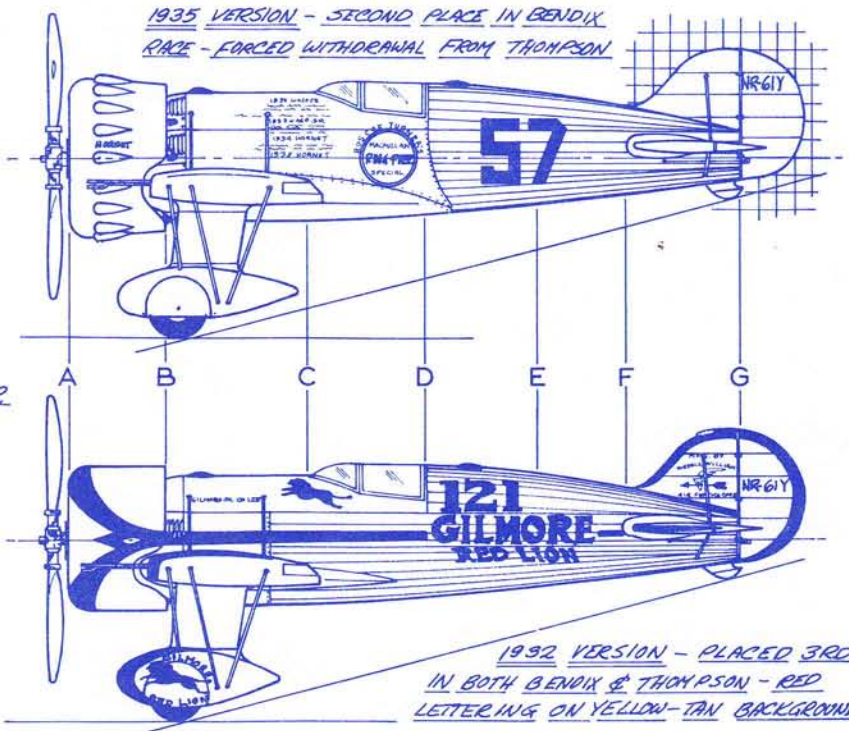
PILOT: JOE MACKLEY

POWERPLANT: P&W  
 WASP JR 985 - 535 H.P.



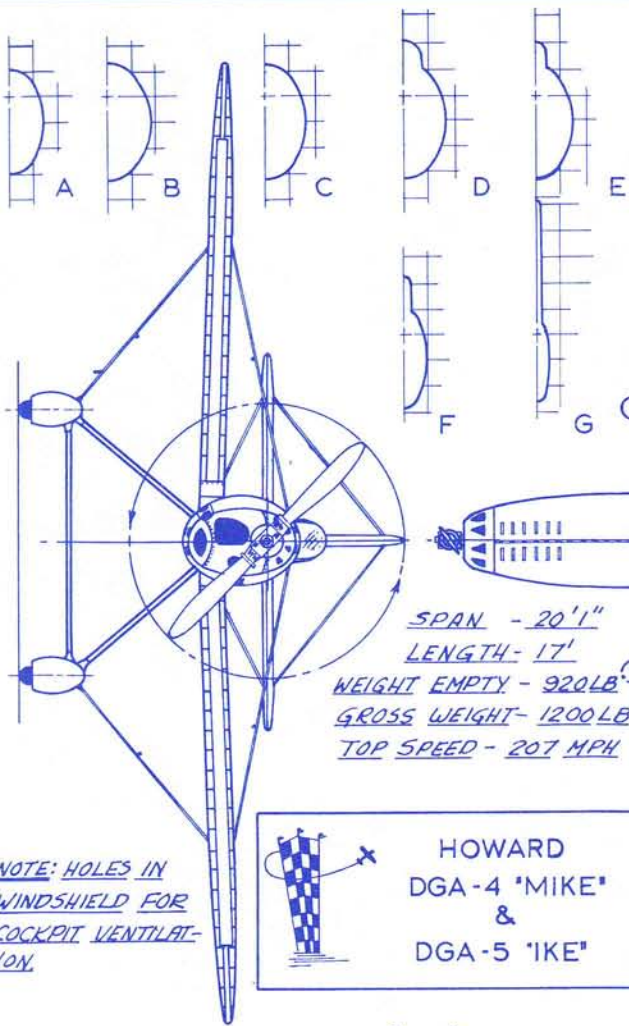
FRONT VIEW OF 1932 VERSION  
 SHOWING WASP JR. COWLING.

1935 VERSION - SECOND PLACE IN BENDIX  
 RACE - FORCED WITHDRAWAL FROM THOMPSON



1932 VERSION - PLACED 3RD  
 IN BOTH BENDIX & THOMPSON - RED  
 LETTERING ON YELLOW-TAN BACKGROUND

1934 VERSION SPONSORED BY HEINZ "57" WON THOMPSON  
 TROPHY RACE - PILOT, ROSCOE TURNER



SPAN - 20'1"  
 LENGTH - 17'  
 WEIGHT EMPTY - 920LB  
 GROSS WEIGHT - 1200LB  
 TOP SPEED - 207 MPH

FUSELAGE, TAIL & LANDING GEAR  
CONSTRUCTION OF WELDED CHROME  
MOLYBDENUM TUBING - FABRIC COVERED  
EXCEPT FOR AREAS SHOWN.

WING CONSTRUCTION - SPRUCE SPARS  
AND PLYWOOD RIBS WITH INTERNAL  
WIRE BRACING - FABRIC COVERED

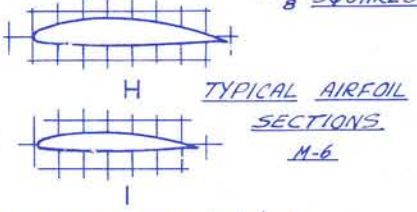
LICENSE WAS GOLD WITH BLACK OUTLINE

COLOR SCHEME: BOTH "IKE" & "MIKE"  
 WHITE WITH BLACK LETTERING.

FABRIC COVERED  
 TOP VIEW IS "IKE"

ALUMINUM  
 DECKING  
 H

1/8" SQUARES

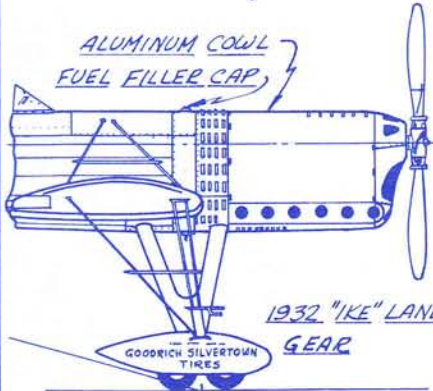


NOTE: HOLES IN  
 WINDSHIELD FOR  
 COCKPIT VENTILAT-  
 ION.

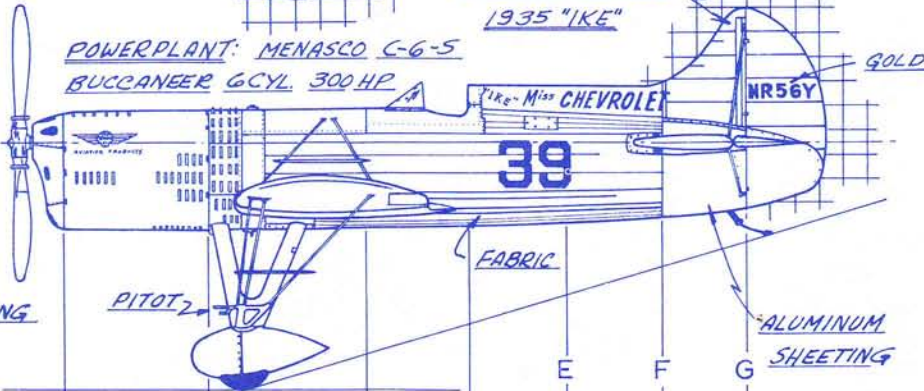
HOWARD  
 DGA-4 "MIKE"  
 &  
 DGA-5 "IKE"

FABRIC COVERED  
 1935 "IKE"

POWERPLANT: MENASCO C-6-5  
 BUCCANEER 6 CYL. 300 HP

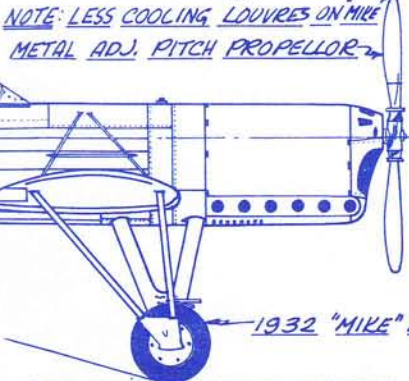


1932 "IKE" LANDING  
 GEAR

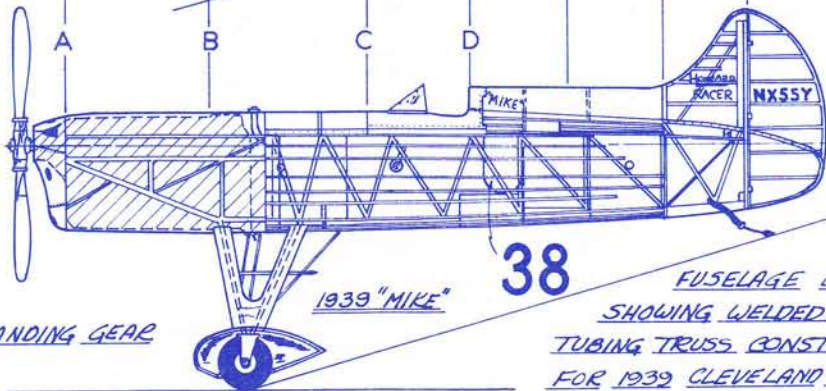


"IKE" MISS CHEVROLET  
 39

ALUMINUM  
 SHEETING



1932 "MIKE" LANDING GEAR



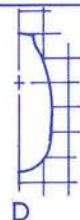
38

FUSELAGE LAYOUT  
 SHOWING WELDED STEEL  
 TUBING TRUSS CONSTRUCTION  
 FOR 1939 CLEVELAND AIR RACE  
 BOTH SHIPS PAINTED YELLOW  
 BUT DID NOT FLY.

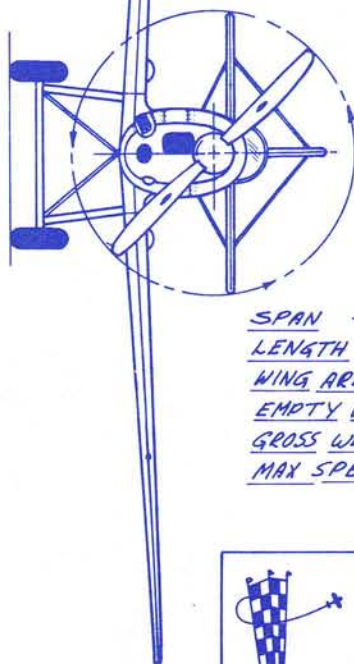
BUILT IN 1932 BY BEN HOWARD BOTH SHIPS PLACED  
 IN VARIOUS THOMPSON TROPHY RACES 1932 THRU 1935.

SCALE 1/4" = 1'





SCALE:  $\frac{1}{4}'' = 1'$

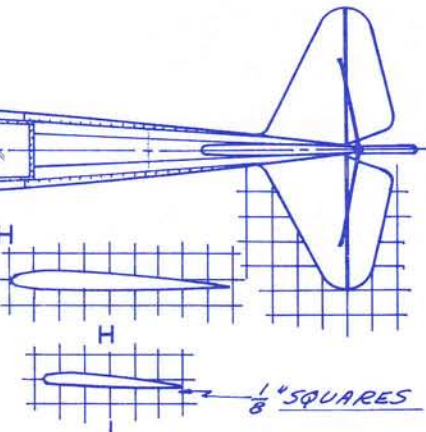


SPAN - 21'4"  
LENGTH - 19'  
WING AREA - 65 FT<sup>2</sup>  
EMPTY WEIGHT - 900 LBS  
GROSS WEIGHT - 1200 LBS  
MAX SPEED - 237.74

 KEITH RIDER R-1  
"SUZY"  
&  
"SAN FRANCISCO"

FUSELAGE AND FIN CONSTRUCTION:  
MONOCOQUE ALUMINUM SKIN,  
FORMERS AND STRINGERS.  
WING AND STABILIZER CONSTRUCTION:  
SPRUCE SPARS AND RIBS COVERED  
WITH SHEET PLYWOOD

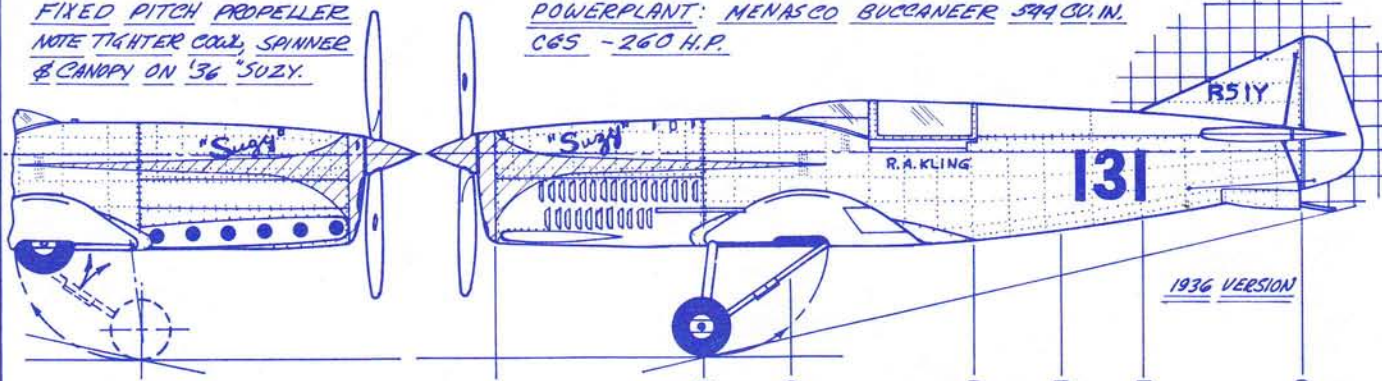
RETRACTABLE GEAR WAS MANUALLY  
OPERATED. SHOCK ABSORBING  
WAS PROVIDED BY LARGE LOW  
PRESSURE TIRES



COLOR SCHEME: 1936 "SUZY"  
ENTIRE AIRCRAFT WAS BLUE WITH  
CREAM TRIM.  
ALL OTHER VERSIONS WERE  
NATURAL ALUMINUM WITH BLACK  
NUMERALS  
"SUZY" FLOWN BY RUDY KLING FOR A  
3RD IN 1935 THOMPSON TROPHY RACE

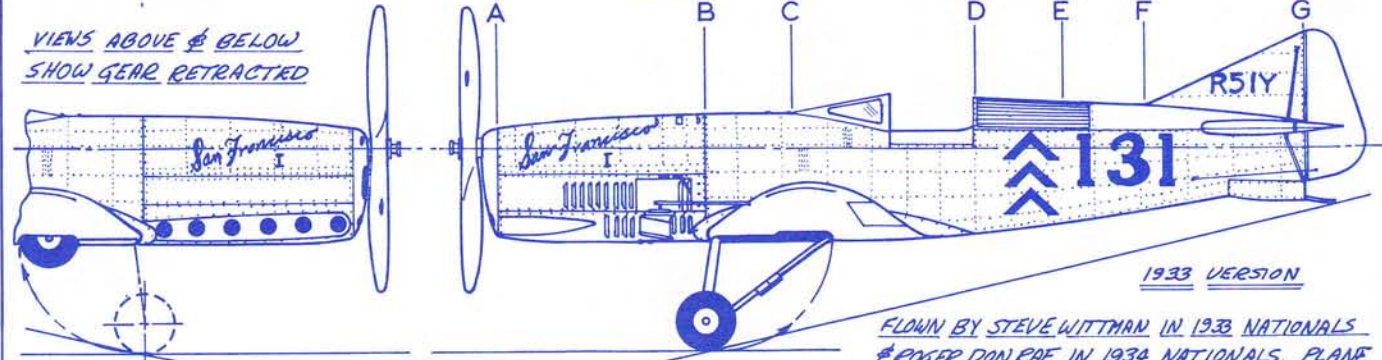
FIXED PITCH PROPELLER  
NOTE TIGHTER COIL, SPINNER  
& CANOPY ON '36 "SUZY."

POWERPLANT: MENASCO BUCCANEER 599 CU. IN.  
CGS - 260 H.P.



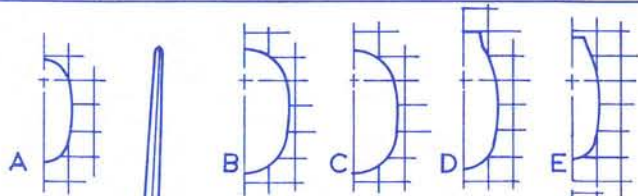
1936 VERSION

VIEWS ABOVE & BELOW  
SHOW GEAR RETRACTED

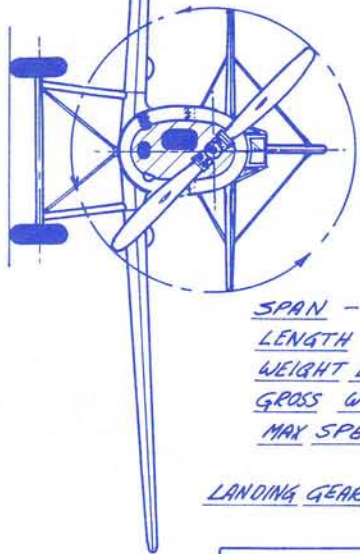


1933 VERSION

FLOWN BY STEVE WITTMAN IN 1933 NATIONALS  
& ROGER DON RAE IN 1934 NATIONALS. PLANE  
WON PLACES IN MANY NATIONAL EVENTS.



SCALE:  $\frac{1}{4}'' = 1'$



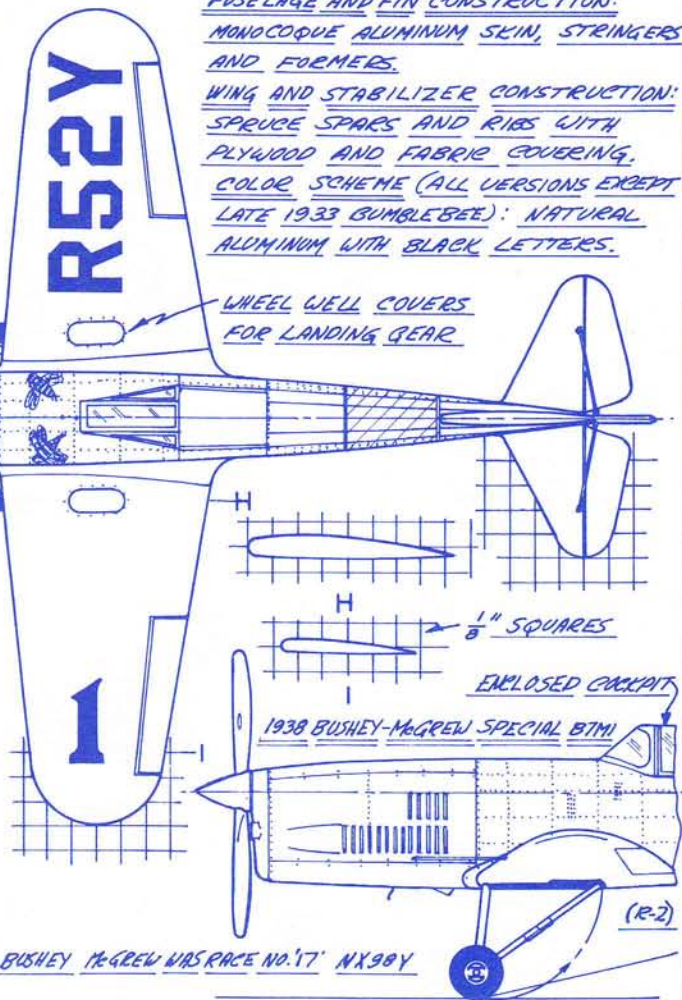
SPAN - 17'  
 LENGTH - 19'  
 WEIGHT EMPTY - 800 LBS  
 GROSS WEIGHT - 1100 LBS  
 MAX SPEED - 210.12 MPH

LANDING GEAR MANUALLY RETRACTED

FUSELAGE AND FIN CONSTRUCTION:  
 MONOCOQUE ALUMINUM SKIN, STRINGERS  
 AND FORMERS.

WING AND STABILIZER CONSTRUCTION:  
 SPRUCE SPARS AND RIBS WITH  
 PLYWOOD AND FABRIC COVERING.  
COLOR SCHEME (ALL VERSIONS EXCEPT  
 LATE 1933 BUMBLEBEE): NATURAL  
 ALUMINUM WITH BLACK LETTERS.

WHEEL WELL COVERS  
 FOR LANDING GEAR



$\frac{1}{8}''$  SQUARES

EMLOYED COCKPIT

1938 BUSHEY-McGREW SPECIAL BTM

(R-2)

BUSHEY McGREW WAS RACE NO. 17 NX90Y

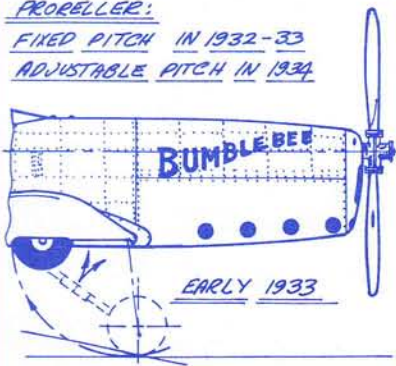
COLOR SCHEME (LATE '33)  
 RED FUSELAGE TRIMMED  
 WITH YELLOW. RACE NO.  
 RED ON YELLOW BAND  
 YELLOW WINGS & STAB.



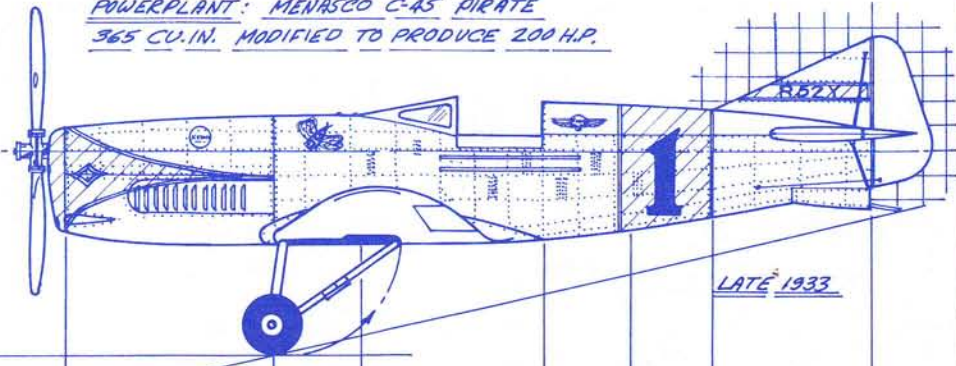
KEITH RIDER R-2  
 "BUMBLEBEE"  
 &  
 "SAN FRANCISCO II"

PROPELLER:  
 FIXED PITCH IN 1932-33  
 ADJUSTABLE PITCH IN 1934

POWERPLANT: MENASCO C-45 PIRATE  
 365 CU. IN. MODIFIED TO PRODUCE 200 H.P.

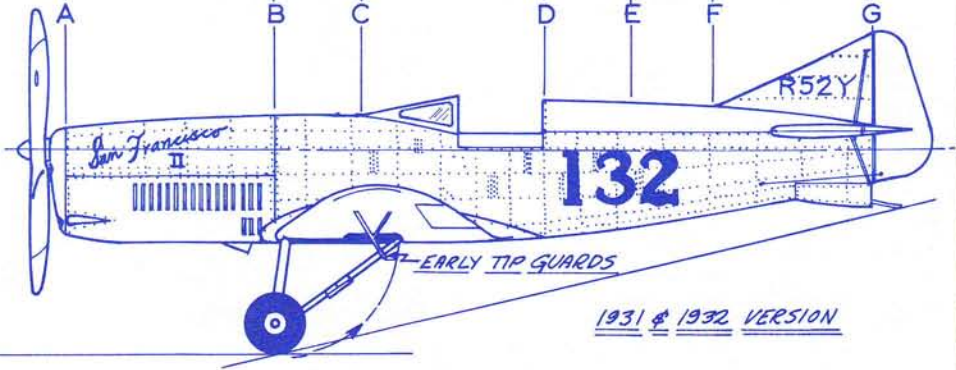
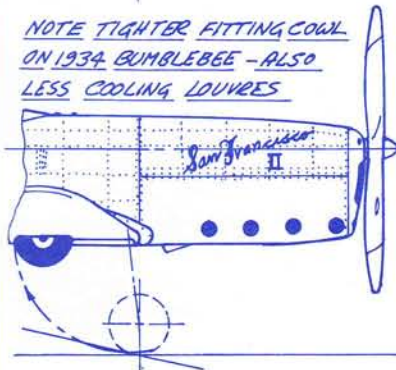


EARLY 1933



LATE 1933

NOTE TIGHTER FITTING COWL  
 ON 1934 BUMBLEBEE - ALSO  
 LESS COOLING LOUVRES



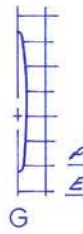
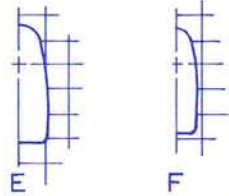
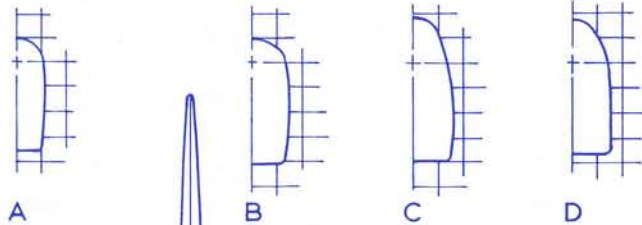
1931 & 1932 VERSION

LANDING GEAR RETRACTED REARWARD LEAVING  
 HALF OF WHEELS EXPOSED IN EVENT OF GEAR UP  
 LANDINGS. WING TIP GUARDS USED ONLY ON INITIAL FLIGHTS

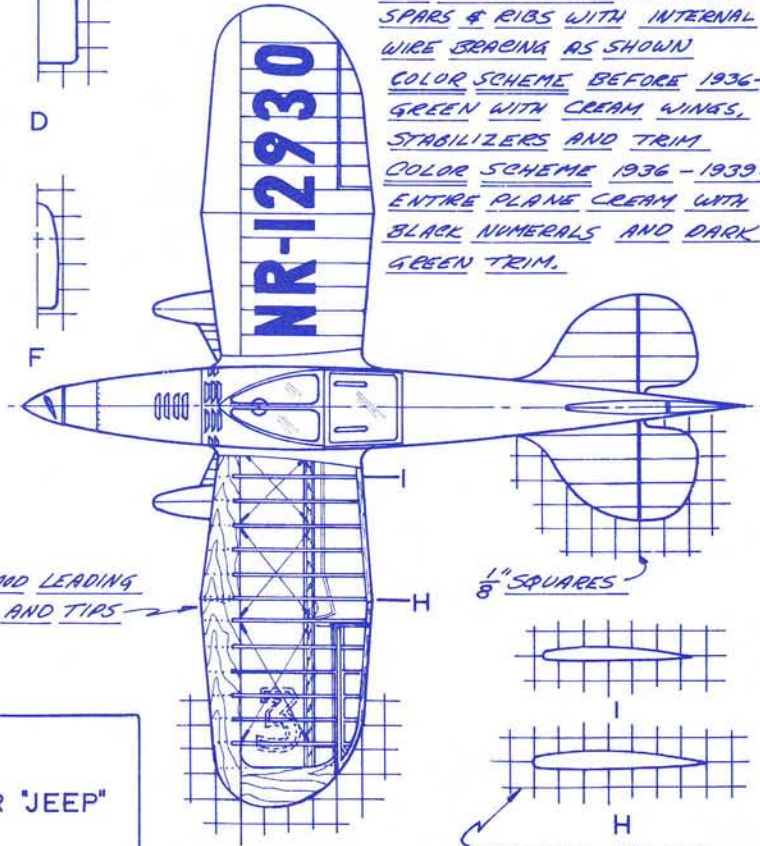
FLOWN TO 1ST PLACE IN 400 CO IN EVENT AT '31 NATIONALS BY ROBERT  
 CLAMPETT. IN 1932-'33-'34 BUMBLEBEE PLACED IN MANY EVENTS  
 AT THE NATIONALS FLOWN BY GEORGE HAGUE & EARL ORTMAN 94

FUSELAGE, TAIL & LANDING GEAR CONSTRUCTION:  
WELDED STEEL TUBING - FABRIC COVERED  
EXCEPT FOR COOL AREAS SHOWN.

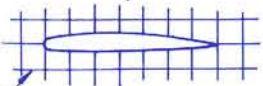
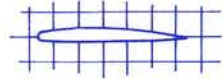
WING CONSTRUCTION: WOODEN  
SPARS & RIBS WITH INTERNAL  
WIRE BRACING AS SHOWN  
COLOR SCHEME BEFORE 1936-  
GREEN WITH CREAM WINGS,  
STABILIZERS AND TRIM  
COLOR SCHEME 1936 - 1939 -  
ENTIRE PLANE CREAM WITH  
BLACK NUMERALS AND DARK  
GREEN TRIM.



PLYWOOD LEADING  
 EDGE AND TIPS



1" SQUARES  
 8"



CHESTER AIRFOIL

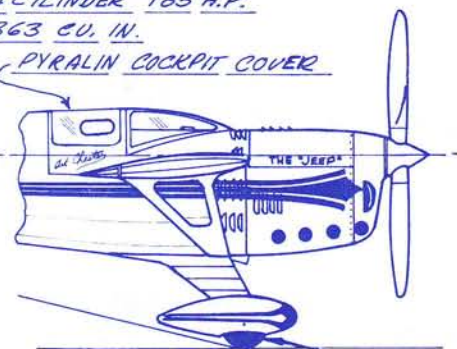
AILERON CONTROL CABLES FULLY ENCLOSED  
 INSIDE FABRIC COVERED WING.

SPAN - 16' 0"  
 LENGTH - 15'  
 WGT. EMPTY - 765 LBS.  
 GR. WGT. - 1150 LBS.  
 MAX SPEED - 255 MPH  
 FUEL CAP - 30 GAL.  
 HEIGHT - 4' 10"



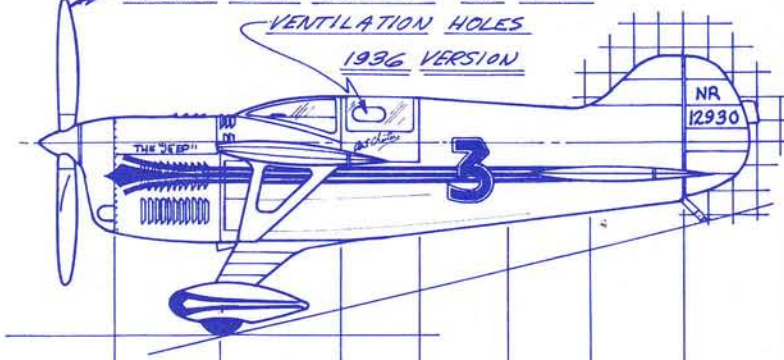
POWERPLANT: MENASCO C-45  
4 CYLINDER 185 H.P.  
363 CU. IN.

PYRALIN COCKPIT COVER

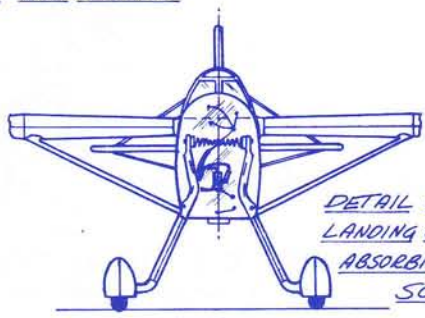


CHESTER METAL PROPELLER - ONE PIECE  
 VENTILATION HOLES

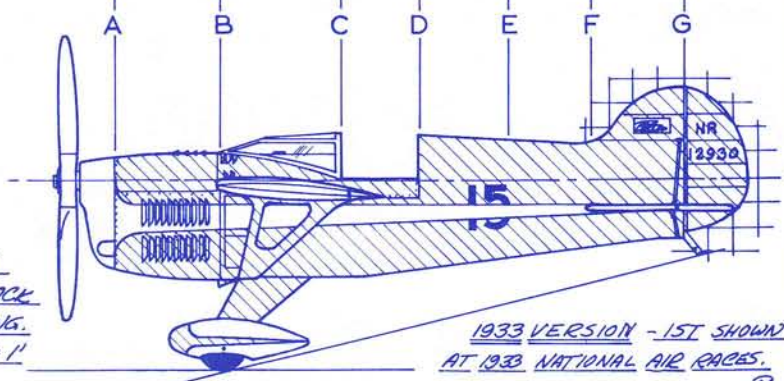
1936 VERSION



GOODYEAR 12x5 AIRWHEELS  
 NOTE NON AIR FOIL SHAPE ON TAIL SURFACES  
 OF 1933 VERSION

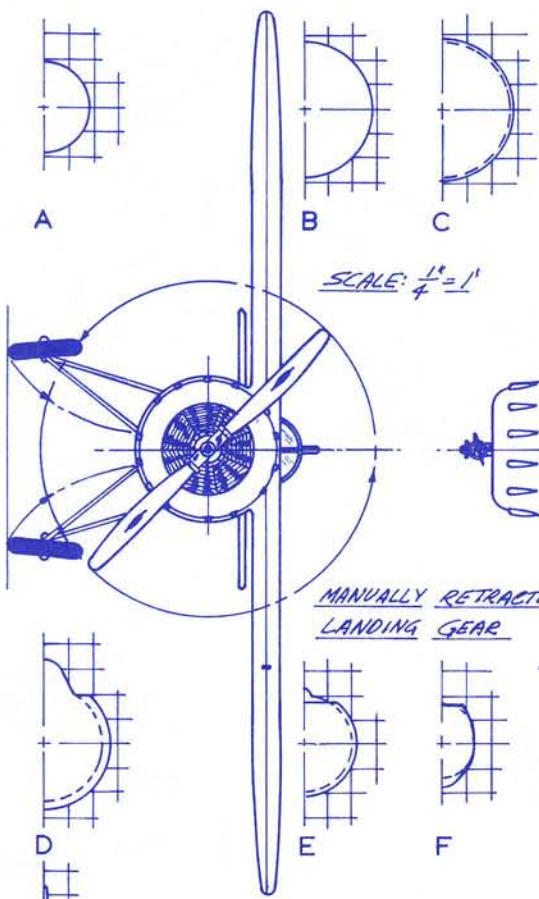


DETAIL SHOWING  
 LANDING GEAR SHOCK  
 ABSORBING ARRANG.  
 SCALE 1/4" = 1"

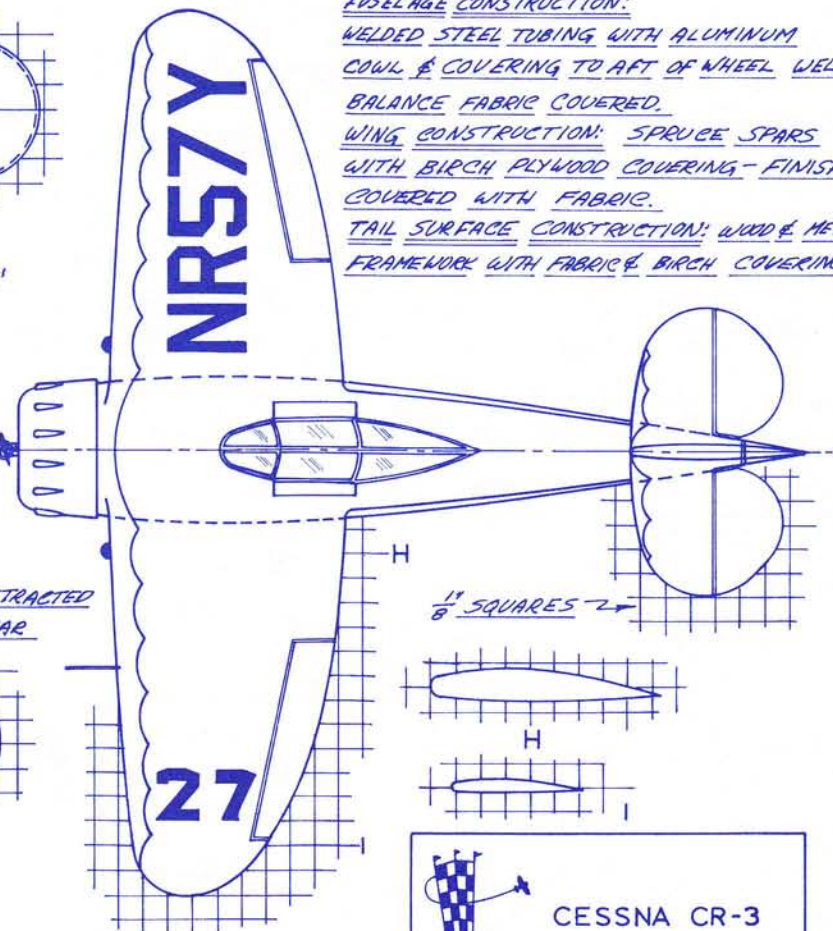


1933 VERSION - 1ST SHOWN  
 AT 1933 NATIONAL AIR RACES.

FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBING WITH ALUMINUM  
COWL & COVERING TO AFT OF WHEEL WELLS,  
BALANCE FABRIC COVERED.  
WING CONSTRUCTION: SPRUCE SPARS  
WITH BIRCH PLYWOOD COVERING - FINISH  
COVERED WITH FABRIC.  
TAIL SURFACE CONSTRUCTION: WOOD & METAL  
FRAMEWORK WITH FABRIC & BIRCH COVERING.



SCALE:  $\frac{1}{4}'' = 1'$

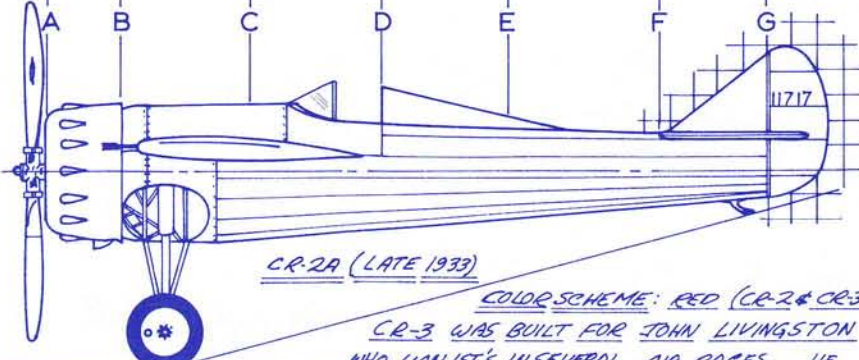
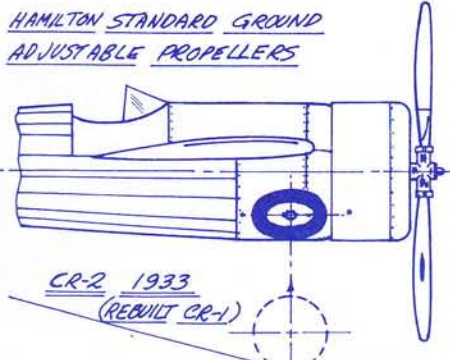
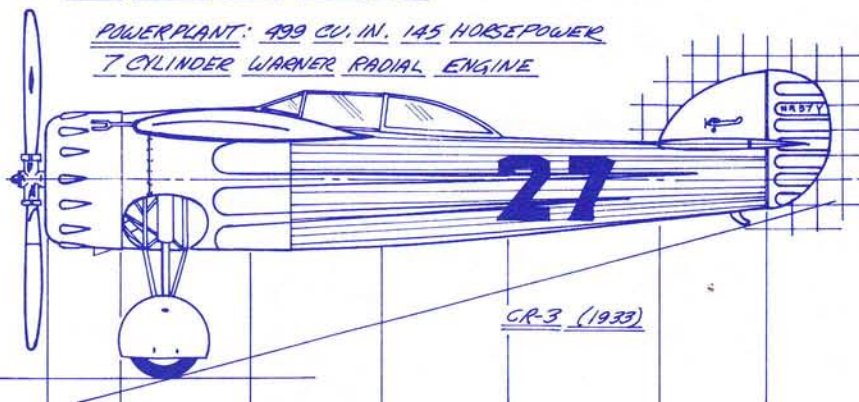
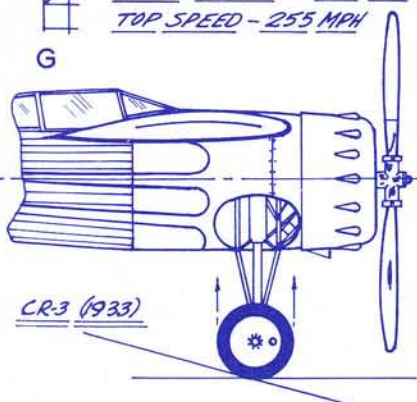


CESSNA CR-3  
 CR-2 & CR-2A

SPAN - 17 FT.  
 LENGTH - 18.5 FT.  
 EMPTY WEIGHT - 750 LBS  
 TOP SPEED - 255 MPH

COLOR SCHEME - RED TRIM  
WITH YELLOW BASE COLOR (CR-3)

POWERPLANT: 499 CU. IN. 145 HORSEPOWER  
7 CYLINDER WARNER RADIAL ENGINE

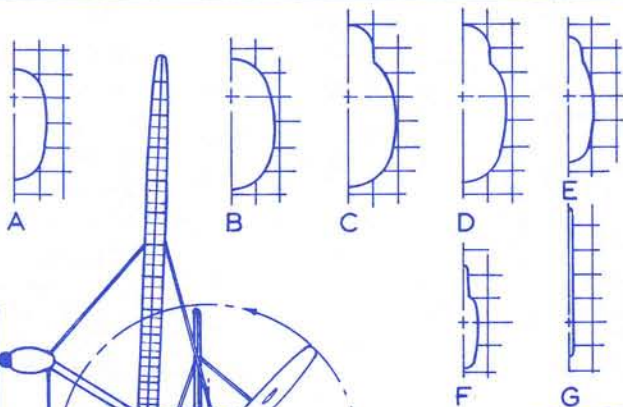


CR-2 & CR-2A FLOWN BY ROY LIGGETT WHO  
 PLACED 1ST IN 500 C.I. MIAMI AIR RACES

FULL SPAN AILERONS  
 ON CR-2 & CR-2A

COLOR SCHEME: RED (CR-2 & CR-3A)  
 CR-3 WAS BUILT FOR JOHN LIVINGSTON  
 WHO WON 1ST'S IN SEVERAL AIR RACES. HE  
 SET WORLD SPEED RECORD FOR 500 CU. IN.  
 ENGINES AT 204.35 MPH AT 1933 CHICAGO RACES.





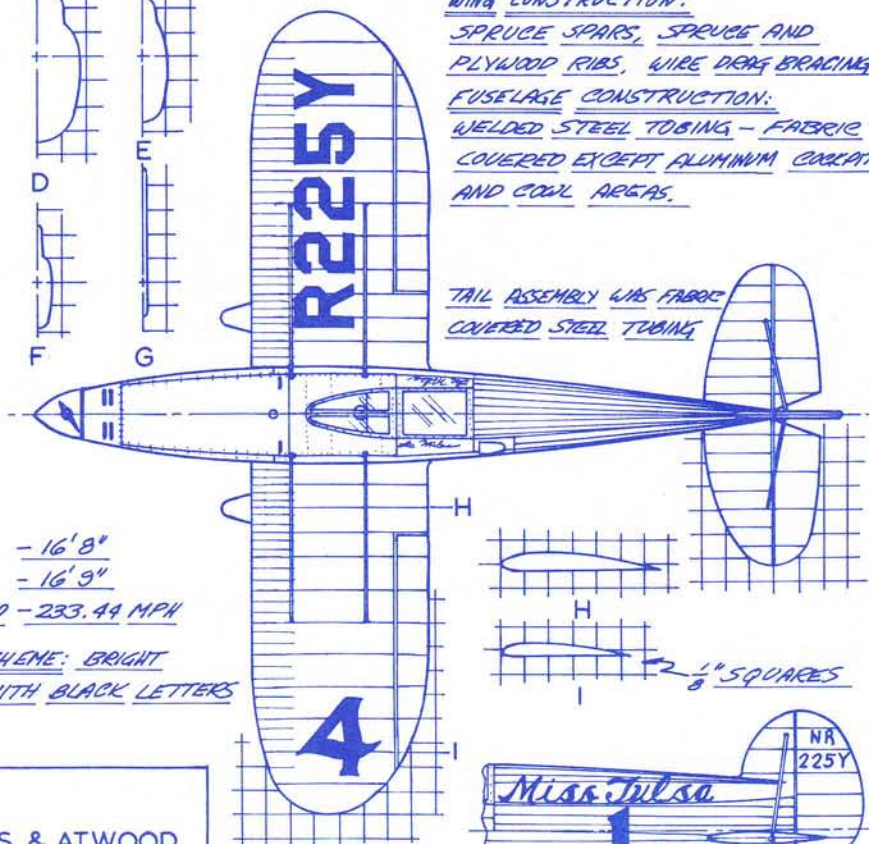
WING CONSTRUCTION:

SPRUCE SPARS, SPRUCE AND PLYWOOD RIBS, WIRE DECK BRACING

FUSELAGE CONSTRUCTION:

WELDED STEEL TUBING - FABRIC COVERED EXCEPT ALUMINUM CONCAIT AND COOL AREAS.

TAIL ASSEMBLY WAS FABRIC COVERED STEEL TUBING

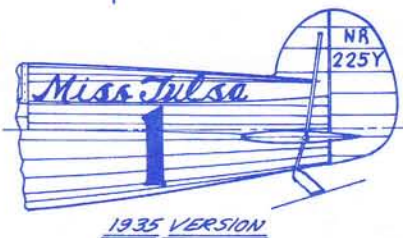


SPAN - 16' 8"  
LENGTH - 16' 3"  
MAX SPEED - 233.44 MPH

COLOR SCHEME: BRIGHT GREEN WITH BLACK LETTERS

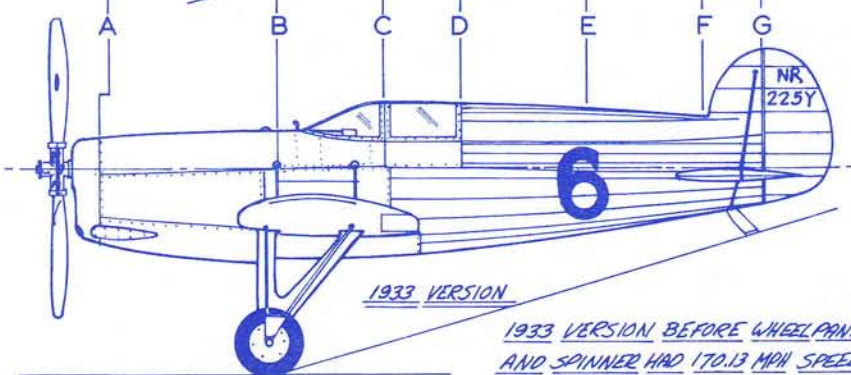
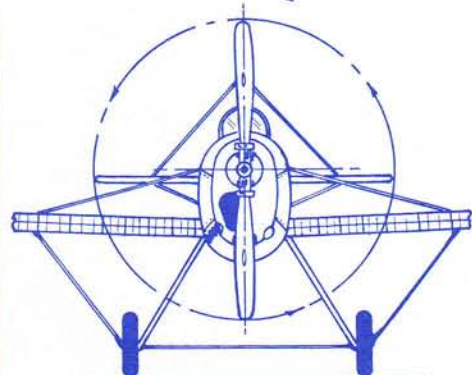
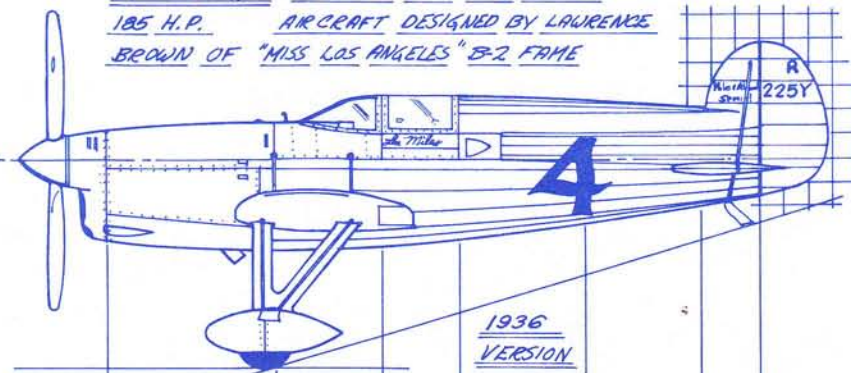
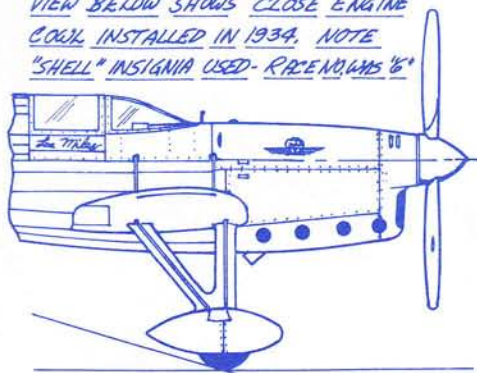
SCALE: 1/4" = 1'

WING WAS FABRIC COVERED



VIEW BELOW SHOWS CLOSE ENGINE COOL INSTALLED IN 1934. NOTE "SHELL" INSIGNIA USED - RACER NO. WAS "6"

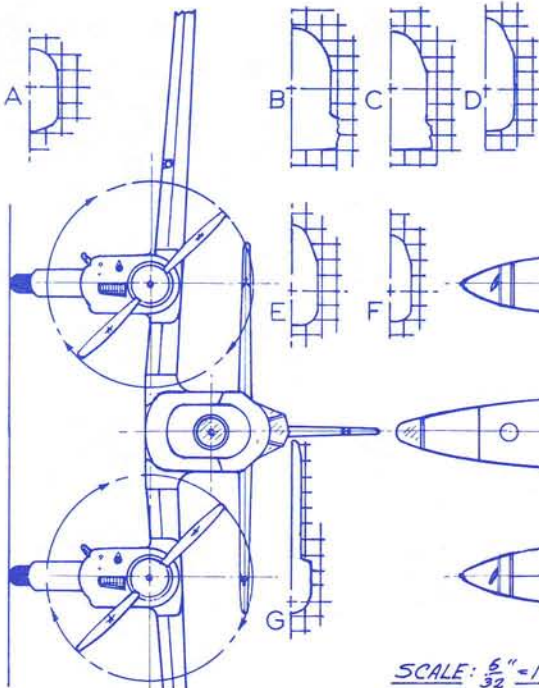
POWERPLANT: MENASCO C45 363 CU. IN. 185 H.P. AIRCRAFT DESIGNED BY LAWRENCE BROWN OF "MISS LOS ANGELES" B-2 FRAME



ABOVE VIEW SHOWING WIRE BRACING ON 1933 VERSION WITH LARGE COOL AND NO WHEEL PANTS.

1933 VERSION BEFORE WHEEL PANTS AND SPINNER HAD 170.13 MPH SPEED.

AIRCRAFT FLOWN BY LEE MILES IN NATIONAL AIR RACES 1933-1937. MILES WON 1934 GREVE TROPHY RACE AT 206.2 MPH. IN FOLLOWING YEARS THROUGH 1936 AIRCRAFT WON PRIZE MONEY IN VARIOUS RACES.



WING CONSTRUCTION: 2 WOOD SPARS WITH BIRCH PLYWOOD RIBS. SPRUCE SPARS & STRINGERS COVERED WITH DIAGONAL SPRUCE PLANKING LAMINATIONS.  
TAIL CONSTRUCTION: ALL SPRUCE FRAMEWORK COVERED WITH PLYWOOD.  
FUSELAGE CONSTRUCTION: ALL WOOD FORMERS, STRINGERS & SKIN.  
COYLINGS ARE ALUMINUM.

SCALE:  $\frac{5}{32}'' = 1'$



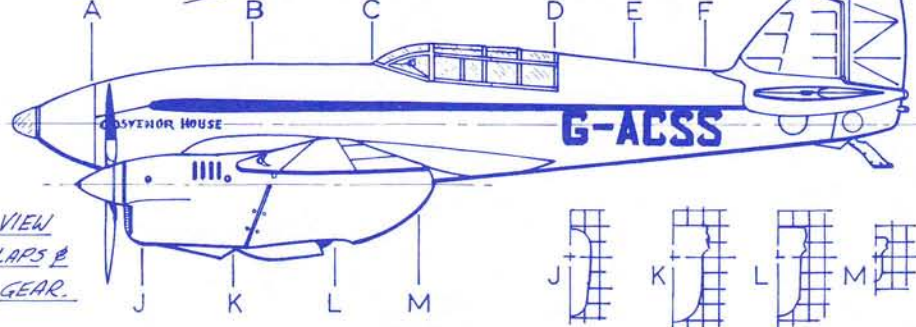
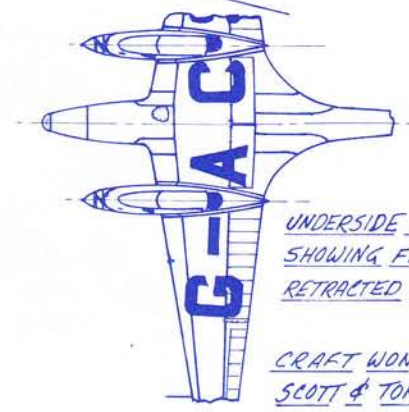
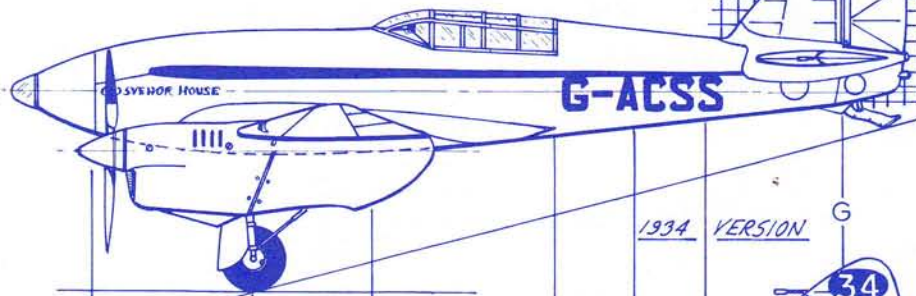
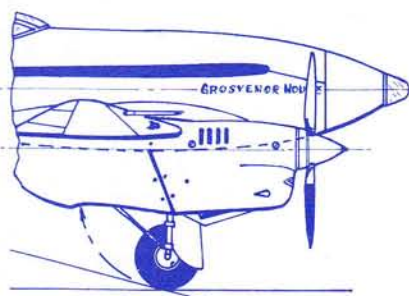
SPAN - 44' 0" AREA - 212.5 FT<sup>2</sup>  
 LENGTH - 29' 8" HEIGHT - 10'  
 WEIGHT EMPTY - 2840 LBS; GROSS 5320 LBS.  
 MAX SPEED 237 MPH; CRUISE 220 MPH  
 RANGE - 2,925 MILES; CEILING 19,000'

TYPICAL RAF 34 AEROFOIL SECTIONS.

COLOR SCHEME: BRIGHT RED WITH WHITE MARKINGS (SHOWN BLACK)  
 RACING #34 WAS BLACK ON WHITE OVAL PROPELLERS & SPINNERS - POLISHED METAL

PITOT TUBE SHOWN ON THIS WING FOR POSITION ONLY. TUBE IS ON RIGHT WING.

POWERPLANTS: TWO 230 H.P. DE HAVILLAND GIPSY SIX R ENGINES. RATIER PROPELLERS



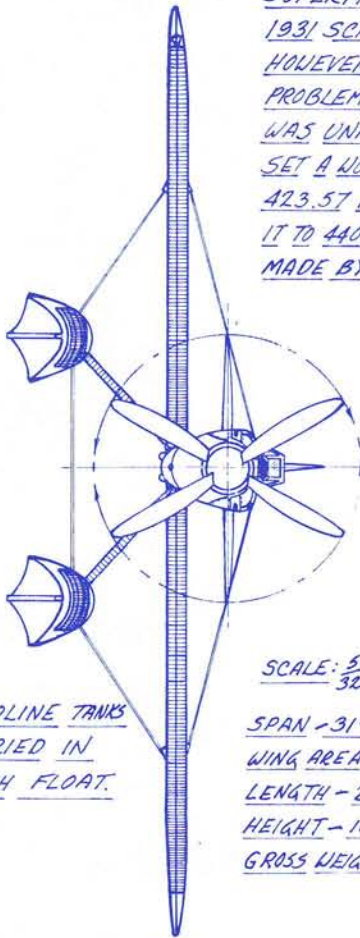
UNDERSIDE VIEW SHOWING FLAPS & RETRACTED GEAR.

CRAFT WON THE 1934 MACROBERTSON ENGLAND TO MELBOURNE RACE PILOTED BY CWA, SCOTT & TOM CAMPBELL BLACK. G-ACSS WAS ONE OF THREE COMETS. SISTER SHIPS WERE G-ACSP "BLACK MAGIC" (BLACK WITH GOLD TRIM) & G-ACSR WHICH WAS NAMELESS. (PAINTED GREEN).

11" 16.5"

THIS AIRCRAFT WAS BUILT TO COMPETE AGAINST THE SUPERMARINE 56-B IN THE 1931 SCHNEIDER TROPHY RACE. HOWEVER DUE TO MECHANICAL PROBLEMS WITH ITS ENGINE(S) WAS UNABLE TO. IN 1933 PLANE SET A WORLD SPEED RECORD OF 423.57 M.P.H. AND IN 1934 RAISED IT TO 440.681 M.P.H. BOTH FLIGHTS MADE BY FRANCESCO AGELLO.

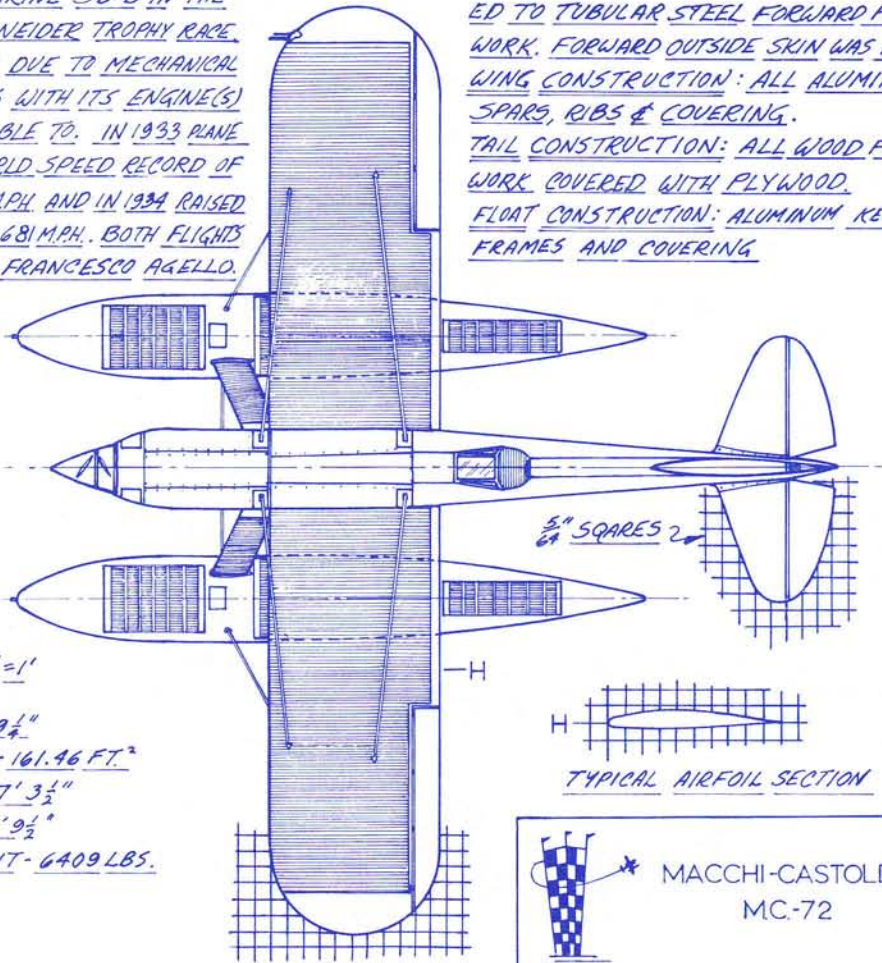
FUSELAGE CONSTRUCTION: REAR PORTION WAS WOOD FRAMES PLYWOOD COVERED IN MONOCOQUE STYLE. THIS WAS BOLTED TO TUBULAR STEEL FORWARD FRAMEWORK. FORWARD OUTSIDE SKIN WAS ALUM. WING CONSTRUCTION: ALL ALUMINUM SPARS, RIBS & COVERING. TAIL CONSTRUCTION: ALL WOOD FRAMEWORK COVERED WITH PLYWOOD. FLOAT CONSTRUCTION: ALUMINUM KEEL, FRAMES AND COVERING



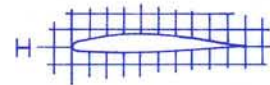
GASOLINE TANKS CARRIED IN EACH FLOAT.

SCALE:  $\frac{5}{32}'' = 1'$

SPAN - 31' 9  $\frac{1}{4}''$   
 WING AREA - 161.46 FT.<sup>2</sup>  
 LENGTH - 27' 3  $\frac{1}{2}''$   
 HEIGHT - 10' 9  $\frac{1}{2}''$   
 GROSS WEIGHT - 6409 LBS.



$\frac{5}{8}''$  SQUARES

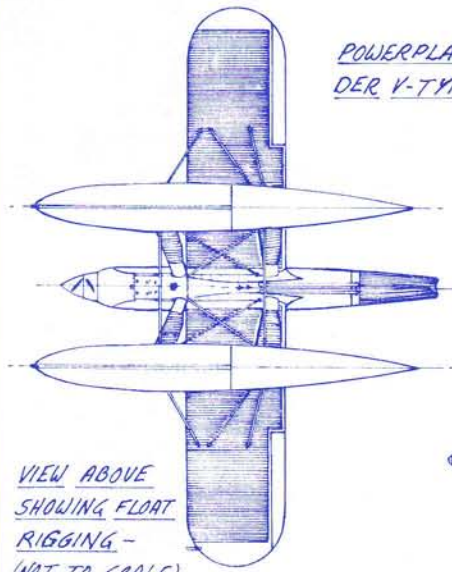


TYPICAL AIRFOIL SECTION

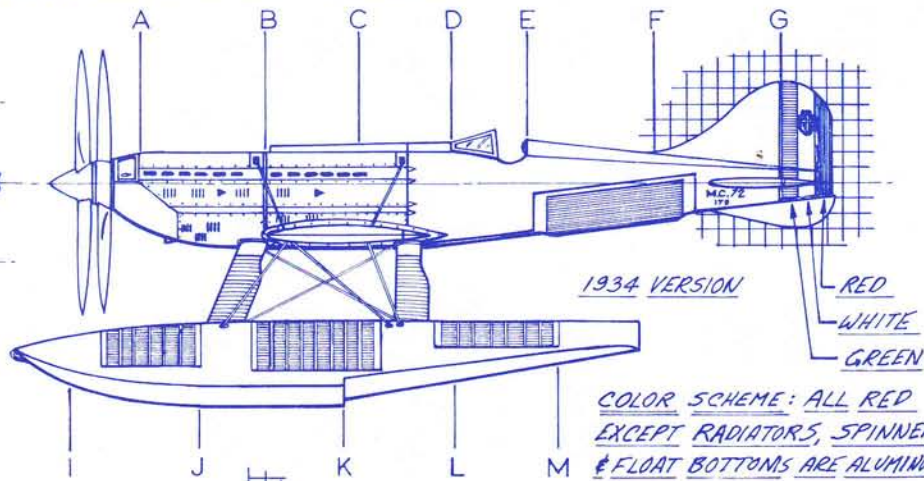


MACCHI-CASTOLDI  
MC-72

POWERPLANT: ONE 2800 H.P. FIAT A.5.6 24 CYLINDER V-TYPE (2 A.5.5 V-12s TANDEM COUPLED)



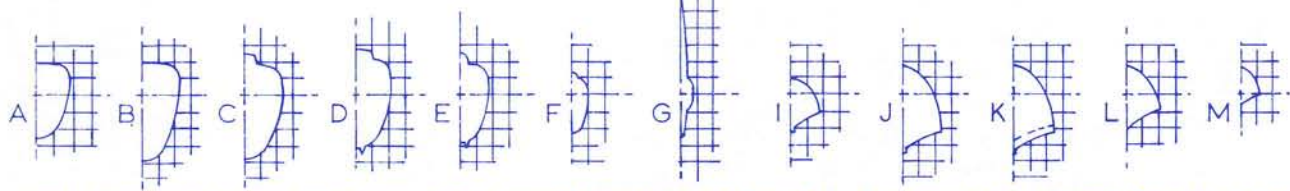
VIEW ABOVE SHOWING FLOAT RIGGING - (NOT TO SCALE)



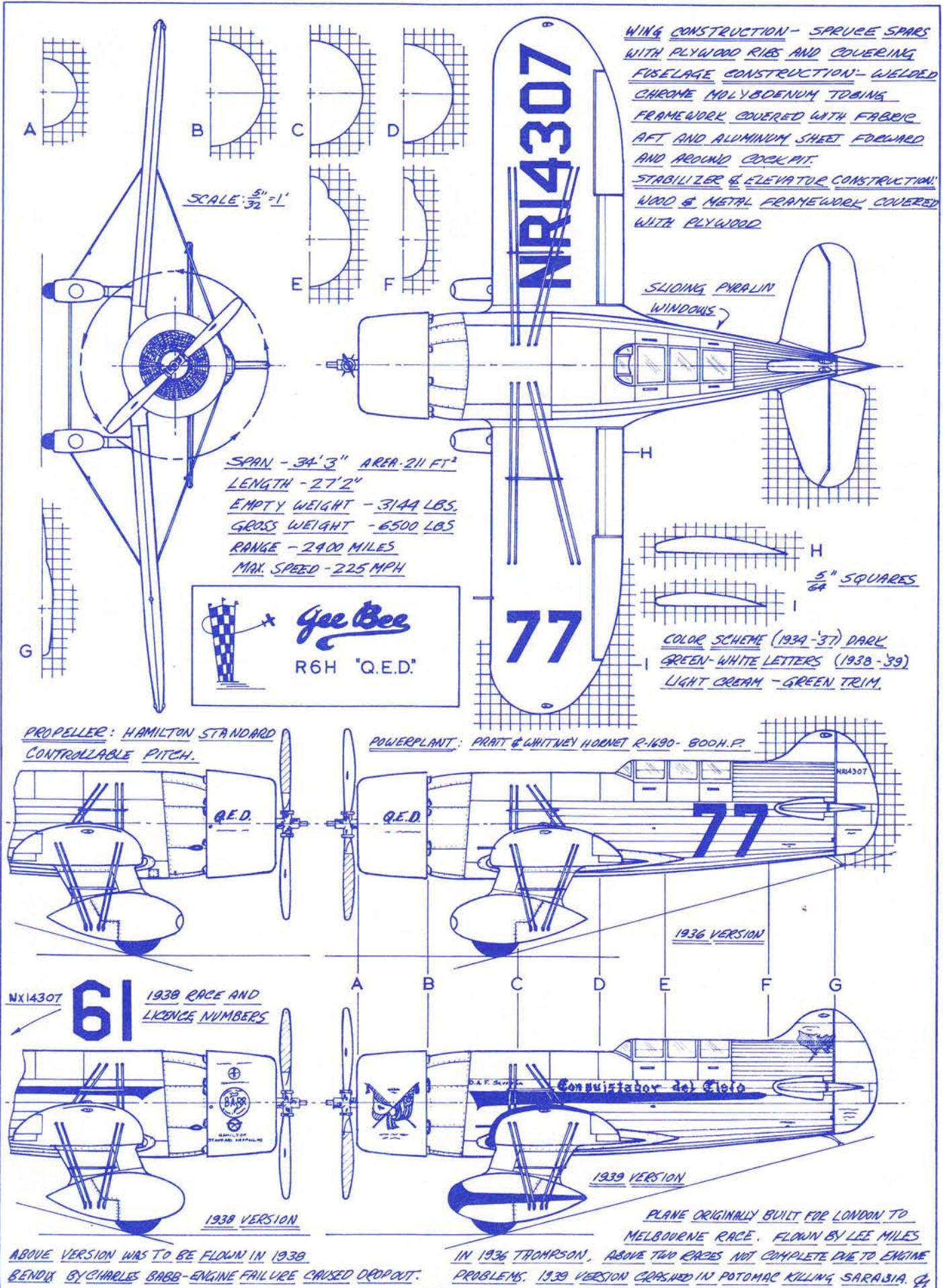
1934 VERSION

RED  
WHITE  
GREEN

COLOR SCHEME: ALL RED EXCEPT RADIATORS, SPINNER & FLOAT BOTTOMS ARE ALUMINUM



WATER RADIATORS ON FORWARD FLOATS, FLOAT STRUTS & REAR UNDER FUSELAGE. OIL COOLERS ON CENTER & REAR OF FLOATS



WING CONSTRUCTION - SPRUCE SPARS WITH PLYWOOD RIBS AND COVERING  
 FUSELAGE CONSTRUCTION - WELDED CHROME MOLYBDENUM TUBING FRAMEWORK COVERED WITH FABRIC AFT AND ALUMINUM SHEET FORWARD AND AROUND COCKPIT.  
 STABILIZER & ELEVATOR CONSTRUCTION - WOOD & METAL FRAMEWORK COVERED WITH PLYWOOD

SCALE:  $\frac{5''}{32} = 1'$

SPAN - 34'3" AREA - 211 FT<sup>2</sup>  
 LENGTH - 27'2"  
 EMPTY WEIGHT - 3144 LBS.  
 GROSS WEIGHT - 6500 LBS.  
 RANGE - 2400 MILES  
 MAX. SPEED - 225 MPH



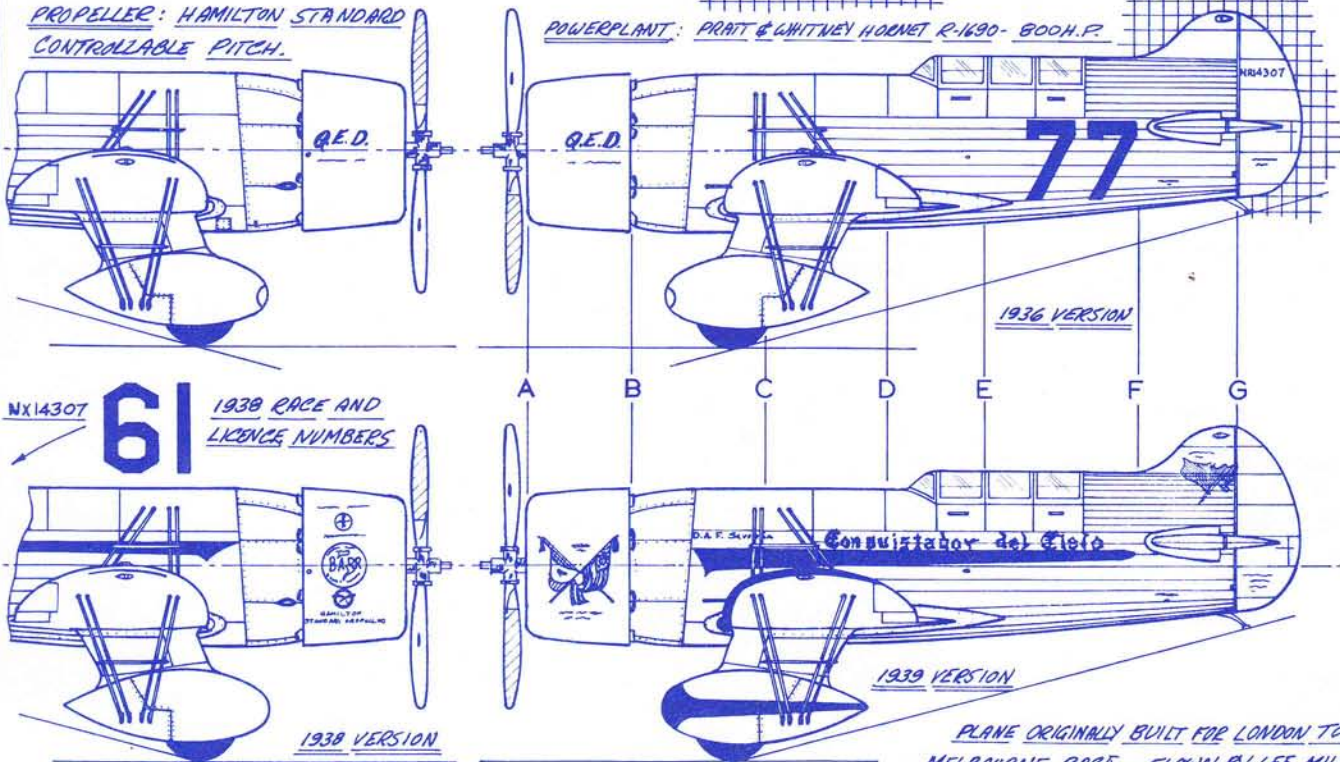
SLIDING PYRALIN WINDOWS

H  
 $\frac{5''}{64}$  SQUARES

COLOR SCHEME (1934-'37) DARK GREEN-WHITE LETTERS (1938-'39) LIGHT CREAM - GREEN TRIM.

PROPELLER: HAMILTON STANDARD CONTROLLABLE PITCH.

POWERPLANT: PRATT & WHITNEY HORNET R-1690-800H.P.

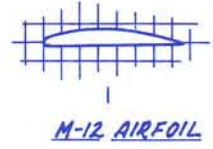
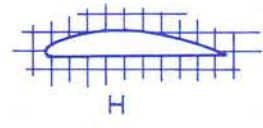
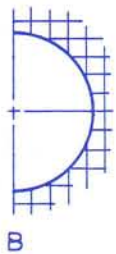
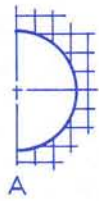
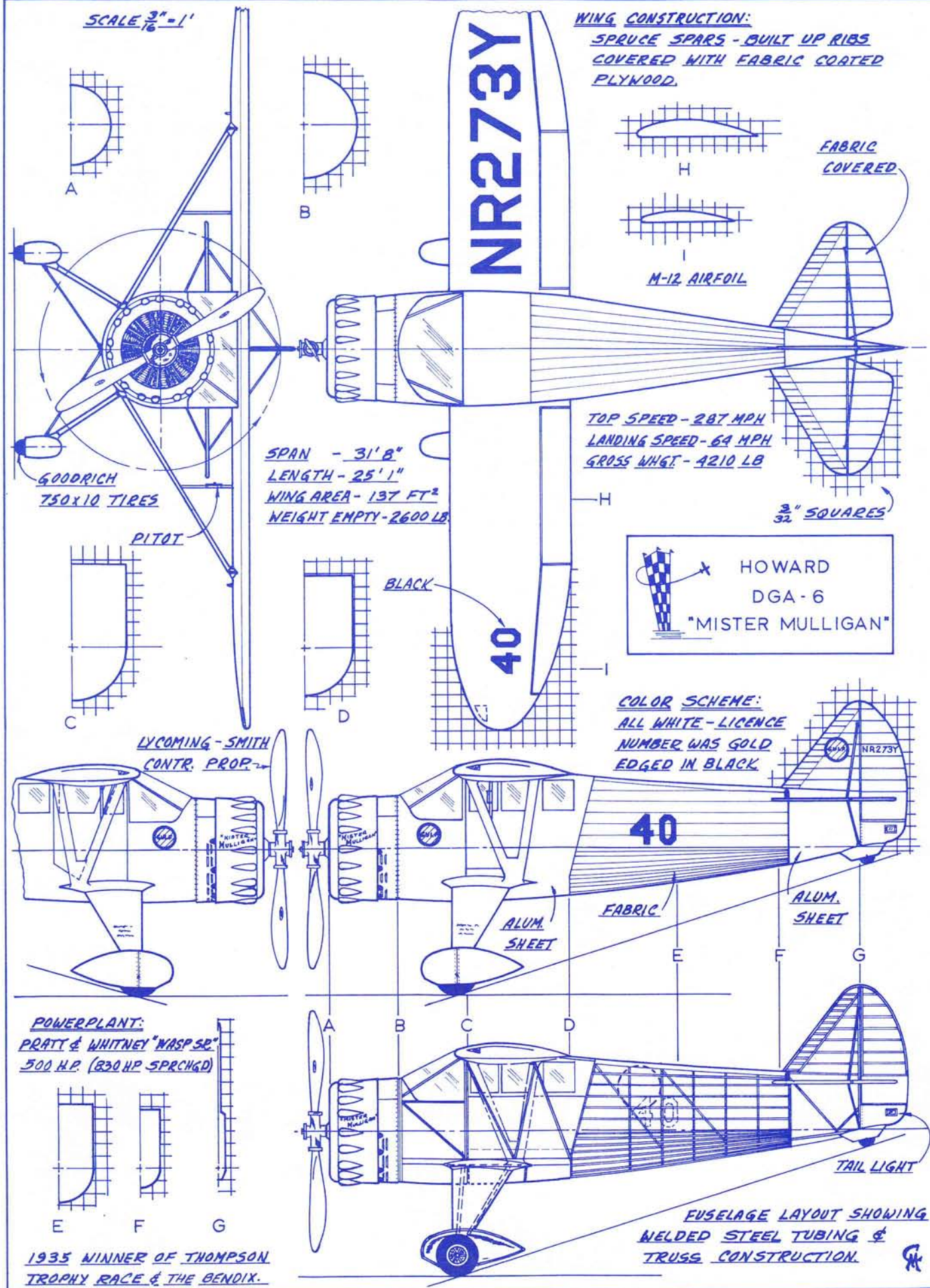


ABOVE VERSION WAS TO BE FLOWN IN 1938 BENT BY CHARLES BAGG - ENGINE FAILURE CAUSED DROP-OUT.

IN 1936 THOMPSON, ABOVE TWO RACES NOT COMPLETE DUE TO ENGINE PROBLEMS. 1939 VERSION CRASHED IN POTOMAC KILLING SARABIA.  $\frac{1}{2}$

SCALE  $\frac{3}{16}'' = 1'$

**WING CONSTRUCTION:**  
 SPRUCE SPARS - BUILT UP RIBS  
 COVERED WITH FABRIC COATED  
 PLYWOOD.



FABRIC COVERED

M-12 AIRFOIL

$\frac{3}{32}''$  SQUARES

SPAN - 31' 8"  
 LENGTH - 25' 1"  
 WING AREA - 137 FT<sup>2</sup>  
 WEIGHT EMPTY - 2600 LB

TOP SPEED - 287 MPH  
 LANDING SPEED - 64 MPH  
 GROSS WGT - 4210 LB



HOWARD  
 DGA - 6  
 "MISTER MULLIGAN"

**COLOR SCHEME:**  
 ALL WHITE - LICENCE  
 NUMBER WAS GOLD  
 EDGED IN BLACK

GOODRICH  
 750x10 TIRES

PITOT

BLACK

40

40

NR273Y

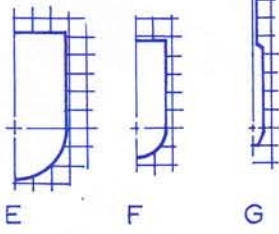
LYCOMING - SMITH  
 CONTR. PROP.

FABRIC

ALUM.  
 SHEET

ALUM.  
 SHEET

**POWERPLANT:**  
 PRATT & WHITNEY "WASP SR"  
 500 H.P. (830 HP SPRING)



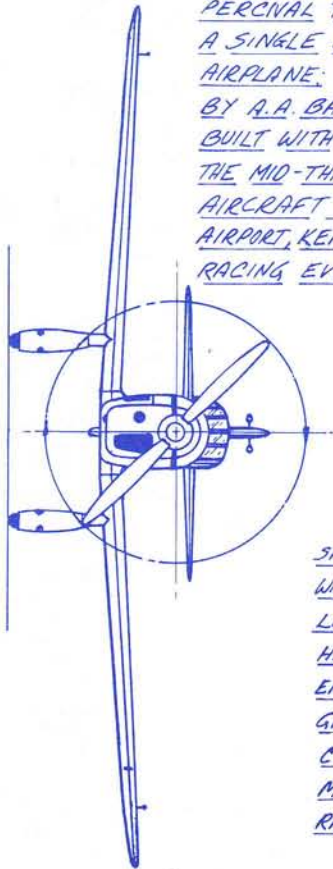
1935 WINNER OF THOMPSON  
 TROPHY RACE & THE BENDIX.

FUSELAGE LAYOUT SHOWING  
 WELDED STEEL TUBING &  
 TRUSS CONSTRUCTION.

TAIL LIGHT

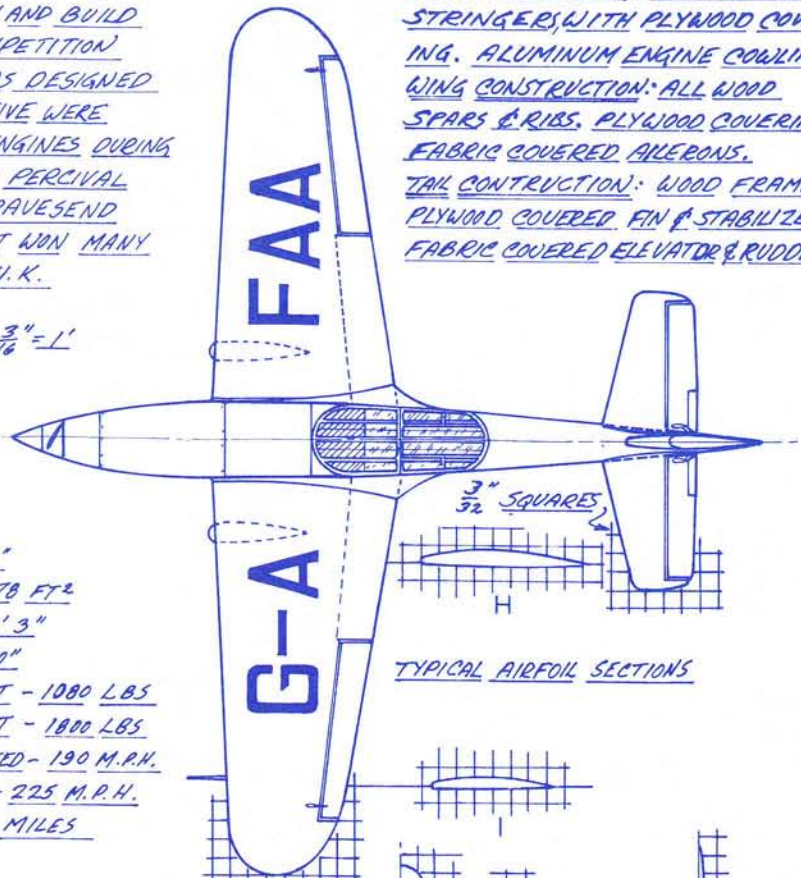
THE "MEW GULL" IS ACTUALLY A SECOND ATTEMPT BY EDGAR PERCIVAL TO DESIGN AND BUILD A SINGLE SEAT COMPETITION AIRPLANE. CRAFT WAS DESIGNED BY A.A. BAGE AND FIVE WERE BUILT WITH VARIOUS ENGINES DURING THE MID-THIRTIES BY PERCIVAL AIRCRAFT LTD. @ GRAVESEND AIRPORT, KENT. CRAFT WON MANY RACING EVENTS IN U.K.

FUSELAGE CONSTRUCTION: ALL WOOD FORMERS, LONGERONS, STRINGERS, WITH PLYWOOD COVERING. ALUMINUM ENGINE COWLING.  
WING CONSTRUCTION: ALL WOOD SPARS & RIBS, PLYWOOD COVERING. FABRIC COVERED ALERONS.  
TAIL CONSTRUCTION: WOOD FRAMES. PLYWOOD COVERED. FIN & STABILIZER, FABRIC COVERED ELEVATOR & RUDDER



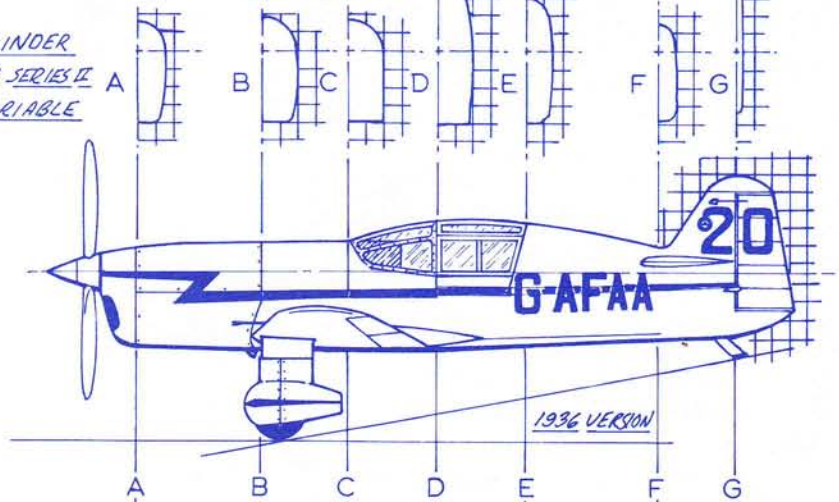
SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 24' 0"  
 WING AREA - 78 FT<sup>2</sup>  
 LENGTH - 20' 3"  
 HEIGHT - 6' 10"  
 EMPTY WEIGHT - 1080 LBS  
 GROSS WEIGHT - 1800 LBS  
 CRUISING SPEED - 190 M.P.H.  
 MAX. SPEED - 225 M.P.H.  
 RANGE - 575 MILES



TYPICAL AIRFOIL SECTIONS

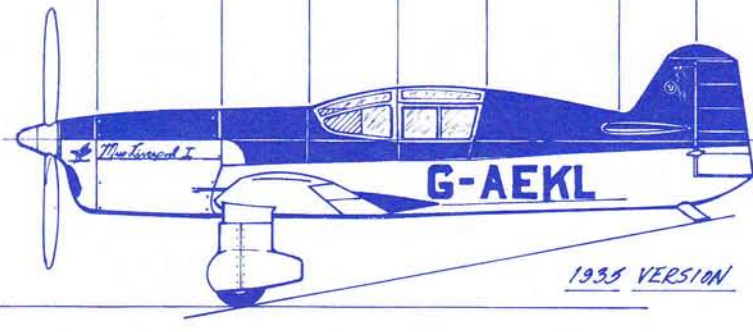
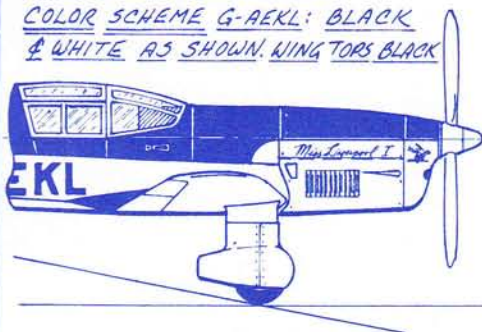
POWERPLANT: ONE AIR COOLED 6 CYLINDER 205 HORSEPOWER DE HAUVILLAND GIPSY SIX SERIES II  
PROPELLER: DE HAUVILLAND ALL METAL VARIABLE PITCH AIRSCREW.  
 NOTE: WHEEL PANTS WERE DURAL.



1936 VERSION

COLOR SCHEME G-AFAA: ALL WHITE WITH BLACK MARKINGS.

COLOR SCHEME G-AEKL: BLACK & WHITE AS SHOWN. WING TIPS BLACK



1935 VERSION

CA

WING CONSTRUCTION: 2 SPARS, WOOD RIBS WITH PLYWOOD COVERING-FULL CANTILEVER.  
FUSELAGE CONSTRUCTION: WOOD FRAMEWORK COVERED WITH PLYWOOD; DURAL COWL.  
TAIL CONSTRUCTION: WOOD FRAMEWORK WITH DOPED FABRIC COVERING.  
WHEEL PANTS WERE DURAL COVERING A DOWTY UNDERCARRIAGE.

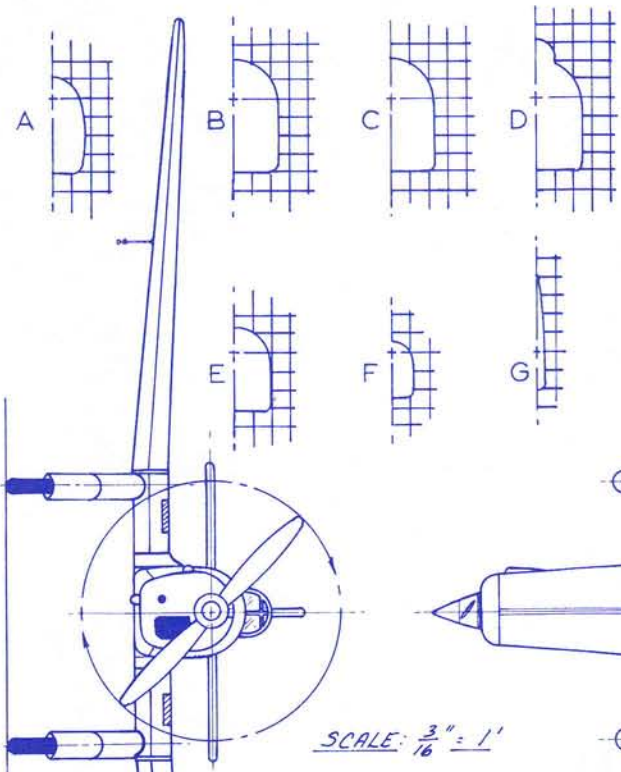
CRAFT WAS DIRECT DESIGN DEVELOPMENT OF 1935 MILES M.2 HAWK.

DOTTED LINES SHOW WINGS IN FOLDED POSITION.

3/32" SQUARES

TYPICAL AIRFOIL SECTIONS

COLOR SCHEME: ALL WHITE WITH BLUE LETTERING - RED '8'

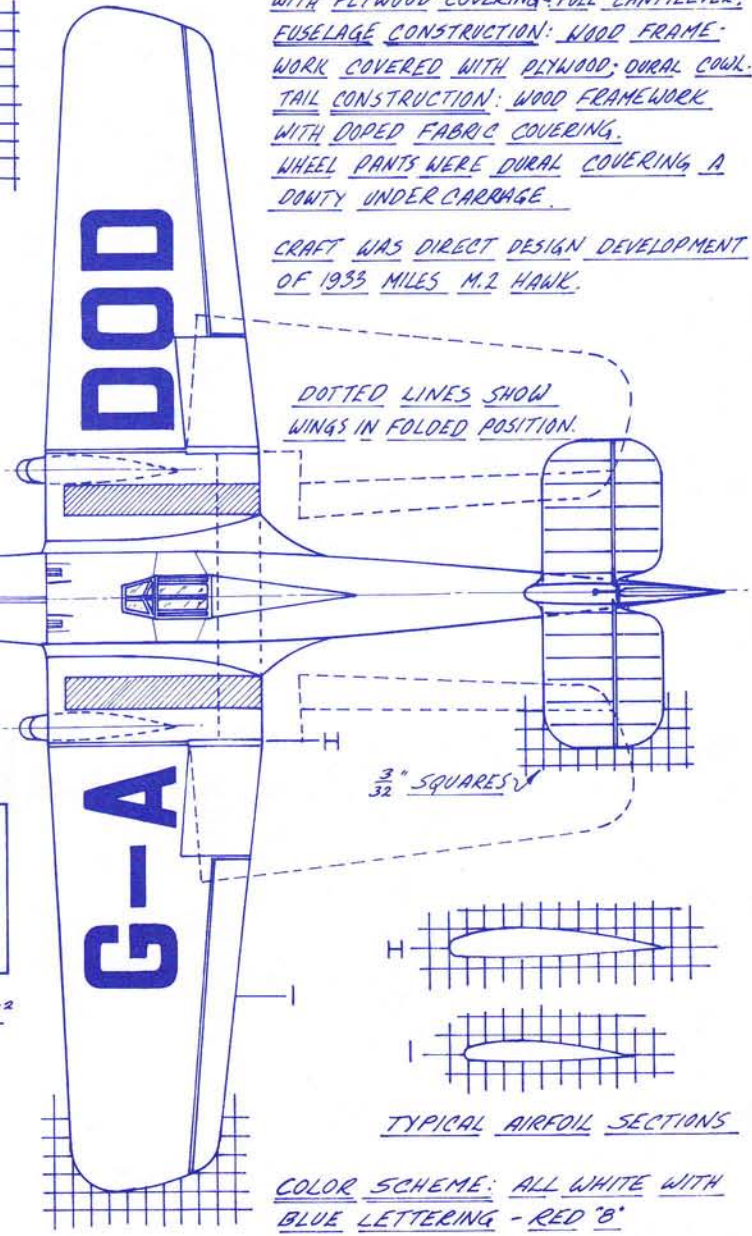


SCALE: 3/16" = 1'



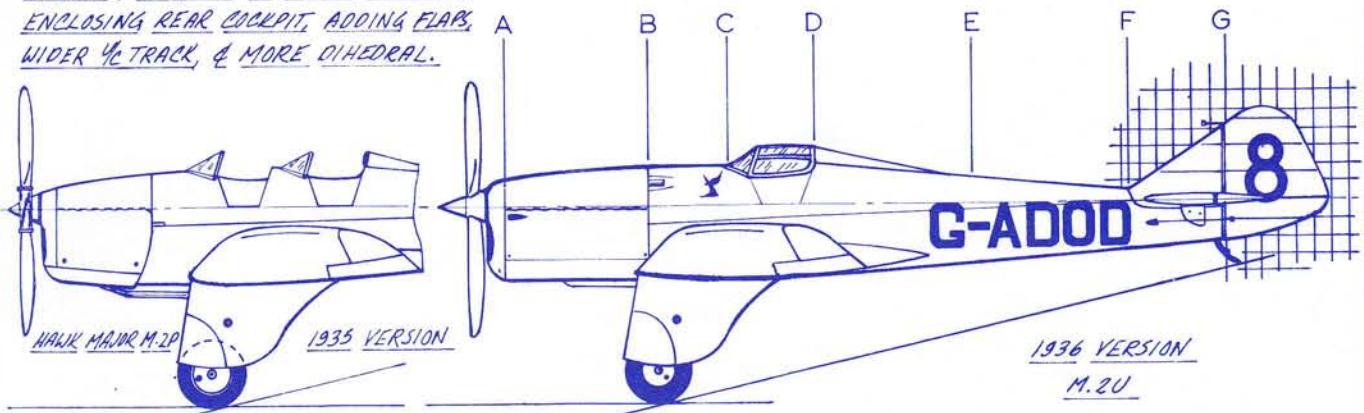
MILES RACER  
'HAWK SPEED SIX'

SPAN - 33' WING AREA - 169 FT.<sup>2</sup>  
LENGTH - 24'  
HEIGHT - 6' 8"  
EMPTY WEIGHT - 1355 LBS.  
GROSS WEIGHT - 1900 LBS.  
MAX. SPEED - 185 M.P.H.



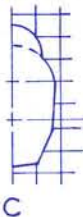
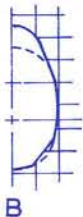
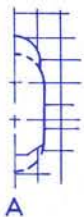
HAWK MAJOR M.2P WAS MADE INTO 'SPEED SIX' BY ADDITION OF LARGE ENGINE, REMOVAL OF FRONT COCKPIT, ENCLOSING REAR COCKPIT, ADDING FLAPS, WIDER 1/2 TRACK, & MORE DIHEDRAL.

POWERPLANT: DE HAVILLAND 200 H.P. GIPSY SIX R. - TURNING METAL FIXED PITCH PROPELLER.



ONE OF 3 'HAWK SPEED SIX' AIRCRAFT 'G-ADOD' FLOWN BY RUTH FONTES COMPETED IN 1936 KING'S CUP RACE. LATER CRAFT WAS FLOWN BY F/LT CLOUSTON IN THE SCHLESINGER RACE. PLANE DESIGNED BY F.G. MILES; BUILT BY PHILLIPS & POWIS A/C LTD.

SCALE  $\frac{1}{4}'' = 1'$



A

B

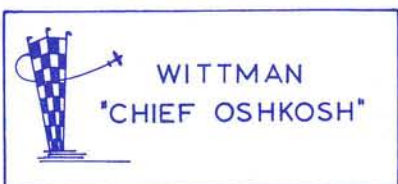
C

D

FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBE AND WOOD.  
FABRIC COVERED AFT - ALUMINUM  
COWLING AND AROUND COCKPIT.  
STEEL TUBE TAIL: FABRIC COVERED

WING CONST: WOOD SPARS & RIBS  
FABRIC COVERED

COLOR SCHEME (1931) ALL RED  
1932-1938 ALL RED EXCEPT NATURAL  
ALUMINUM COWL AND AROUND  
COCKPIT. WHITE NUMERALS



WITTMAN  
"CHIEF OSHKOSH"

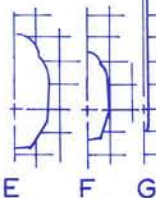
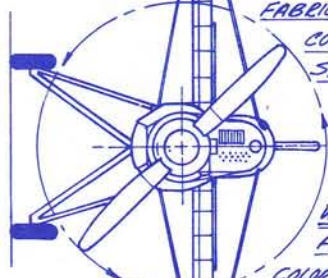
FABRIC COVERED

R12047

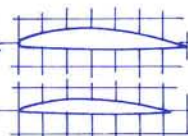


FRONT VIEW 1936  
MULTIPLE LEAF  
SPRING L.G.

FLAPS ADDED IN 1936



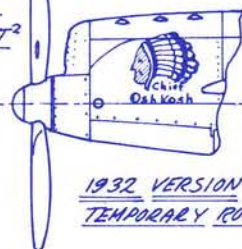
E F G



1/8" SQUARES

WITTMAN RACING AIRFOIL

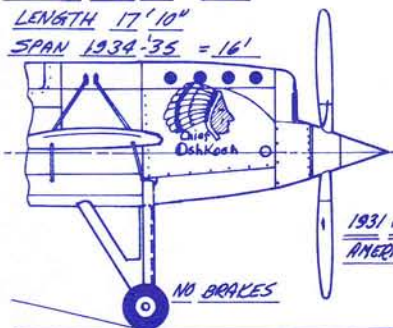
1936 SPAN:  
13 FEET  
AREA: 45 FT<sup>2</sup>



1932 VERSION WITH  
TEMPORARY ROUNDED SPINNER

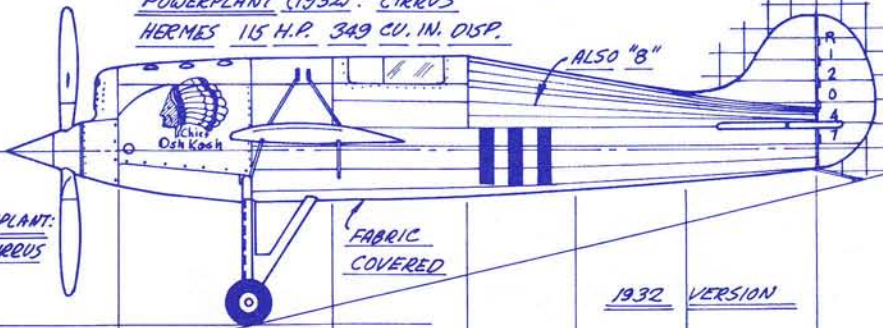
SPAN 1931-'33 = 19'  
LENGTH 17' 10"  
SPAN 1934-'35 = 16'

POWERPLANT (1932): CIRRUS  
HERMES 115 H.P. 349 CU. IN. DISP.



1931 POWERPLANT:  
AMERICAN CIRCUS

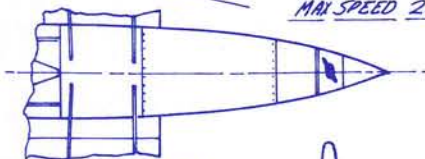
NO BRAKES



FABRIC  
COVERED

1932 VERSION

MAX SPEED 202.2 MPH

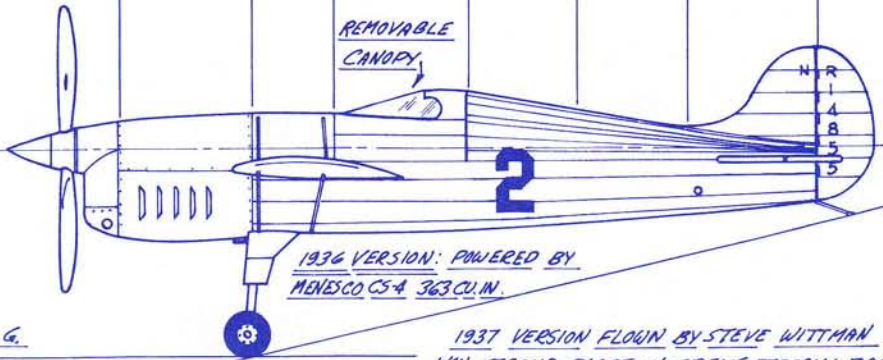


TOP VIEW OF 1936  
ALUMINUM COWL



1930 "CESSNA" LEAF SPRING L.G.

MAX. SPEED 231.99 WITH MENESCO ENGINE

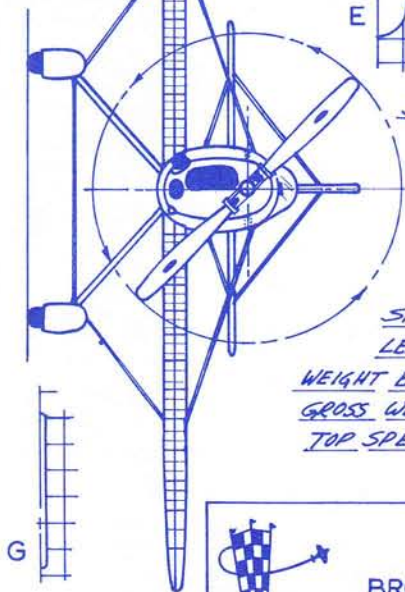
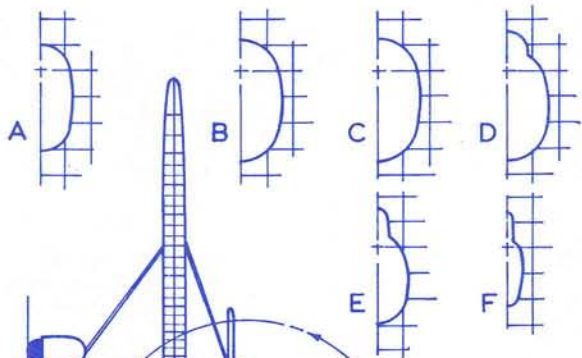


REMOVABLE  
CANOPY

1936 VERSION: POWERED BY  
MENESCO CS-4 363 CU. IN.

1937 VERSION FLOWN BY STEVE WITTMAN  
WON SECOND PLACE IN GREVE TROPHY RACE.  
ALSO WON TWO FIRST PLACES IN OTHER  
SMALLER RACES.



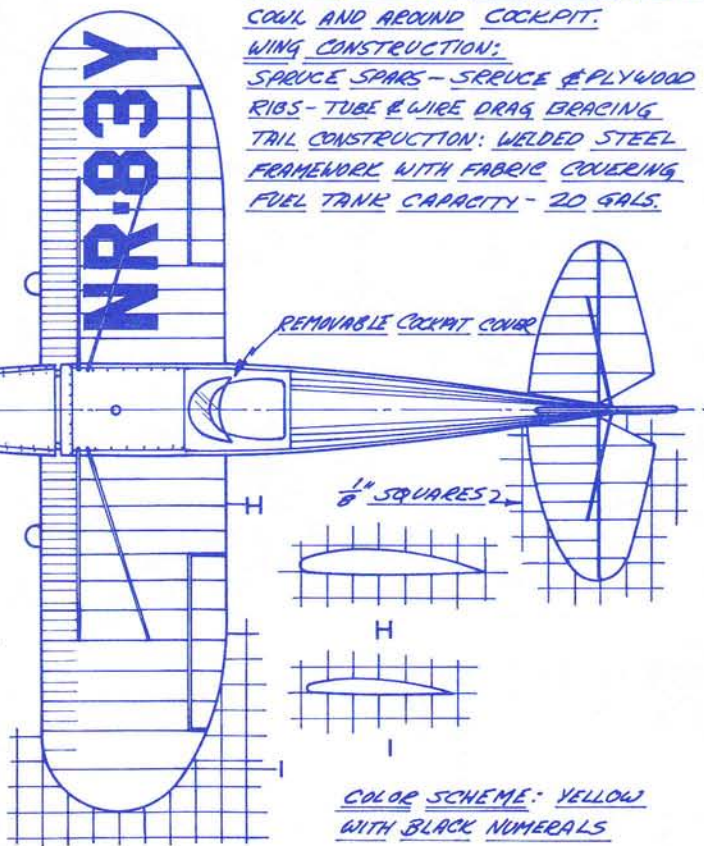


SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 16' 8"  
 LENGTH - 16' 9"  
 WEIGHT EMPTY - 680 LBS  
 GROSS WEIGHT - 964 LBS  
 TOP SPEED - 235 MPH



FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBE TRUSS CONSTRUCTION  
 FABRIC COVERED WITH SHEET ALUMINUM  
 COUL AND AROUND COCKPIT.  
WING CONSTRUCTION:  
 SPRUCE SPARS - SPRUCE & PLYWOOD  
 RIBS - TUBE & WIRE DRAG BRACING  
TAIL CONSTRUCTION: WELDED STEEL  
 FRAMEWORK WITH FABRIC COVERING  
 FUEL TANK CAPACITY - 20 GALS.

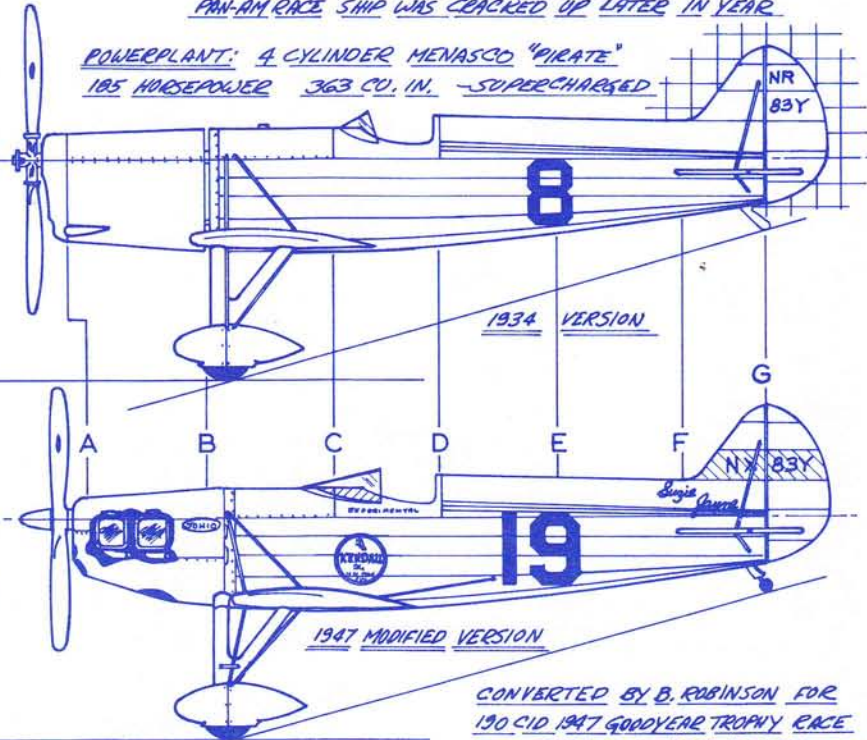
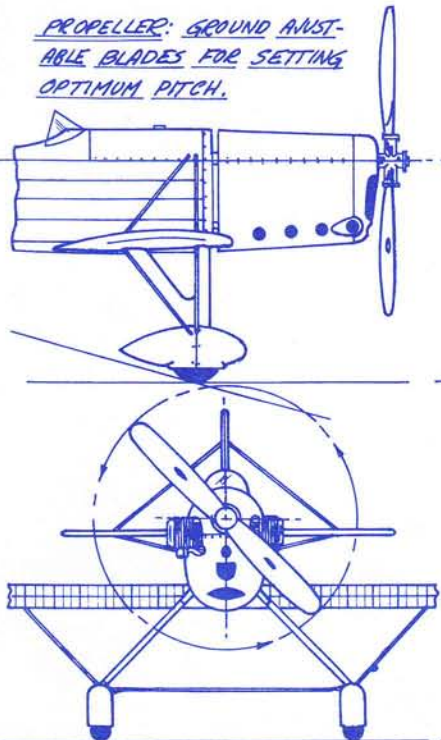


COLOR SCHEME: YELLOW  
 WITH BLACK NUMERALS

AIRCRAFT BUILT IN 1934 BY LAWRENCE BROWN  
 FOR RALPH BUSHEY. AFTER PLACING 2ND IN NEW ORLEANS  
 PAN-AM RACE SHIP WAS CRACKED UP LATER IN YEAR.

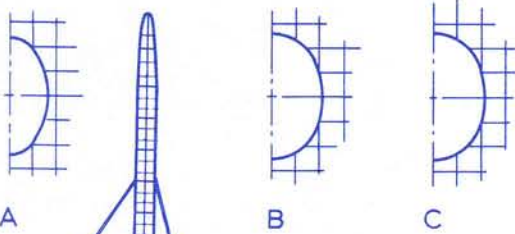
PROPELLER: GROUND ANTI-  
 ABLE BLADES FOR SETTING  
 OPTIMUM PITCH.

POWERPLANT: 4 CYLINDER MENASCO "PIRATE"  
 185 HORSEPOWER 363 CU. IN. - SUPERCHARGED



CONVERTED BY B. ROBINSON FOR  
 190 CID 1947 GOODYEAR TROPHY RACE  
 TOP SPEED 185 MPH - WEIGHED 820 LBS

ALTHOUGH THIS AIRCRAFT WAS NEVER SUCCESSFUL AT RACING, IT WAS STILL THE FORERUNNER OF THE BROWN B-2  
 "MISS LOS ANGELES" WHICH CARRIED MANY OF THE B-1 LINES AND FEATURES AND WENT ON TO RACING FAME

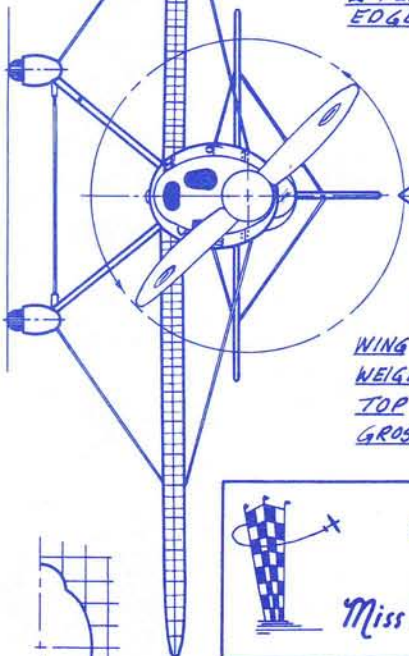


2-PLY CLOTH LEADING  
EDGE REINFORCING

WING CONSTRUCTION:  
2 SPRUCE SPARS - SPRUCE & PLYWOOD  
RIBS - STEEL TUBE AND WIRE DRAG  
BRACING -AILERONS STATICALLY  
BALANCED WITH INTERNAL LEAD WEIGHT.

COLOR SCHEME:  
BRIGHT SCARLET WITH GOLD LEAF  
LETTERING.

FLAPS - LANDING SPEED  
WITH FLAPS DOWN  
50-60 M.P.H.



SPAN - 19'3"  
LENGTH - 19'10"  
WING AREA - 60FT<sup>2</sup>  
WEIGHT EMPTY - 882 LBS  
TOP SPEED - 270 M.P.H.  
GROSS WEIGHT - 1299 LBS.

FABRIC COVERED WINGS  
AND TAIL SURFACES

MOD. CURTISS  
RACING AIRFOIL

1/8" SQUARES

BROWN  
B-2  
Miss Los Angeles

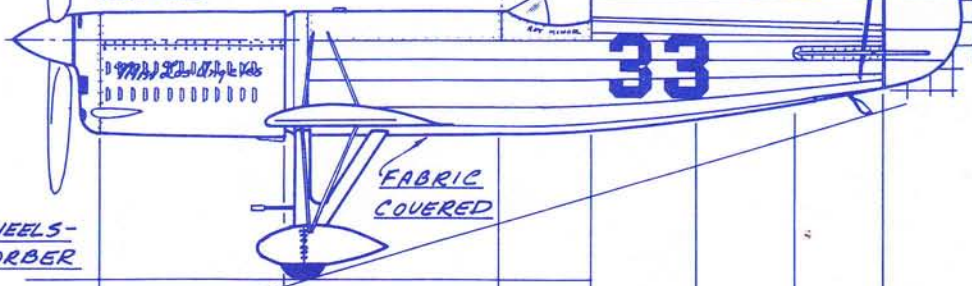
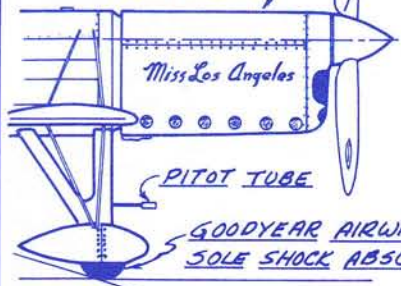
REMOVABLE COCKPIT COVER WITH  
QUICK EMERGENCY RELEASE

D SHEET ALUM-  
INUM COWL

PROPELLER:  
HAMILTON STANDARD HUB  
SPECIAL 6'6" STONY METAL  
BLADES

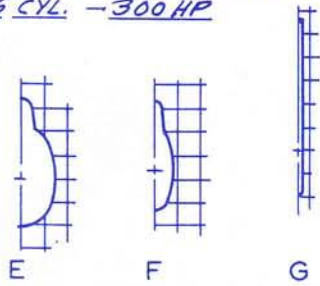
DECK - SHEET  
ALUMINUM

R  
255-Y



POWERPLANT:  
MENASCO C-6-S BUCCANEER  
6 CYL. - 300HP

A B C D E F G



ENGINE  
OUTLINE

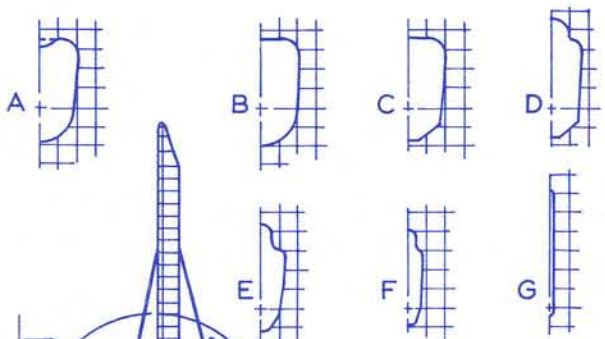
30 GAL. FUEL  
TANK

SPAR MOUNT

FUSELAGE LAYOUT SHOWING  
WELDED STEEL TUBING  
TRUSS CONSTRUCTION.

FLOWN IN VARIOUS EVENTS  
AT NATIONAL AIR RACES 1934-39 -  
WON 550 CO. IN. EVENT AND PLACED  
2ND IN 1934 THOMPSON TROPHY RACE.

SCALE 1/4" = 1'

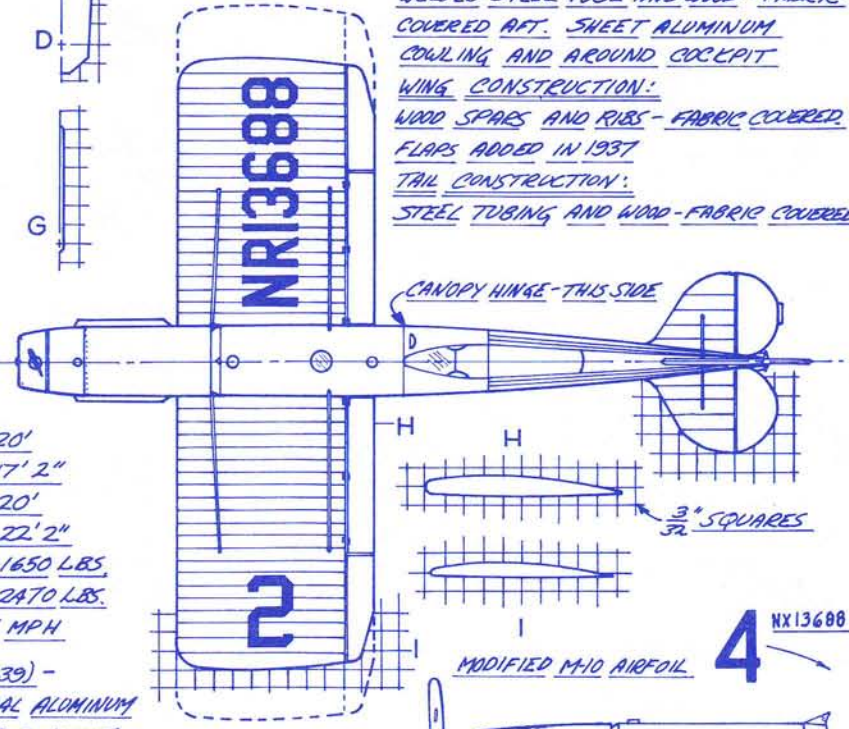


SCALE:  $\frac{3}{16}'' = 1'$

- SPAN (1934-'35) - 20'
- SPAN (1937-'39) - 17' 2"
- LENGTH (1934-'35) - 20'
- LENGTH (1937-'39) - 22' 2"
- EMPTY WEIGHT - 1650 LBS.
- GROSS WEIGHT - 2470 LBS.
- MAX SPEED - 325 MPH

COLOR SCHEME: (1934-'39) -  
 ALL RED EXCEPT NATURAL ALUMINUM  
 COUL AND AROUND COCKPIT - WHITE  
 NUMERALS.

FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBE AND WOOD - FABRIC  
 COVERED AFT. SHEET ALUMINUM  
 COWLING AND AROUND COCKPIT  
WING CONSTRUCTION:  
 WOOD SPARS AND RIBS - FABRIC COVERED  
 FLAPS ADDED IN 1937  
TAIL CONSTRUCTION:  
 STEEL TUBING AND WOOD - FABRIC COVERED

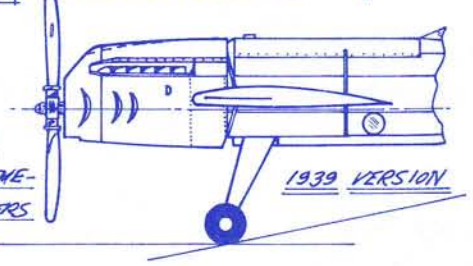


MODIFIED M-10 AIRFOIL 4 NX13688

COOLANT RADIATOR  
 WAS LOCATED BEHIND  
 COOLING FAN IN SPIN-  
 NER ON 1937-'38  
 VERSIONS

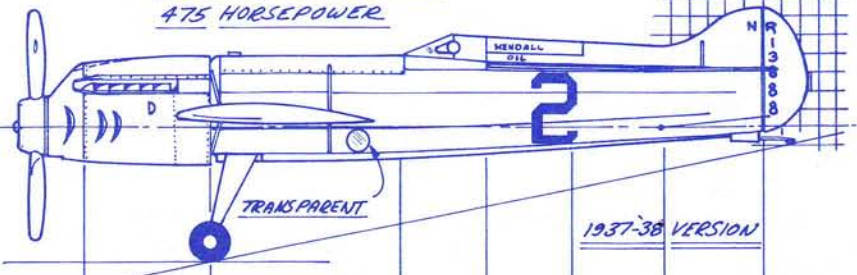
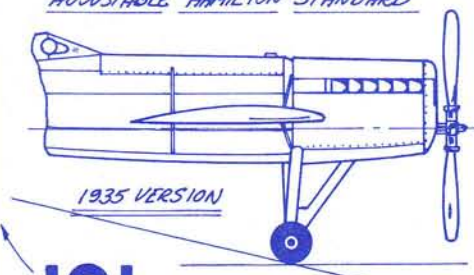


SPINNER REMOVED  
 IN '39 - COLOR SCHEME -  
 ALL RED, WHITE NUMBERS



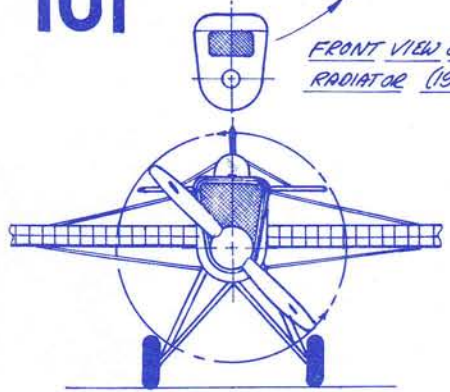
PROPELLER: 78" DIA. GROUND  
ADJUSTABLE HAMILTON STANDARD

POWERPLANT: CURTISS D-12  
 1145 CU. IN. - 12 CYLINDER  
 475 HORSEPOWER

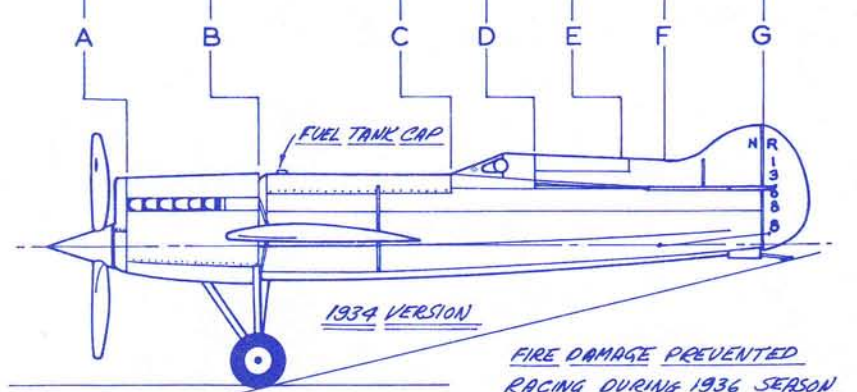


101

FRONT VIEW OF  
RADIATOR (1935)

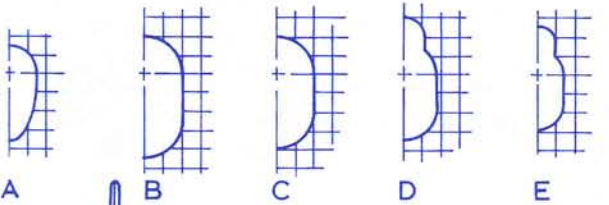


FRONT VIEW SHOWING 1934 RADIATOR AND  
TRI-POD LANDING GEAR CONSTRUCTION



FIRE DAMAGE PREVENTED  
RACING DURING 1936 SEASON

DESIGNED, BUILT & FLOWN BY STEVE WITTMAN. PLACED 2ND IN 1935  
TRAMPSON TROPHY RACE, 5TH IN 1937, 3RD IN 1938 AND 5TH IN 1939



FUSELAGE CONSTRUCTION:  
 ALL WOOD WITH FORMERS AND CROSS BRACING BEING  
 SPRUCE AND PLYWOOD. SIDES WERE PLYWOOD  
 WITH ENTIRE STRUCTURE FABRIC COATED & DOPED

WING CONSTRUCTION:

TWO SPRUCE AND PLYWOOD BOX SPARS  
 WITH CLOSELY SPACED SPRUCE RIBS.  
 ENTIRE WING COVERED WITH PLYWOOD.  
 TRAILING EDGE FITTED WITH BALANCED  
 AILERONS AND FLAPS.

TAIL CONSTRUCTION:

ALL WOOD STRUCTURE WITH PLYWOOD  
 AND FABRIC COVERING.  
 ENTIRE AIRCRAFT WAS HIGHLY POLISHED

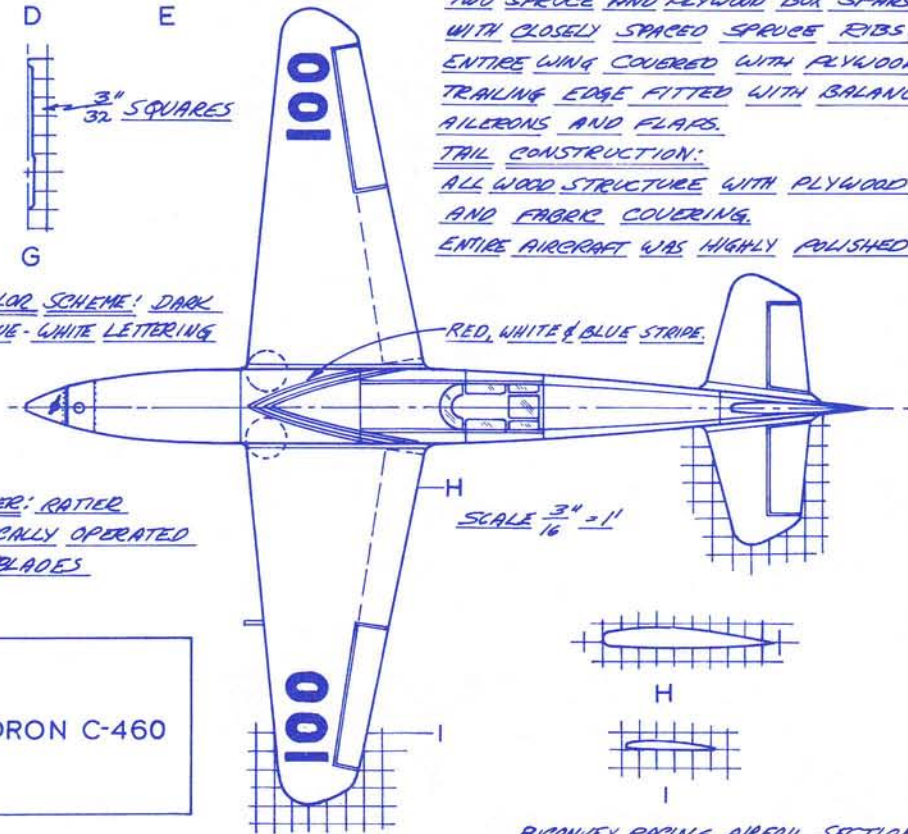
COLOR SCHEME: DARK  
 BLUE - WHITE LETTERING

PROPELLER: RATED  
 PNEUMATICALLY OPERATED  
 2 PITCH BLADES

PITOT TUBE



CAUDRON C-460



SCALE  $\frac{3}{16} = 1$

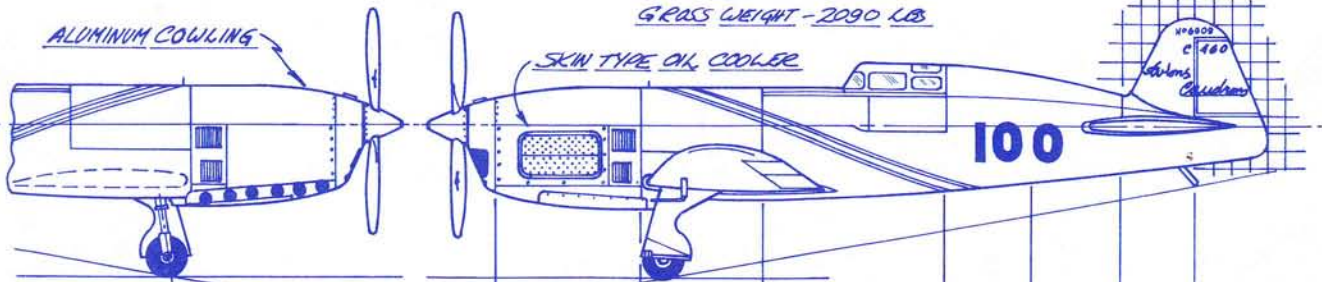


BICONVEX RACING AIRFOIL SECTION

POWERPLANT: RENAULT SIX  
 CYLINDER INVERTED - AIR COOLED  
 488 CU. IN. - 340 HORSE POWER

WING SPAN - 22' 1"  
LENGTH - 23' 4"  
WING AREA - 75.1 FT<sup>2</sup>  
WEIGHT EMPTY - 1298 LBS  
GROSS WEIGHT - 2090 LBS

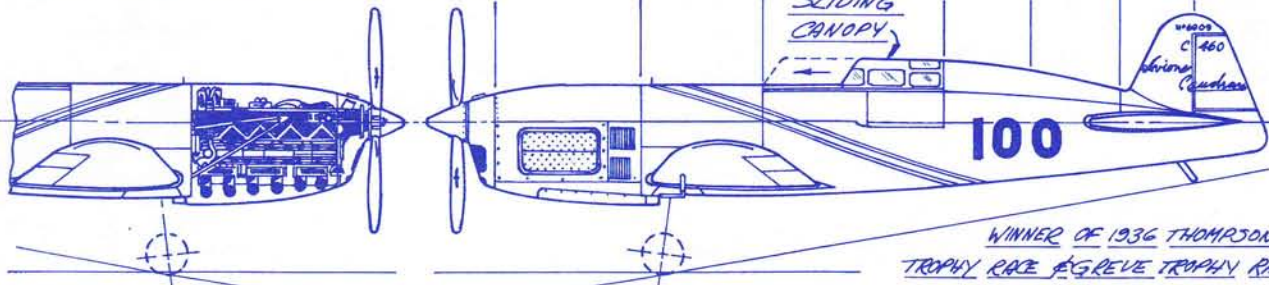
MAX SPEED - 314.2 MPH



ALUMINUM COWLING

SKIN TYPE OIL COOLER

VIEW SHOWING RETRACTABLE GEAR  
 WHEEL WELL COVERS WERE ALUMINUM

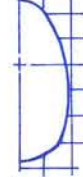
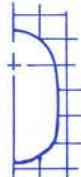
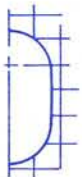


SLIDING  
 CANOPY

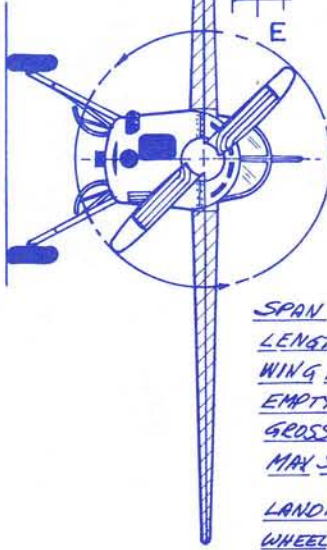
VIEW SHOWING ENGINE MOUNTING STRUCTURE

WINNER OF 1936 THOMPSON  
 TROPHY RACE & GREVE TROPHY RACE  
 PILOT - MICHEL DETROYAT.

SA



SCALE:  $\frac{1}{4}'' = 1'$



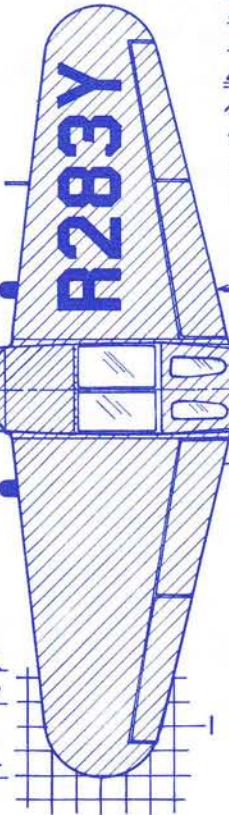
SPAN - 16'  
 LENGTH - 19'6"  
 WING AREA - 50 FT<sup>2</sup>  
 EMPTY WEIGHT - 700 LBS.  
 GROSS WEIGHT - 1000 LBS.  
 MAX SPEED - 245 MPH

LANDING GEAR AND WHEEL WELL COVERS WERE MANUALLY OPERATED

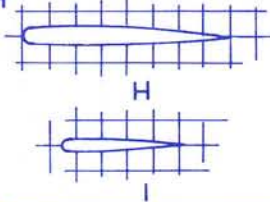
FUSELAGE CONSTRUCTION:  
 WELDED STEEL TUBE FRAMEWORK WITH WOOD FORMERS AND STRINGERS. FABRIC COVERED EXCEPT FOR ALUMINUM AROUND COCKPIT, ENGINE COOLING & WHEEL WELL COVERS

WING & STABILIZER CONSTRUCTION:  
 MONOSPAR SPRUCE I-BEAM AND RIBS COVERED WITH PLYWOOD. FABRIC ADDED ON LEADING EDGE & TIPS.

FIN, RUDDER & ELEVATOR CONSTRUCTION:  
 WELDED STEEL TUBE WITH FABRIC COVERING.



LANDING FLAPS - LEVER CONTROL



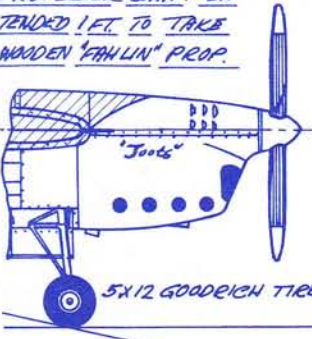
$\frac{1}{8}''$  SQUARES



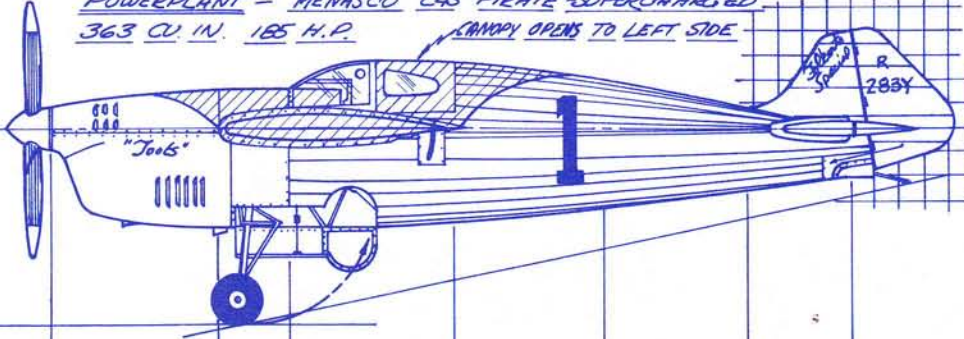
PROPELLER SHAFT EXTENDED 1 FT. TO TAKE WOODEN 'FAHIN' PROP.

POWERPLANT - MENASCO CAS PIRATE SUPERCHARGED 363 CU. IN. 185 H.P.

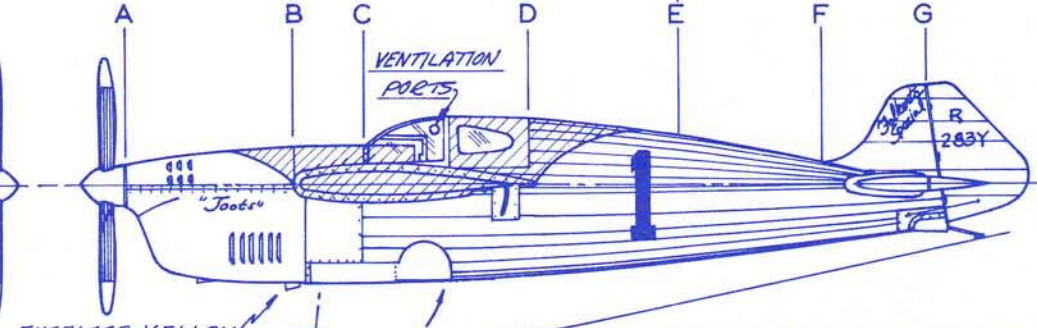
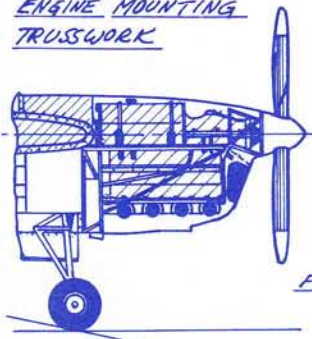
CANNOPY OPENS TO LEFT SIDE



5x12 GOODEICH TIRES



VIEW BELOW SHOWS ENGINE MOUNTING TRUSSWORK



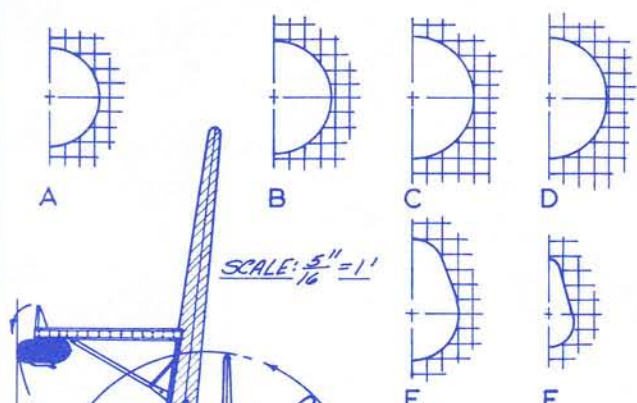
VENTILATION PORTS

FUSELAGE YELLOW

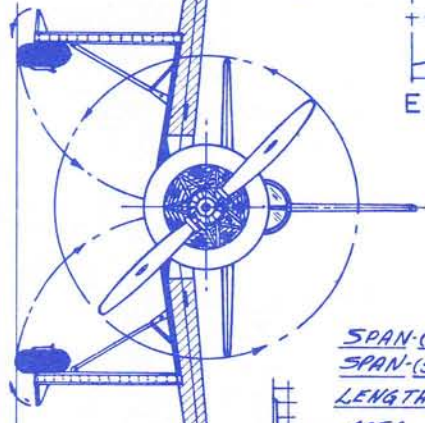
BUILT FOR 1936 NATIONAL AIR RACES BY CLAYTON FOLKERTS.

COLOR SCHEME (1936) BROWN WINGS AND DIAMOND SHAPED AREA AROUND COCKPIT. YELLOW NUMBERS ON WING WITH BROWN LETTERING ON FUSELAGE. (1937) RED WITH BLACK TRIM.

FLOWN BY HAROLD NEUMANN AT '36 NATIONALS. AIRCRAFT PLACED 2ND IN GREVE AND 4TH IN THOMPSON TROPHY RACES CALLED 'MISS DETROIT' IN 1937 AND FLOWN IN NATIONALS THAT YEAR BY R.O. RAE



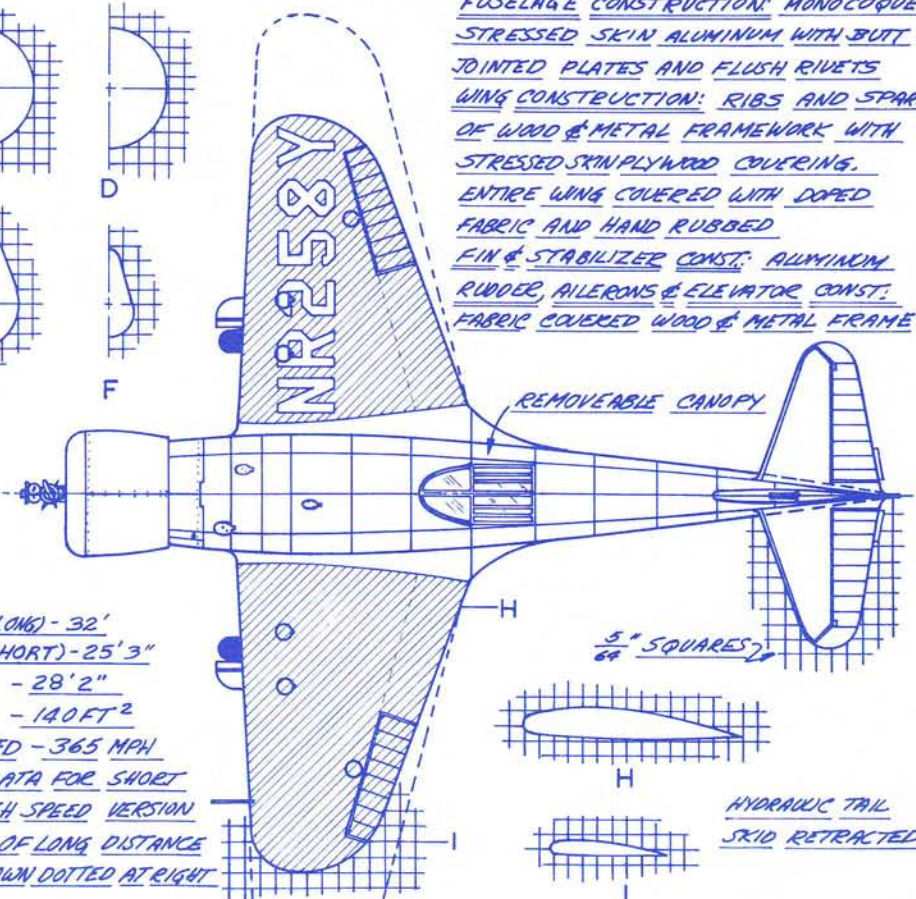
SCALE:  $\frac{5''}{16} = 1'$



POWER OPERATED  
RETRACTABLE  
LANDING GEAR

SPAN (LONG) - 32'  
SPAN (SHORT) - 25' 3"  
LENGTH - 28' 2"  
AREA - 140 FT<sup>2</sup>  
MAX SPEED - 365 MPH  
ABOVE DATA FOR SHORT  
WING HIGH SPEED VERSION  
OUTLINE OF LONG DISTANCE  
WING SHOWN DOTTED AT RIGHT

FUSELAGE CONSTRUCTION: MONOCOQUE  
STRESSED SKIN ALUMINUM WITH BUTT  
JOINTED PLATES AND FLUSH RIVETS  
WING CONSTRUCTION: RIBS AND SPARS  
OF WOOD & METAL FRAMEWORK WITH  
STRESSED SKIN PLYWOOD COVERING.  
ENTIRE WING COVERED WITH DOPED  
FABRIC AND HAND RUBBED  
FIN & STABILIZER CONST: ALUMINUM  
RUDDER, ALERONS & ELEVATOR CONST:  
FABRIC COVERED WOOD & METAL FRAME



REMOVEABLE CANOPY

$\frac{5''}{64}$  SQUARES

HYDRAULIC TAIL  
SKID RETRACTED

EXHAUST WAS USED FOR  
JET THRUST FOR 1ST TIME

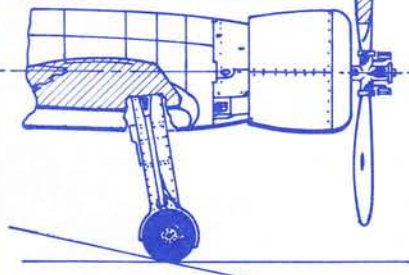
POWERPLANT: PRATT & WHITNEY TWIN WASP JR.  
14 CYLINDERS HOOPED UP TO 1000 H.P.



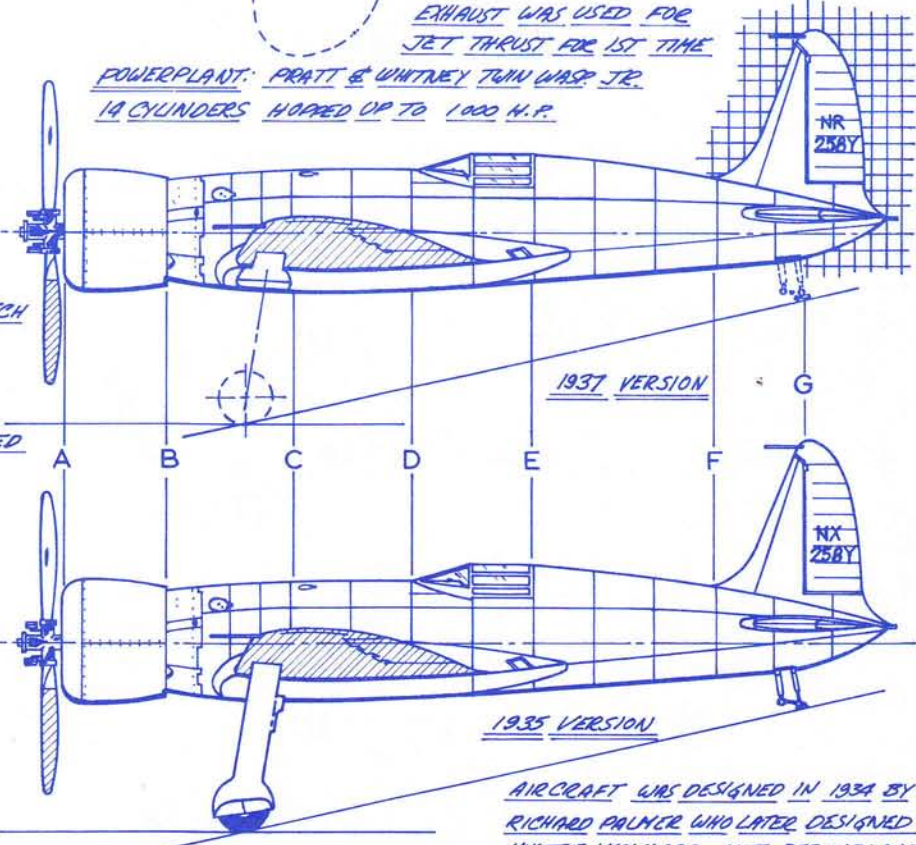
HUGHES H-1

PROPELLER: HAMILTON STANDARD  
CONSTANT SPEED CONTROLLABLE PITCH  
COLOR SCHEME: HIGHLY WAXED  
NATURAL ALUMINUM FUSELAGE AND  
TAIL. WINGS WERE BLUE WITH  
WHITE NUMERALS, ALSO HIGHLY WAXED

HUGHES HAD PLANNED TO  
FLY SHIP IN '36 NATIONALS  
BUT LATER WITHDREW.



ABOVE VIEW SHOWING INBOARD SIDE  
OF LANDING GEAR LEG, RETRACTING  
STRUTS AND BRAKE LINES

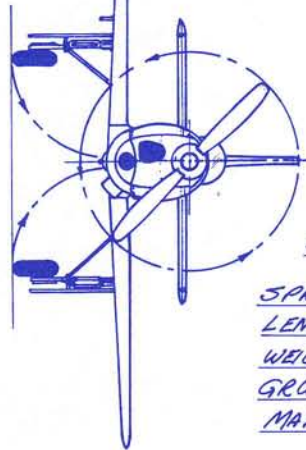
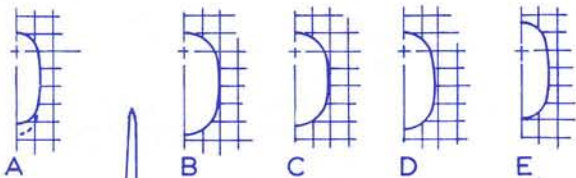


1937 VERSION

1935 VERSION

AIRCRAFT WAS DESIGNED IN 1934 BY  
RICHARD PALMER WHO LATER DESIGNED  
VULTEE VANGUARD - NOTE RESEMBLANCE.

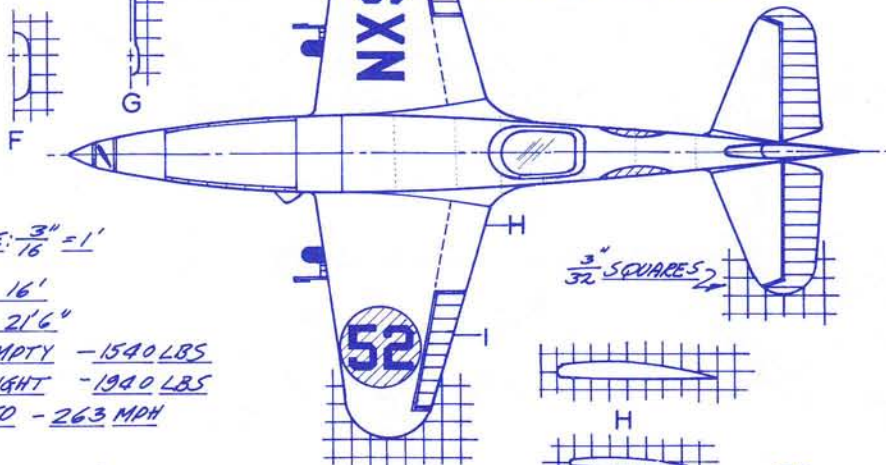
FLOWN BY HOWARD HUGHES TO A WORLD'S LANDPLANE SPEED RECORD OF  
352.388 MPH ON 9-13-35 ON 1-17-37 HUGHES SET LOS ANGELES TO  
NEW YORK RECORD (7 HRS 28 MIN. 10 SEC). AT 332 MPH AVERAGE SPEED



SCALE:  $\frac{3}{16}'' = 1'$

SPAN - 16'  
 LENGTH - 21'6"  
 WEIGHT EMPTY - 1540 LBS  
 GROSS WEIGHT - 1940 LBS  
 MAX SPEED - 263 MPH

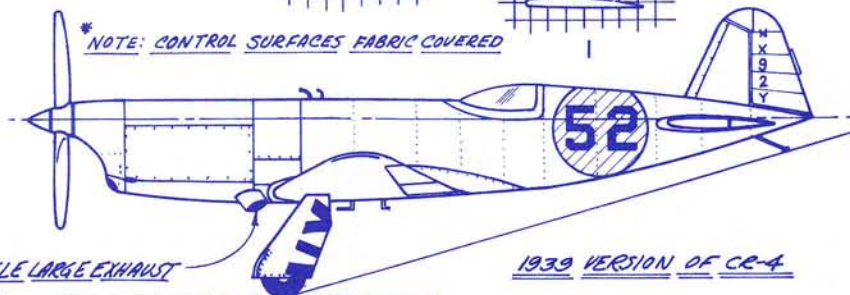
CONSTRUCTION OF FUSELAGE, WINGS AND TAIL ASSEMBLY WAS ENTIRELY AIRCRAFT ALUMINUM.\* CONSTRUCTION WAS CARRIED OUT AT AERO INDUSTRIES TECHNICAL INSTITUTE IN LOS ANGELES  
 COLOR SCHEME: NATURAL ALUMINUM WITH BLACK NUMBERS



\*NOTE: CONTROL SURFACES FABRIC COVERED



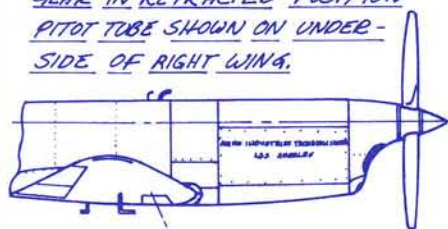
CROSBY  
 CR-3 & CR-4



NOTE SINGLE LARGE EXHAUST

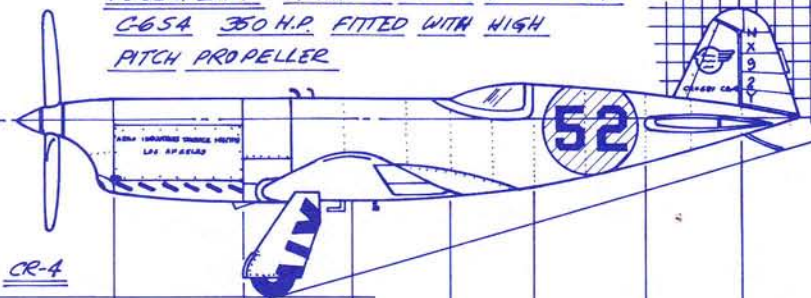
1939 VERSION OF CR-4

VIEW BELOW SHOWS LANDING GEAR IN RETRACTED POSITION  
 PITOT TUBE SHOWN ON UNDER-SIDE OF RIGHT WING.

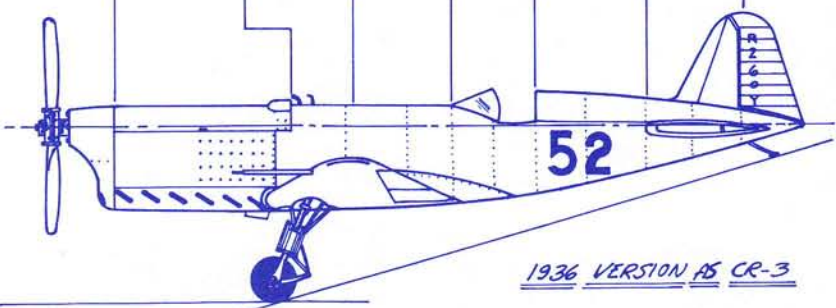
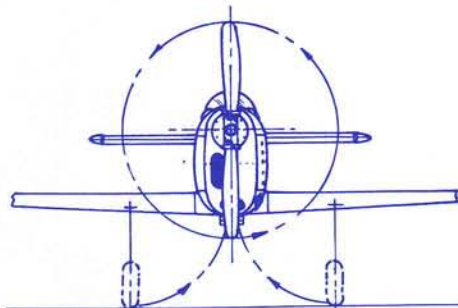


1938 VERSION OF CR-4

POWERPLANT: MENASCO SUPER BUCCANEER  
 C-654 350 H.P. FITTED WITH HIGH PITCH PROPELLER



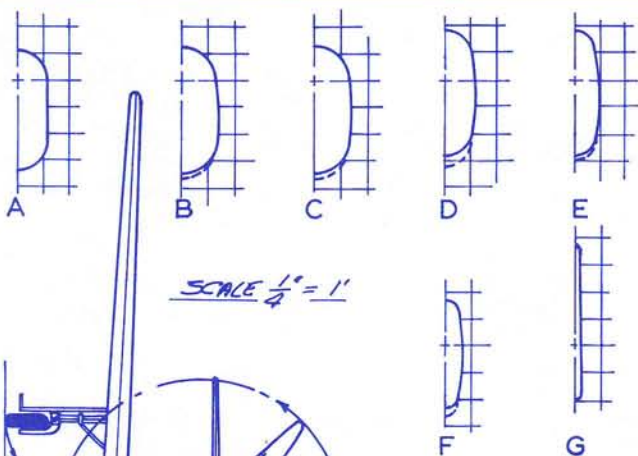
A B C D E F G



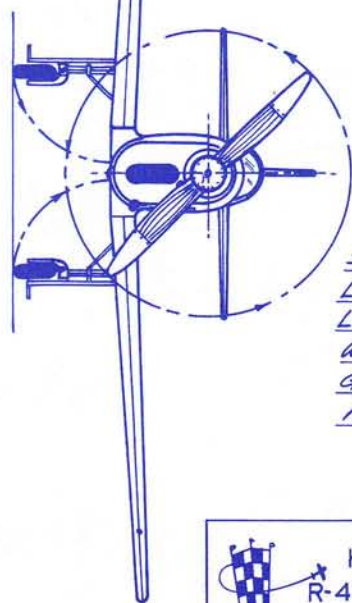
1936 VERSION AS CR-3

CR-3 WAS MODIFIED AND RE-ENGINEERED TO BECOME CR-4. AIRCRAFT WAS FITTED WITH SPLIT TRAILING EDGE FLAPS

AIRCRAFT WAS DESIGNED, WINDTUNNEL TESTED, BUILT AND RACED BY HARRY CROSBY. IN 1936 THOMPSON TROPHY RACE SHIP FINISHED 6TH IN 1939 THOMPSON CROSBY FINISHED 4TH

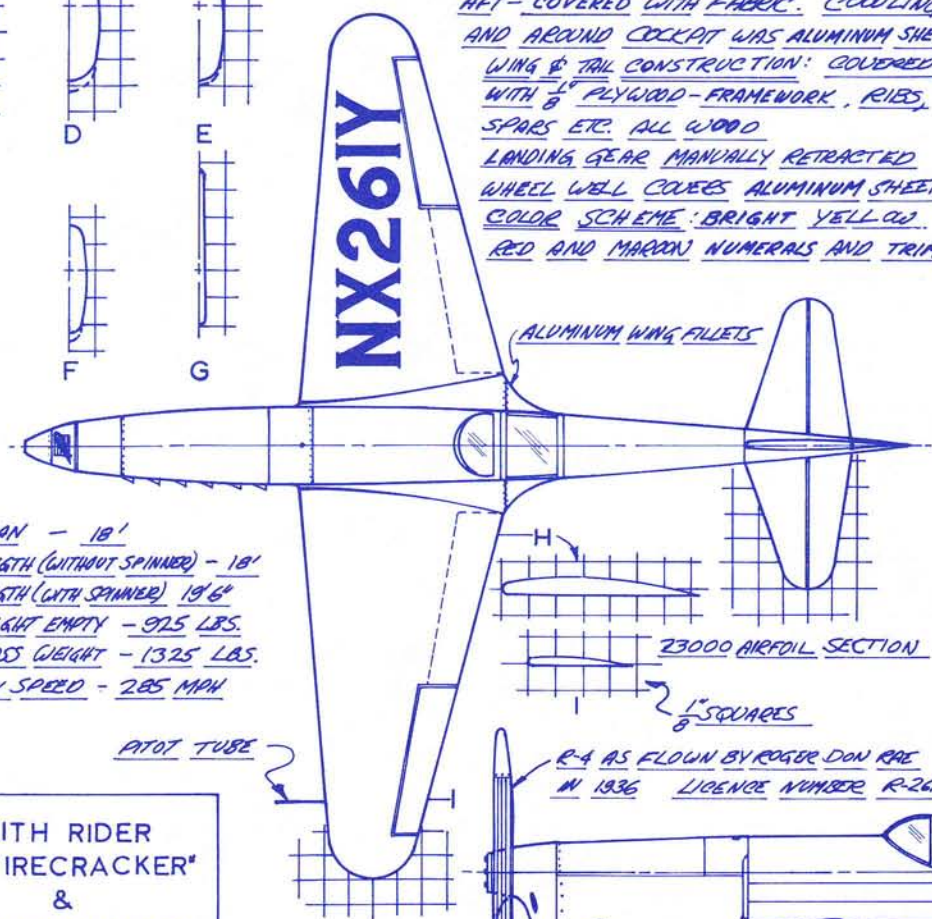


SCALE  $\frac{1}{4}'' = 1'$

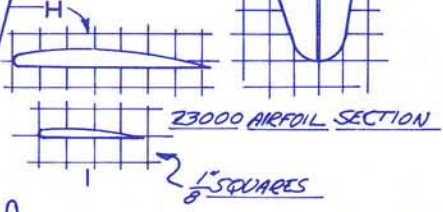


SPAN - 18'  
 LENGTH (WITHOUT SPINNER) - 18'  
 LENGTH (WITH SPINNER) 19'6"  
 WEIGHT EMPTY - 925 LBS.  
 GROSS WEIGHT - 1325 LBS.  
 MAX SPEED - 285 MPH

FUSELAGE CONSTRUCTION: WELDED STEEL TUBING WITH WOOD FORMERS AND STRINGERS AFT - COVERED WITH FABRIC. COOLING AND AROUND COCKPIT WAS ALUMINUM SHEET  
WING & TAIL CONSTRUCTION: COVERED WITH  $\frac{1}{8}$  PLYWOOD - FRAMEWORK, RIBS, SPARS ETC. ALL WOOD  
LANDING GEAR MANUALLY RETRACTED  
WHEEL WELL COVERS ALUMINUM SHEET  
COLOR SCHEME: BRIGHT YELLOW, RED AND MAROON NUMERALS AND TRIM.

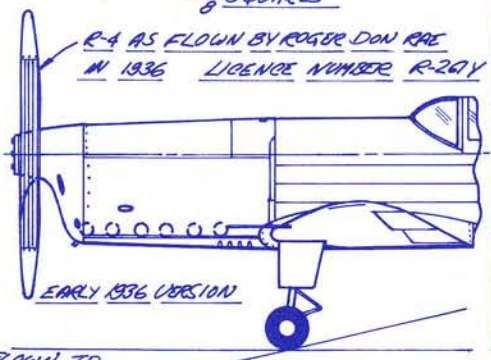


ALUMINUM WING FILLETS



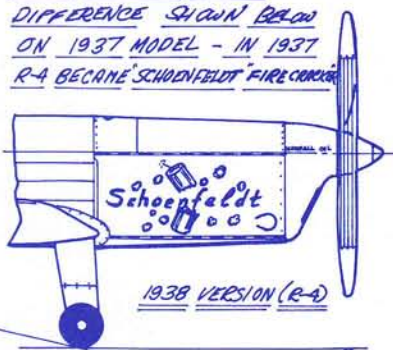
R-4 AS FLOWN BY ROGER DON RAE IN 1936 LICENSE NUMBER R-26Y

KEITH RIDER  
 R-4 "FIRECRACKER"  
 &  
 R-5 "JACKRABBIT"

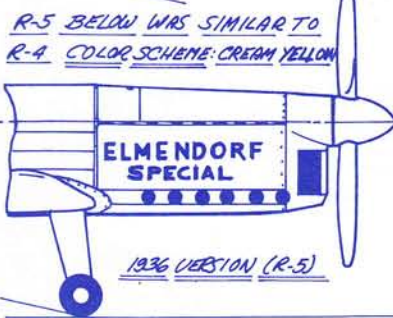


EARLY 1936 VERSION

NOTE COOLING NOSE DIFFERENCE SHOWN BELOW ON 1937 MODEL - IN 1937 R-4 BECAME "SCHUENFELDT FIRECRACKER"



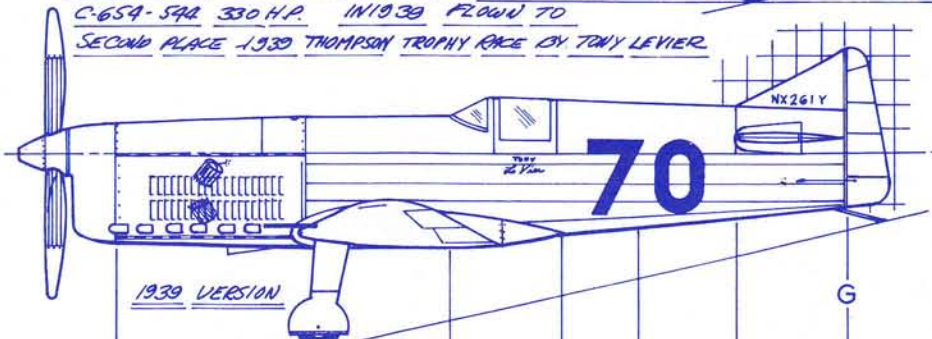
1938 VERSION (R-4)



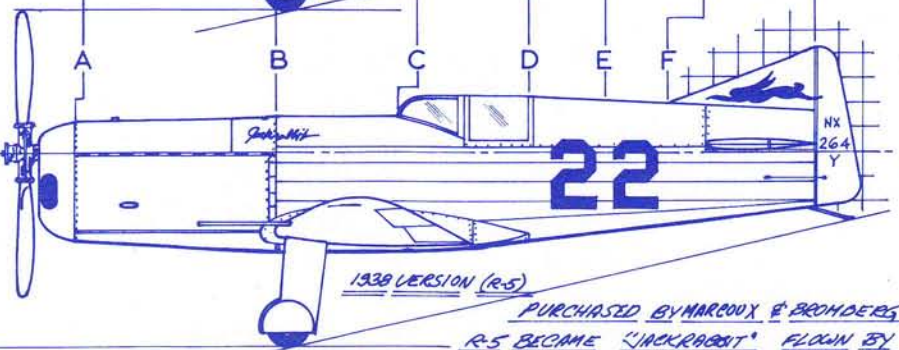
1936 VERSION (R-5)

R-5 HAD 20' WING SPAN AND HAD EMPTY WEIGHT OF 1005 LBS. MAX. SPEED 224.5 MPH

POWERPLANT (1936) MENASCO B-65-480 250 H.P. (1937-39) MENASCO C-654-540 330 H.P. IN 1939 FLOWN TO SECOND PLACE 1938 THOMPSON TROPHY RACE BY TONY LEVIER.



1939 VERSION



1938 VERSION (R-5)

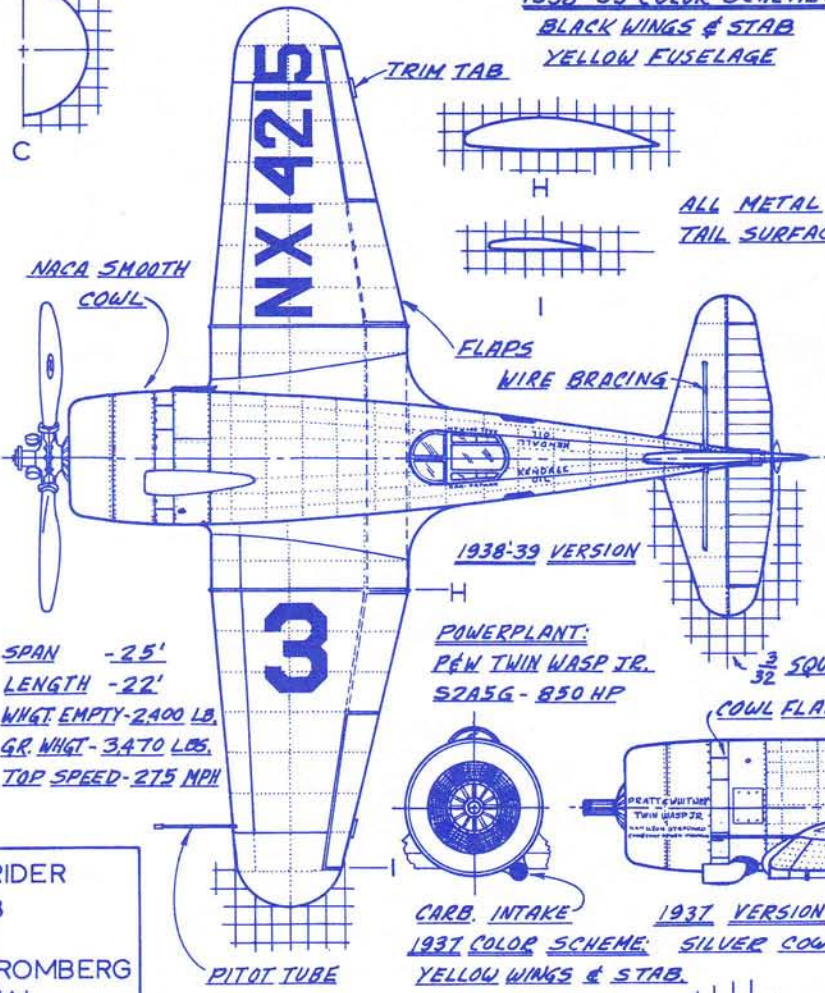
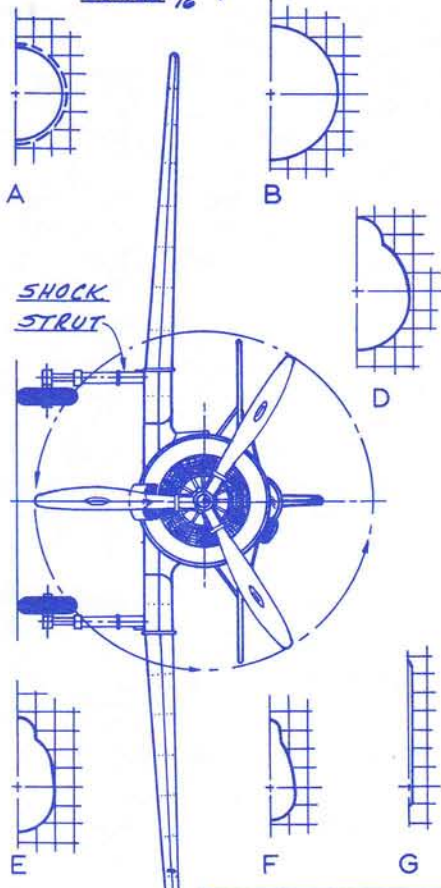
PURCHASED BY MARCOX & BRODERS R-5 BECAME "JACKRABBIT" FLOWN BY EARL ORTHAN PLACED 4TH IN 1938 GEEVE RACE AT 192.5 MPH  
COLOR SCHEME: BLACK FUSELAGE, YELLOW WINGS AND STABILIZER



SCALE:  $\frac{3}{16}''=1'$

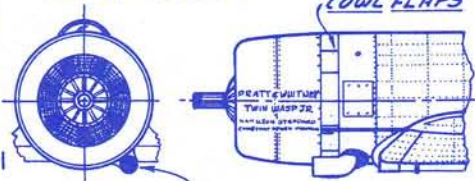
R-3 PURCHASED & REBUILT BY MARCOUX & BROMBERG IN 1937

1938-'39 COLOR SCHEME:  
BLACK WINGS & STAB  
YELLOW FUSELAGE



SPAN - 25'  
LENGTH - 22'  
WGT. EMPTY - 2400 LB.  
GR. WGT. - 3470 LBS.  
TOP SPEED - 275 MPH

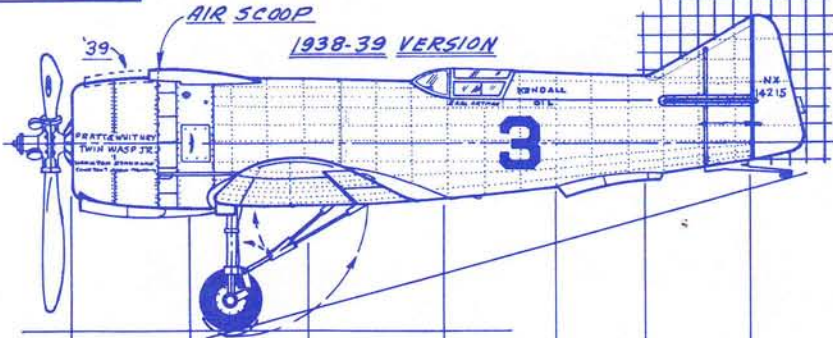
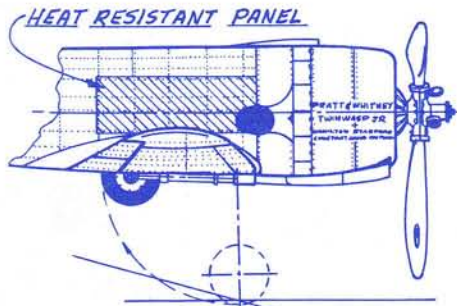
POWERPLANT:  
P&W TWIN WASP JR.  
S2A5G - 850 HP



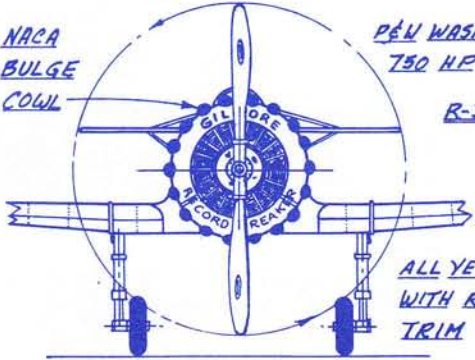
1937 VERSION  
1937 COLOR SCHEME: SILVER COWL -  
YELLOW WINGS & STAB.  
BLACK FUSELAGE

KEITH-RIDER  
R-3  
&  
MARCOUX-BROMBERG  
SPECIAL

HAMILTON STD.  
PROPELLOR USED  
ON BOTH  
CONFIGURATIONS

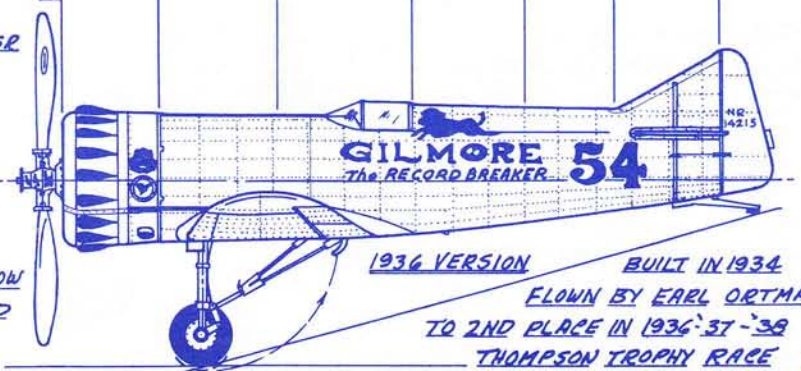


ALL METAL FUSELAGE - PLYWOOD COVERED WING

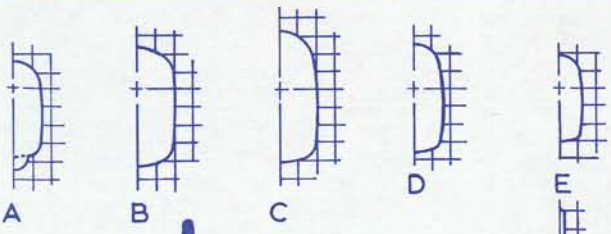


P&W WASP SR  
750 H.P.

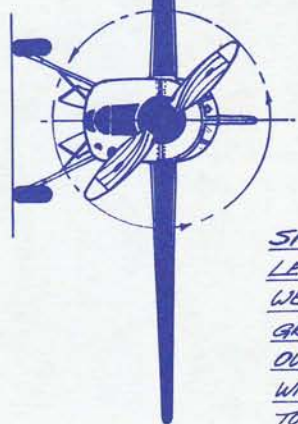
R-3  
ALL YELLOW  
WITH RED  
TRIM



1936 VERSION  
BUILT IN 1934  
FLOWN BY EARL ORTMAN  
TO 2ND PLACE IN 1936-'37-'38  
THOMPSON TROPHY RACE



LEVER OPERATED RETRACTABLE LANDING GEAR



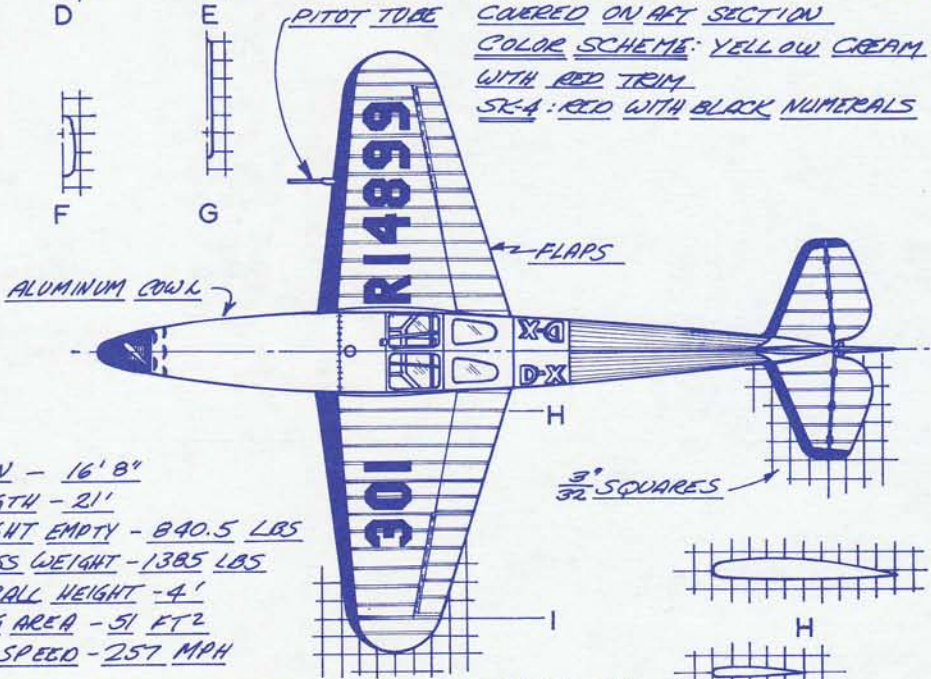
SPAN - 16' 8"  
 LENGTH - 21'  
 WEIGHT EMPTY - 840.5 LBS  
 GROSS WEIGHT - 1385 LBS  
 OVERALL HEIGHT - 4'  
 WING AREA - 51 FT<sup>2</sup>  
 TOP SPEED - 257 MPH

61 GALLONS OF FUEL CARRIED IN 2 TANKS FORWARD OF PILOT

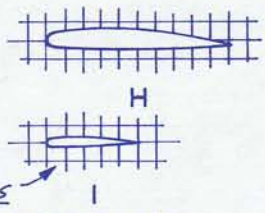


FOLKERTS SK-3 & SK-4

WING CONSTRUCTION: MONOSPAR  
 SPRUCE AND PLYWOOD - FABRIC COVERED - PLYWOOD LEADING EDGE  
 FUSELAGE, TAIL & LANDING GEAR OF WELDED STEEL TUBING - FABRIC COVERED ON AFT SECTION  
 COLOR SCHEME: YELLOW CREAM WITH RED TRIM  
 SK-4: RED WITH BLACK NUMERALS

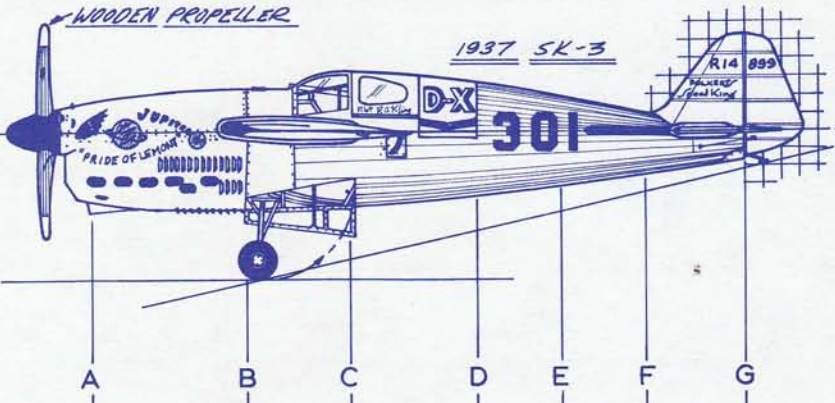
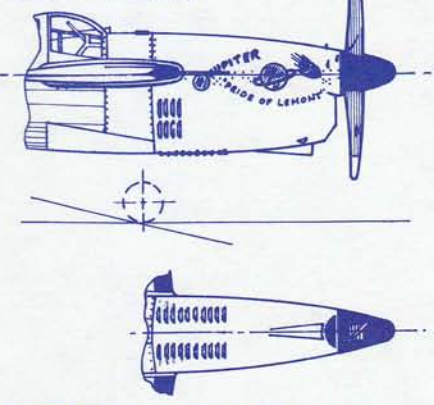


TYPICAL AIR-FOIL SECTIONS

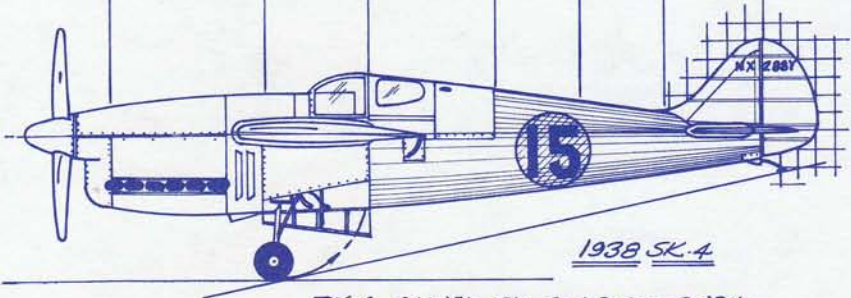
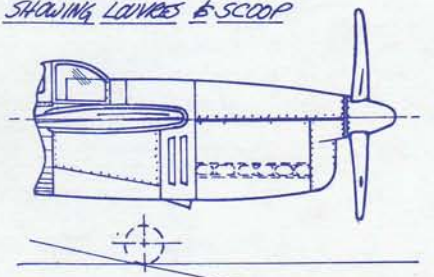


SK-3 FLOWN BY RODDY KLING WON 1937 THOMPSON TROPHY RACE SK-4 WAS SIMILAR IN DESIGN AND INTENDED FOR USE IN 1938 RACING SEASON

POWERPLANT: MENESCO C-6-5  
 6CYL. 400 H.P.



BOTTOM VIEW OF SK-3 SHOWING LOUVERS & SCOOP



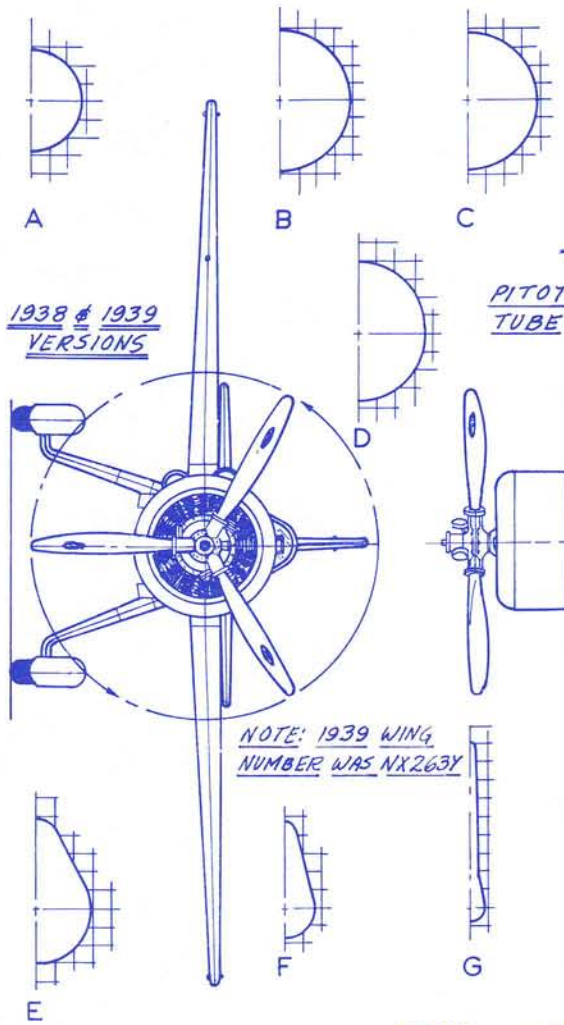
SK-4 OWNED BY DELBERT BUSH - CRASHED QUALIFYING FOR 1939 NATIONALS

SCALE: 3/16" = 1'

135% to 1/4"

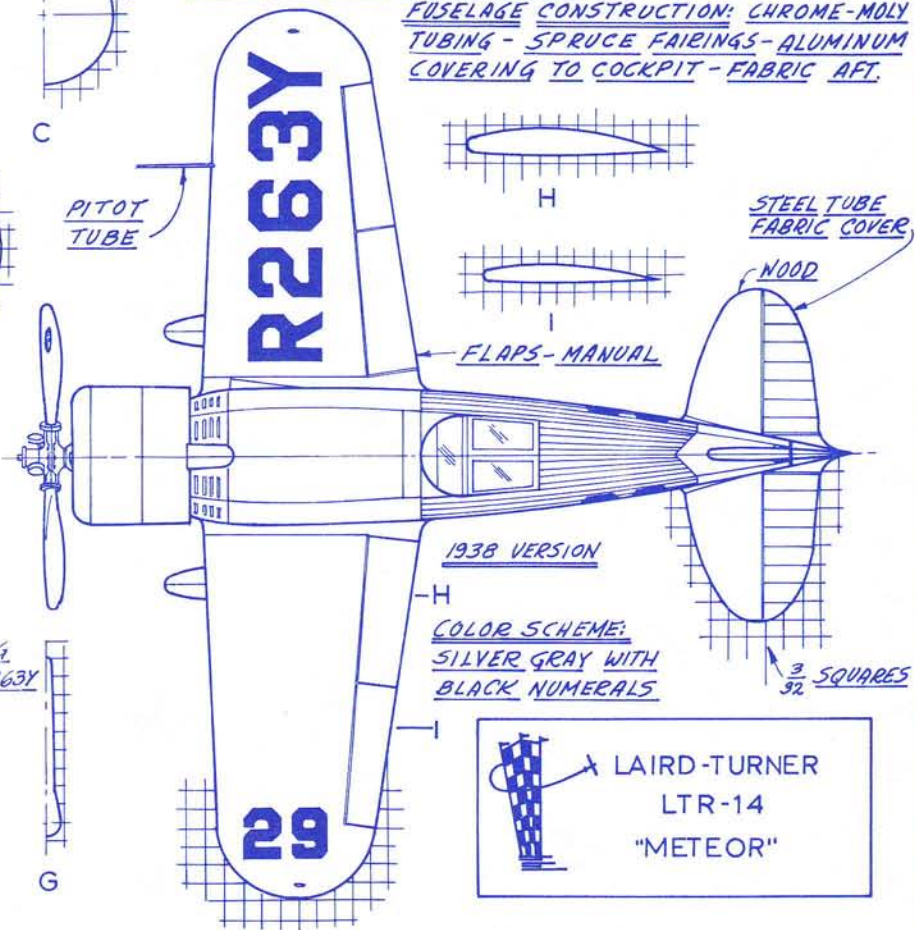
WING CONSTRUCTION: 2 LAMINATED SPRUCE SPARS  
 PLYWOOD RIBS AND ALUMINUM LEADING EDGE.  
 WINGS COVERED WITH PLYWOOD

FUSELAGE CONSTRUCTION: CHROME-MOLY  
 TUBING - SPRUCE FAIRINGS - ALUMINUM  
 COVERING TO COCKPIT - FABRIC AFT.



1938 & 1939  
 VERSIONS

NOTE: 1939 WING  
 NUMBER WAS NX263Y

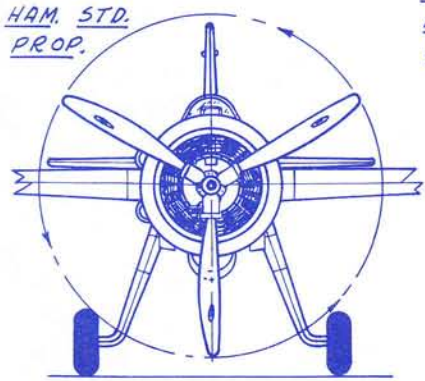


1938 VERSION

COLOR SCHEME:  
 SILVER GRAY WITH  
 BLACK NUMERALS



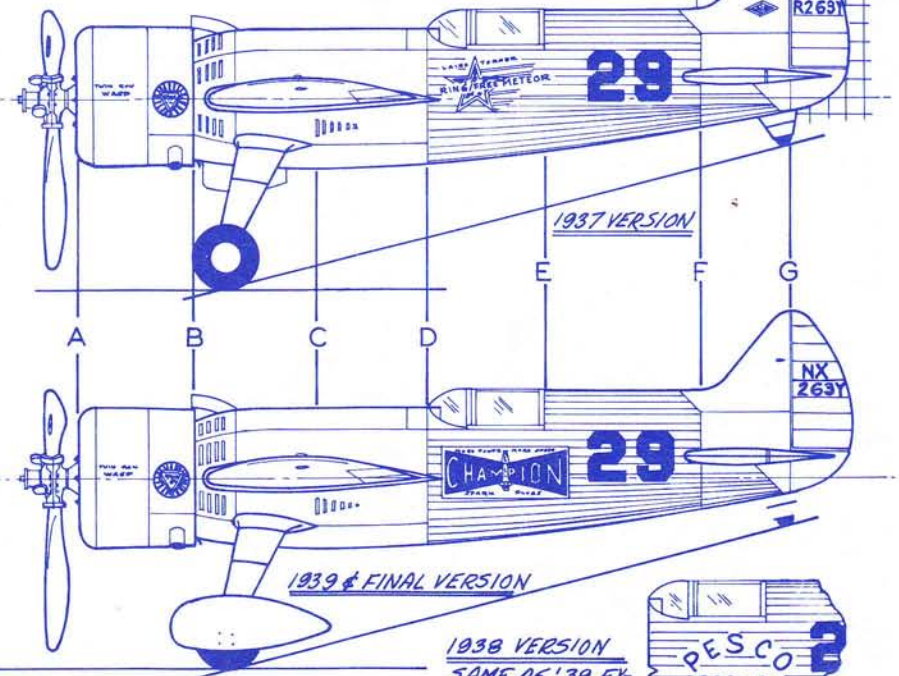
HAM. STD.  
 PROP.



POWERPLANT:  
 P&W. TWIN WASP SR.  
 SBG-177 1,000 HP

SPAN - 25'  
 LENGTH - 23' 4"  
 WING AREA - 95 FT<sup>2</sup>

WEIGHT EMPTY - 3,300 LBS.  
 TOP SPEED - 320 MPH APPROX.  
 GROSS WEIGHT - 4,923 LBS.



1938 VERSION  
 SAME AS '39 EX-  
 CEPT MARKINGS



FLOWN BY ROSCOE TURNER TO 1ST PLACE IN  
 1938 & '39 THOMPSON TROPHY RACE - 3RD PLACE IN 1937

SCALE 3/16" = 1'

NAVIGATION LIGHTS ON  
TIME FLIES ONLY

WING CONSTRUCTION:  
SPRUCE SPARS, PLYWOOD RIBS  
AND COVERING

COLOR SCHEME:

TIME FLIES:  
ALL WHITE - BLACK  
LETTERING  
HM-1:  
FUSELAGE & RUDDER  
DARK BLUE  
WINGS & STAB  
YELLOW - LETTERING  
REVERSE OF BACK-  
GROUND

ALSO  
ON  
LOWER  
LEFT  
WING

NR1313

NX2491

FUSELAGE CONSTRUCTION:  
CHROME MOLYBDENUM STEEL FRAME  
HASKELITE PLYWOOD COVERING.

SPAN - 31'  
LENGTH - 23' 6"



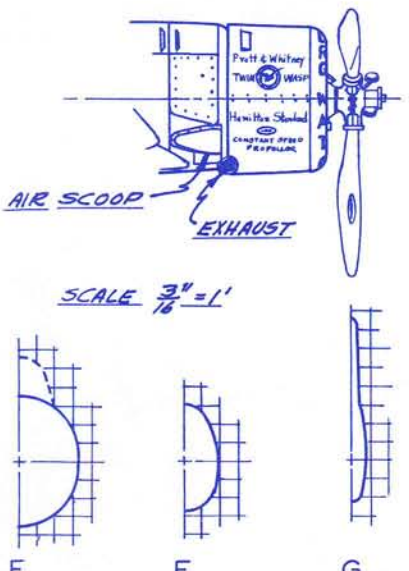
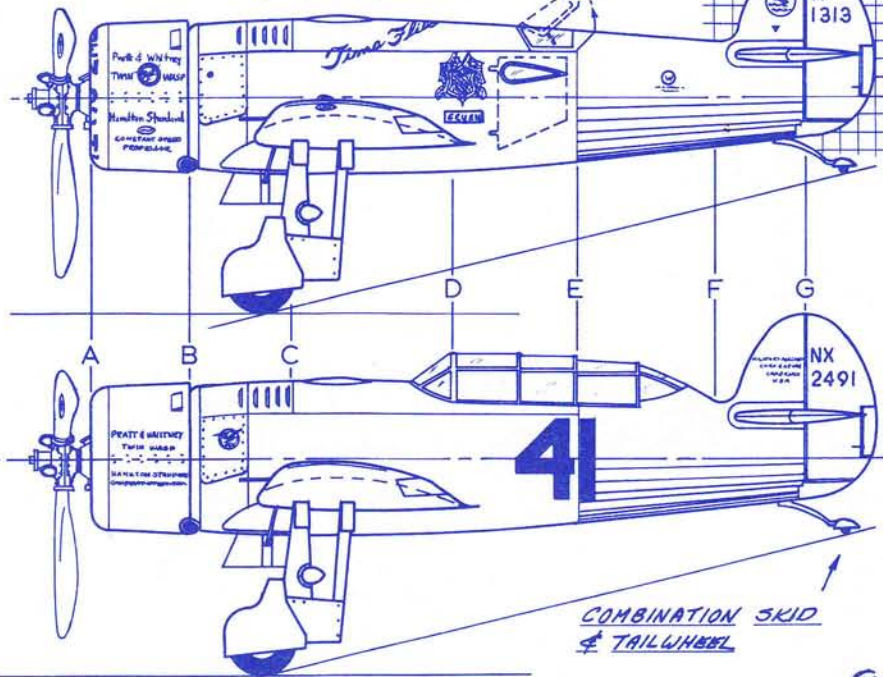
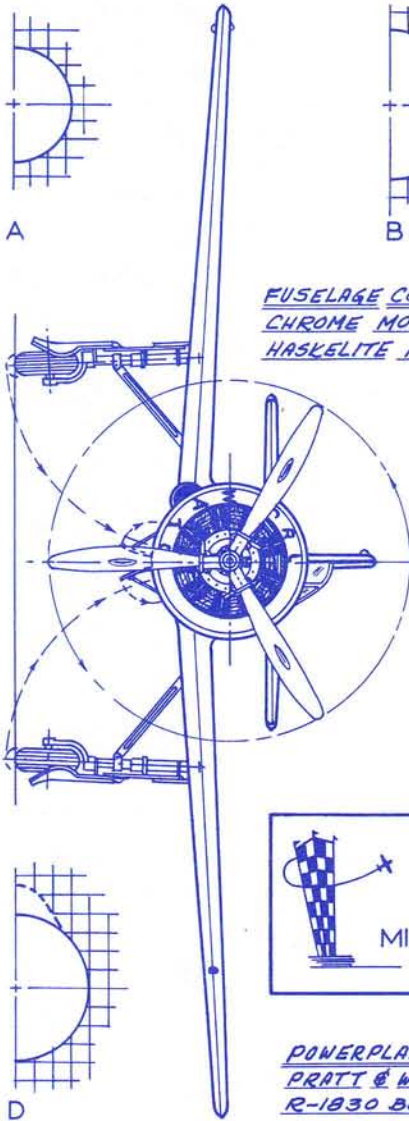
POWERPLANT:  
PRATT & WHITNEY TWIN WASP  
R-1830 B6 1,150 H.P.

$\frac{3}{32}$ " SQUARES

PITOT HEAD

41

CANOPY & SEAT RAISED  
DURING LANDING  
& TAKEOFF



SCALE  $\frac{3}{16}$ " = 1'

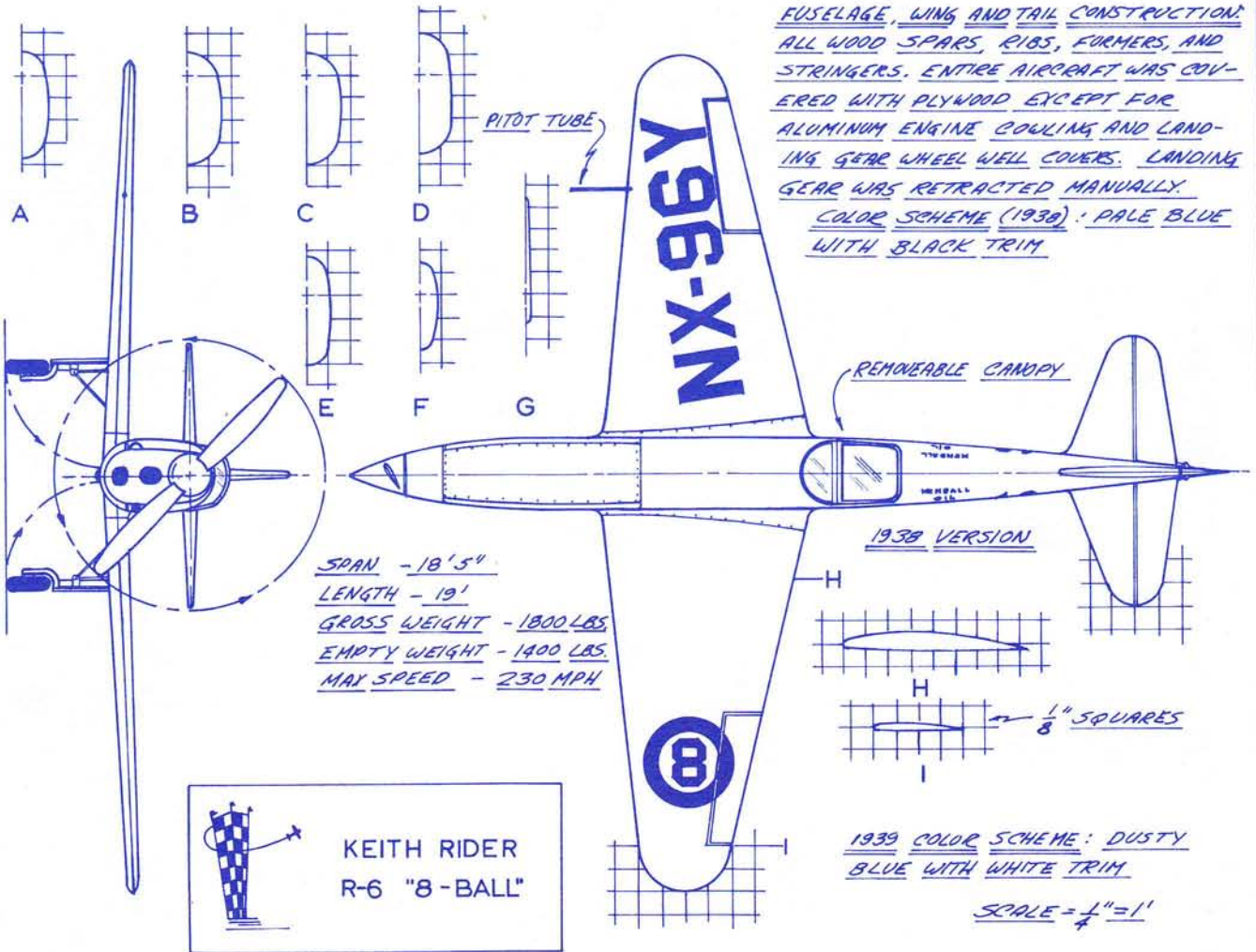
HM-1 REBUILT FROM TIME FLIES.  
WAS FLOWN TO 4TH PLACE IN  
1938 THOMPSON TROPHY RACE.

COMBINATION SKID  
& TAILWHEEL



FUSELAGE, WING AND TAIL CONSTRUCTION:  
ALL WOOD SPARS, RIBS, FORMERS, AND  
STRINGERS. ENTIRE AIRCRAFT WAS COV-  
ERED WITH PLYWOOD EXCEPT FOR  
ALUMINUM ENGINE COWLING AND LAND-  
ING GEAR WHEEL WELL COVERS. LANDING  
GEAR WAS RETRACTED MANUALLY.

COLOR SCHEME (1938): PALE BLUE  
WITH BLACK TRIM



SPAN - 18' 5"  
LENGTH - 19'  
GROSS WEIGHT - 1800 LBS  
EMPTY WEIGHT - 1400 LBS  
MAX SPEED - 230 MPH

 KEITH RIDER  
 R-6 "8-BALL"

1938 VERSION

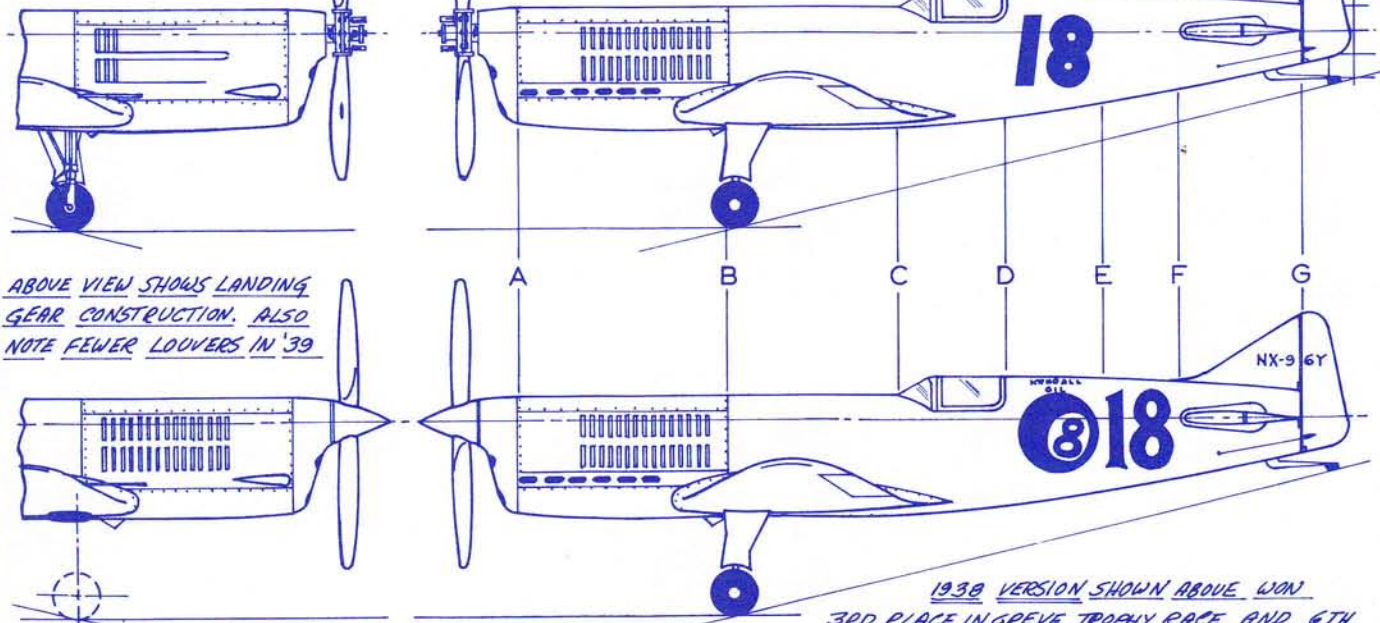
1939 COLOR SCHEME: DUSTY  
BLUE WITH WHITE TRIM

SCALE = 1/4" = 1'

NO SPINNER ON 1939 VERSION  
BECAUSE OF HAMILTON STD.  
PROPELLER COUNTERWEIGHTS.

POWERPLANT: 6 CYLINDER MENESCO  
BUCCANEER C-654, 544 400 H.P.  
CONSTANT SPEED PROP ADDED IN 1939

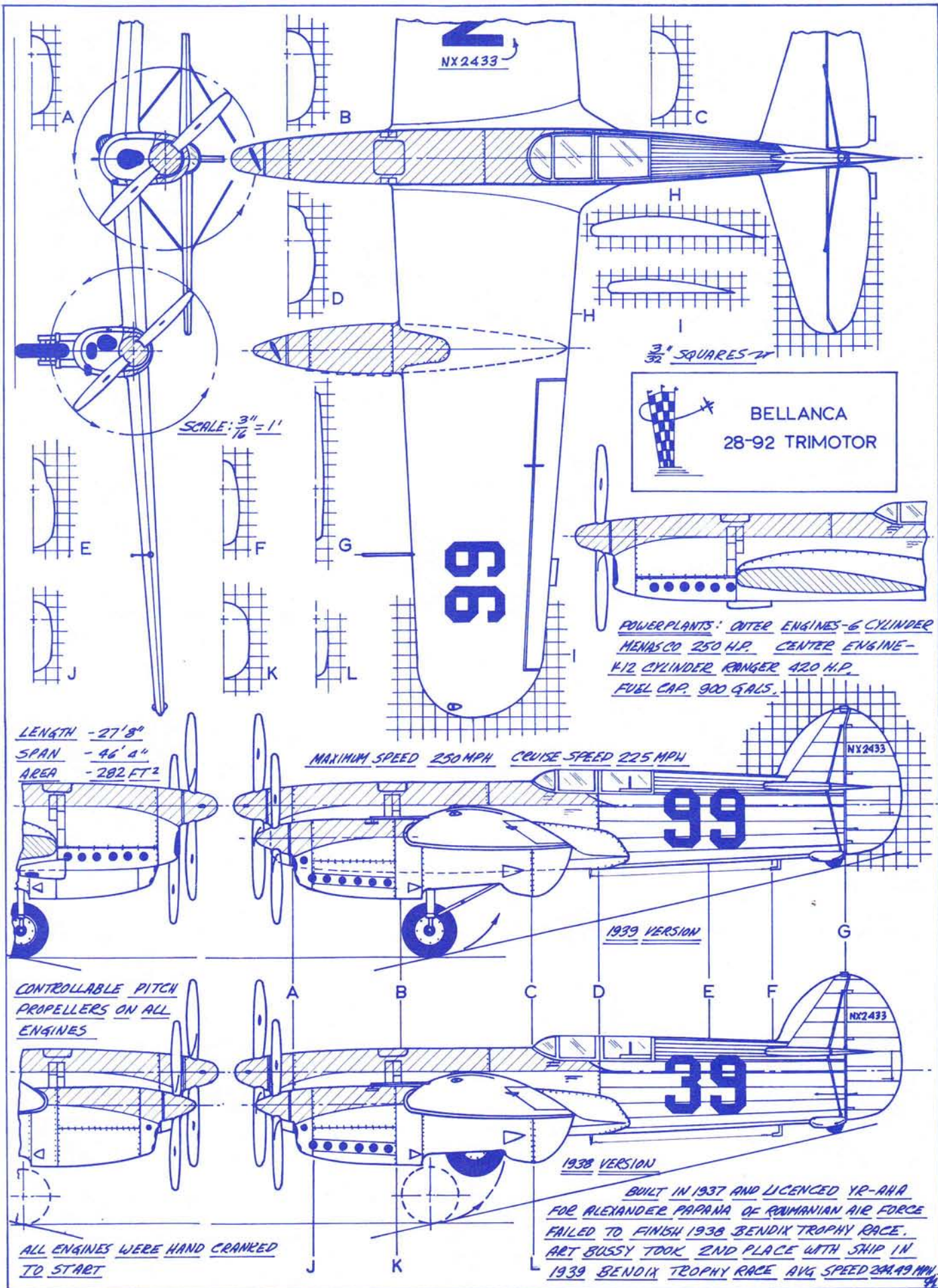
1939 VERSION

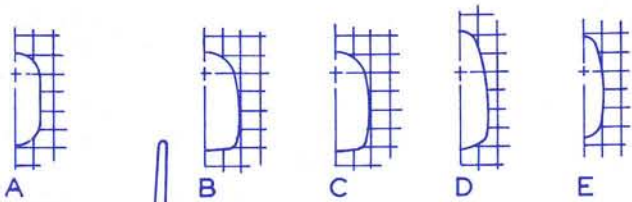


ABOVE VIEW SHOWS LANDING  
GEAR CONSTRUCTION. ALSO  
NOTE FEWER LOUVERS IN '39

ABOVE VIEW SHOWS LANDING GEAR  
IN RETRACTED POSITION

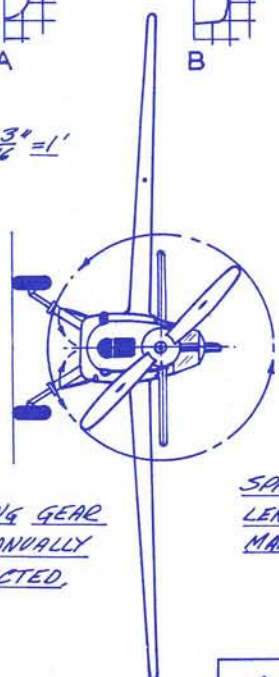
1938 VERSION SHOWN ABOVE WON  
3RD PLACE IN GREVE TROPHY RACE AND 6TH  
PLACE IN THOMPSON. PILOT WAS JOE JACOBSON.





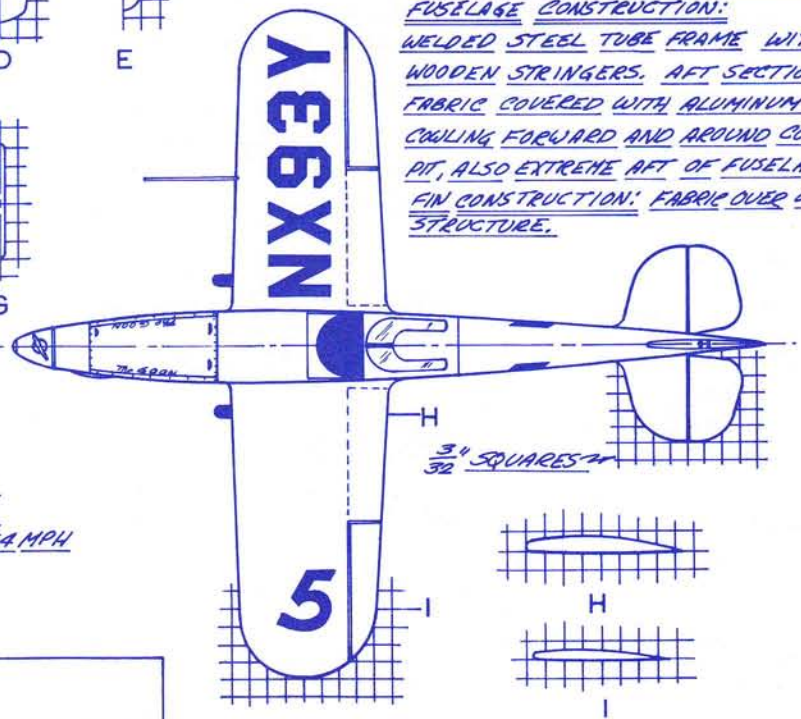
WING AND STABILIZER CONSTRUCTION:  
SPRUCE RIBS AND SPARS COVERED  
WITH PLYWOOD AND DOPED FABRIC.  
FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBE FRAME WITH  
WOODEN STRINGERS. AFT SECTION  
FABRIC COVERED WITH ALUMINUM  
COILING FORWARD AND AROUND COCK  
PIT, ALSO EXTREME AFT OF FUSELAGE  
FIN CONSTRUCTION: FABRIC OVER WOOD  
STRUCTURE.

SCALE  $\frac{3}{16} = 1'$

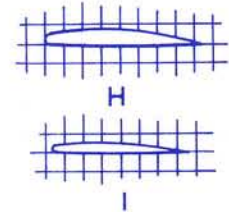


LANDING GEAR  
WAS MANUALLY  
RETRACTED.

SPAN - 18'6"  
LENGTH - 20'6"  
MAX SPEED - 264 MPH



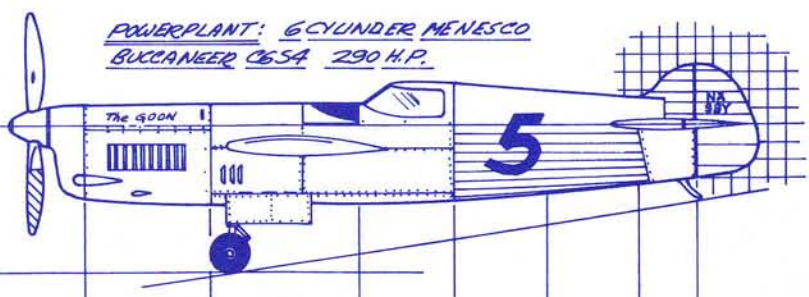
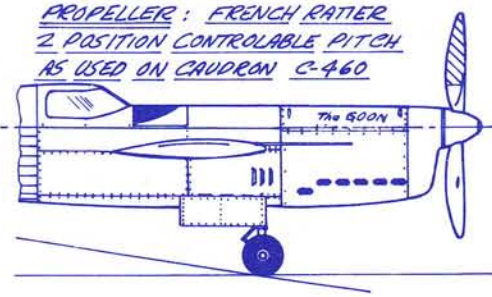
$\frac{3}{32}$  SQUARES



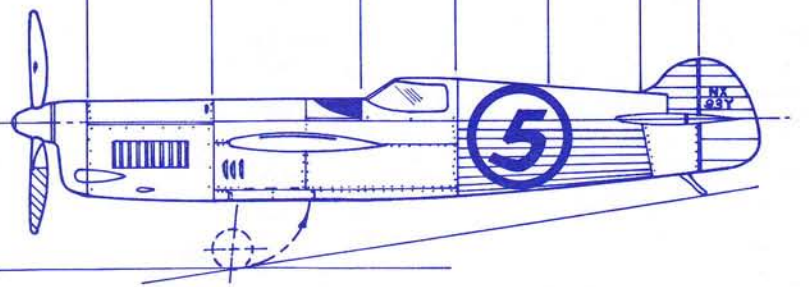
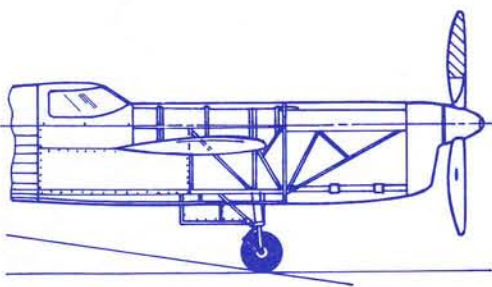
COLOR SCHEME: LIGHT CREAM WITH  
BLACK LETTERS AND TRIM, CIRCLED "FIVE"  
WAS FOR MOVIE MAKING PURPOSES ONLY

PROPELLER: FRENCH RATIER  
2 POSITION CONTROLABLE PITCH  
AS USED ON CAUDRON C-460

POWERPLANT: 6 CYLINDER MENESCO  
BUCCANEER C654 290 H.P.

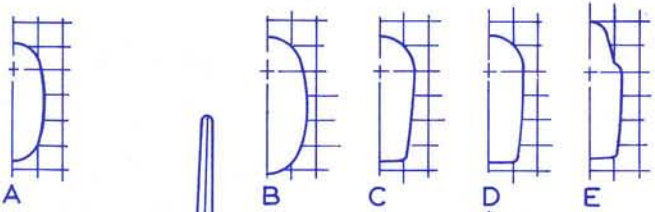


LANDING GEAR DOORS WERE AUTOMATICALLY  
CLOSED BY RETRACTION OF GEAR LEAVING  
FUSELAGE BOTTOM SMOOTH.

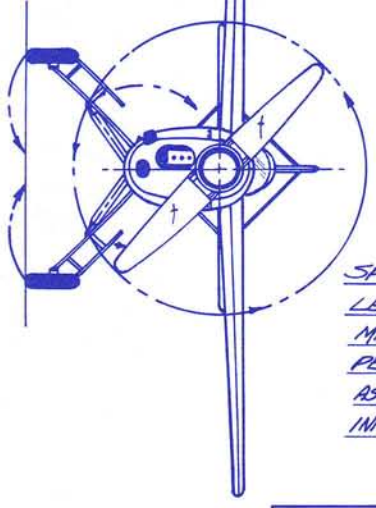


ABOVE VIEW SHOWS ENGINE MOUNTING,  
FUEL TANK BETWEEN COCKPIT AND  
FIREWALL AND VIEW OF RETRACTABLE  
LANDING GEAR OLEO SHOCK STRUT.

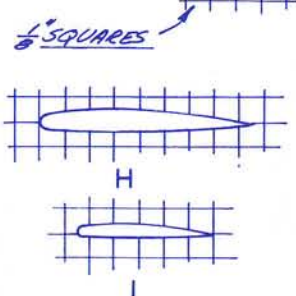
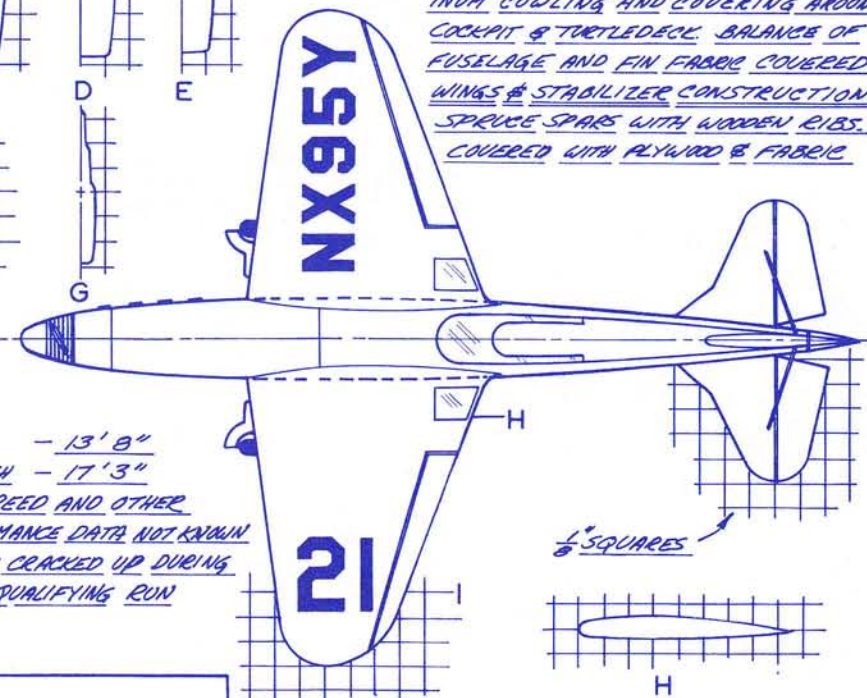
INTRODUCED AT THE 1938 NATIONAL AIR RACES BY ART CHESTER.  
THE GOON WON 2ND PLACE IN THE GREVE TROPHY RACE AT 250.92 MPH.  
IN THE 138 THOMPS ON CHESTER WAS FORCED OUT WITH PROPELLER PROBLEM.  
IN 1939 CHESTER WON GREVE RACE AT 263.39 MPH BUT AGAIN HAD  
TO WITHDRAW FROM THOMPSON WITH ENGINE TROUBLES.



FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBING WITH ALUM-  
INUM COWLING AND COVERING AROUND  
COCKPIT & TURTLEDECK. BALANCE OF  
FUSELAGE AND FIN FABRIC COVERED  
WINGS & STABILIZER CONSTRUCTION:  
SPRUCE SPARS WITH WOODEN RIBS.  
COVERED WITH PLYWOOD & FABRIC



SPAN - 13' 8"  
LENGTH - 17' 3"  
MAX SPEED AND OTHER  
PERFORMANCE DATA NOT KNOWN  
AS SHIP CRACKED UP DURING  
INITIAL QUALIFYING RUN

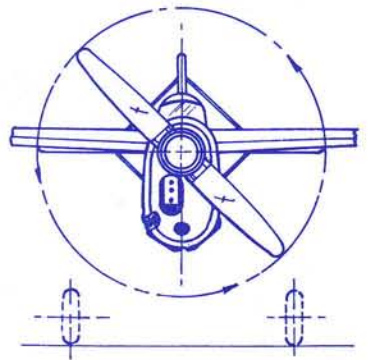


COLOR SCHEME:  
BRIGHT CREAM WITH  
BLACK LETTERING



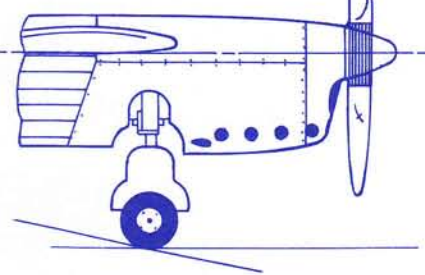
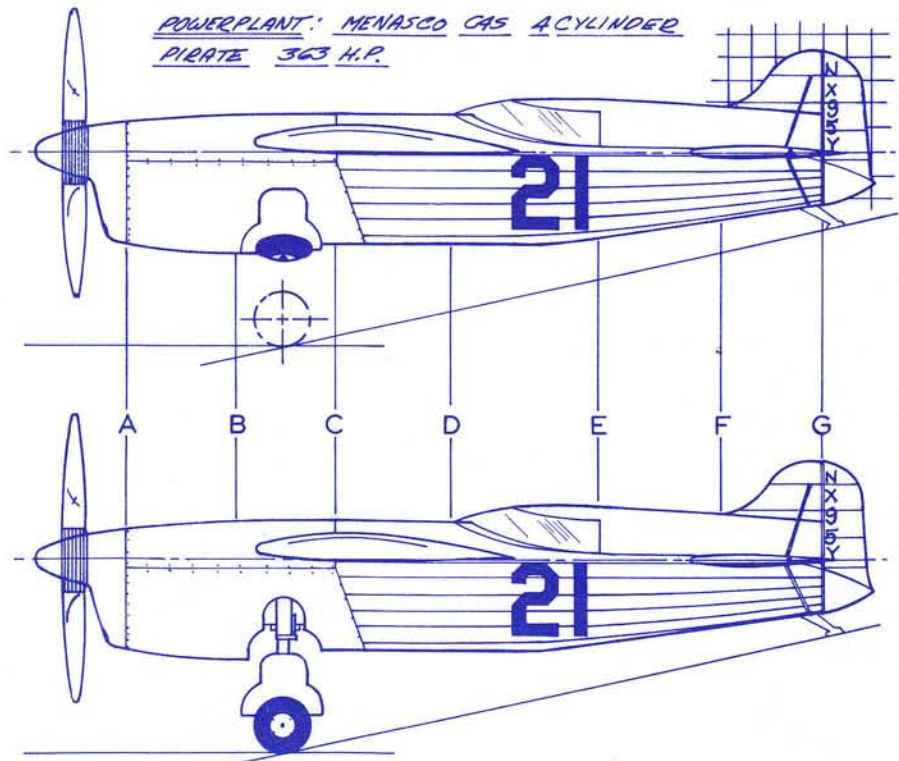
CHAMBERS R-I  
 "CHAMBERMAID"

SCALE: 1/4" = 1'



ABOVE VIEWS SHOWS  
LANDING GEAR IN RETRACTED  
POSITION

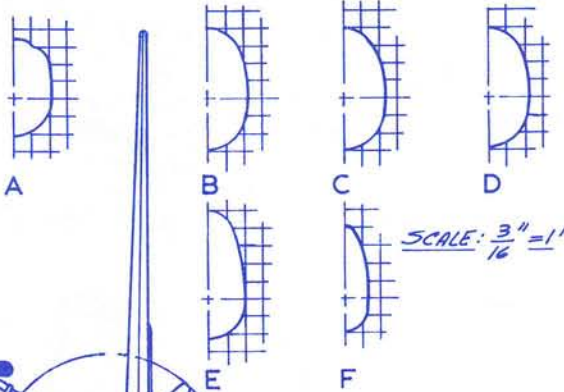
POWERPLANT: MENASCO GAS 4 CYLINDER  
PIRATE 363 H.P.



LEAF SPRING RETRACTABLE  
LANDING GEAR WAS USED AND  
RETRACTED INTO FUSELAGE SIDES

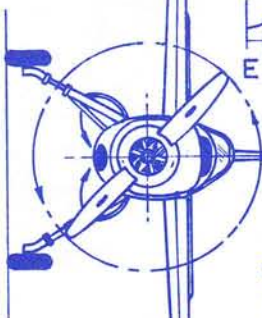
BUILT FOR THE 1938 NATIONALS BY RUSSELL CHAMBERS.  
DURING LANDING AFTER QUALIFYING RUN 'CHAMBERMAID'  
CRACKED UP DESTROYING ITSELF AND TAKING CHAMBERS LIFE



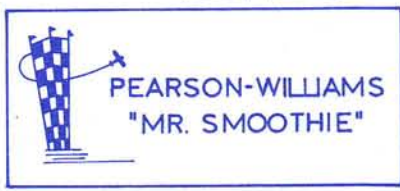
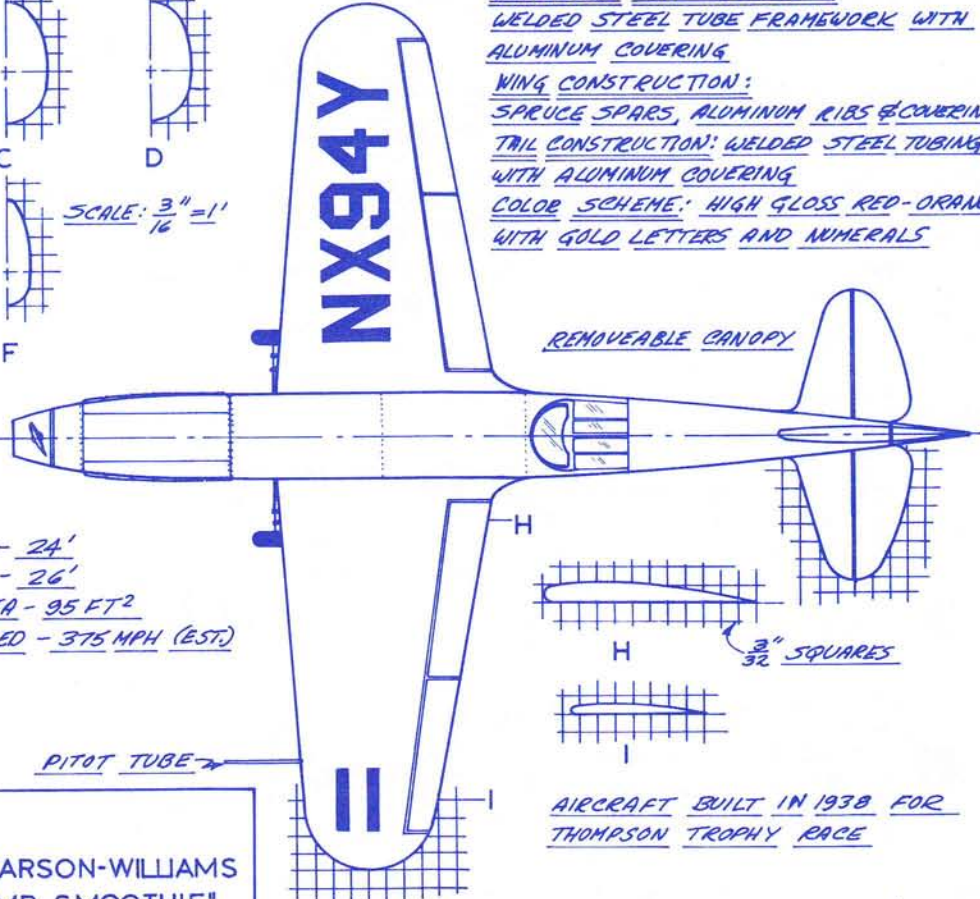


SCALE:  $\frac{3}{16} = 1'$

FUSELAGE CONSTRUCTION:  
WELDED STEEL TUBE FRAMEWORK WITH ALUMINUM COVERING  
WING CONSTRUCTION:  
SPRUCE SPARS, ALUMINUM RIBS & COVERING  
TAIL CONSTRUCTION: WELDED STEEL TUBING WITH ALUMINUM COVERING  
COLOR SCHEME: HIGH GLOSS RED-ORANGE WITH GOLD LETTERS AND NUMERALS

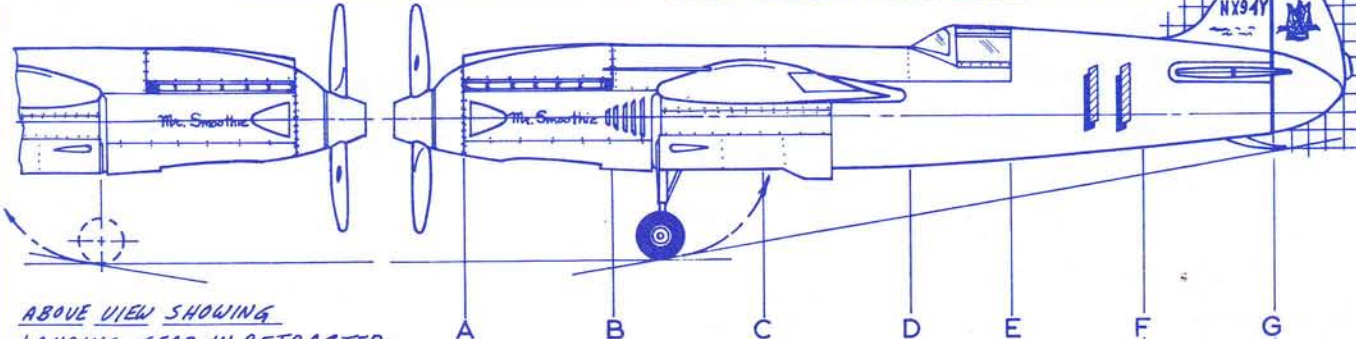


SPAN - 24'  
 LENGTH - 26'  
 WING AREA - 95 FT<sup>2</sup>  
 MAX SPEED - 375 MPH (EST.)

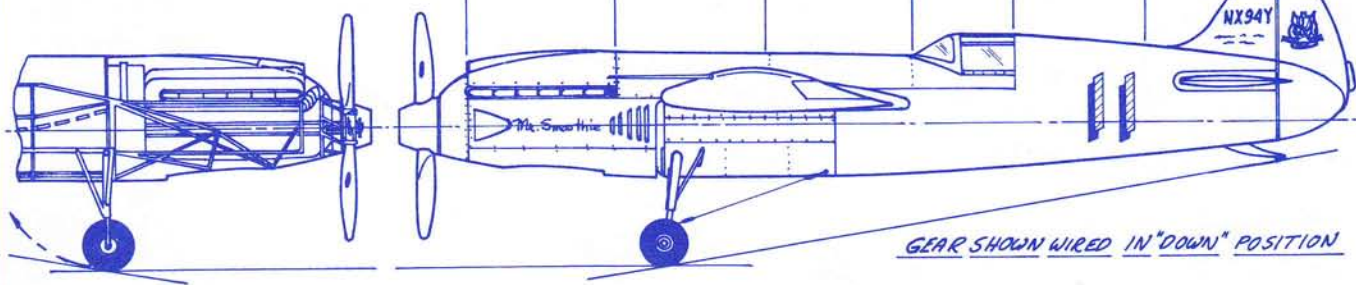


AIRCRAFT BUILT IN 1938 FOR THOMPSON TROPHY RACE

POWERPLANT: CURTISS V-12 825 H.P.  
1569 CU. IN. - PRESTONE COOLED & SUPERCHARGED



ABOVE VIEW SHOWING LANDING GEAR IN RETRACTED POSITION.



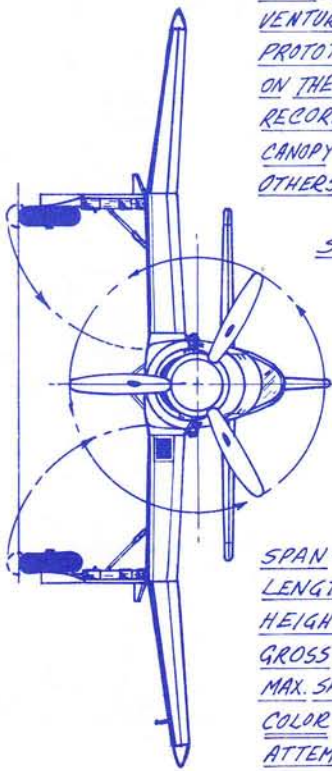
GEAR SHOWN WIRED IN "DOWN" POSITION

ABOVE VIEW SHOWING TUBULAR ENGINE MOUNTS AND ENGINE COOLING FAN BEHIND PROPELLER

AIRCRAFT WAS TO BE FLOWN BY LELAND WILLIAMS IN 1938 THOMPSON TROPHY RACE. DURING TESTING, RETRACTABLE GEAR WAS DAMAGED AND THEREAFTER WAS SEEN WITH GEAR WIRED IN 'DOWN' POSITION. DUE TO FURTHER PROBLEMS PLANE WAS NEVER RACED.

DESIGNED BY SIEGFRIED GÜNTER & KARL SCHWARTZLER OF THE HEINKEL WORKS, THE HE100 WAS A PRIVATE VENTURE HIGH SPEED FIGHTER PROTOTYPE WITH AN EYE ALSO ON THE WORLD ABSOLUTE SPEED RECORD. THIS MODEL HAD SPECIAL CANOPY & SHORTER WING THAN OTHERS IN THE SERIES.

SCALE:  $\frac{5}{32} = 1'$

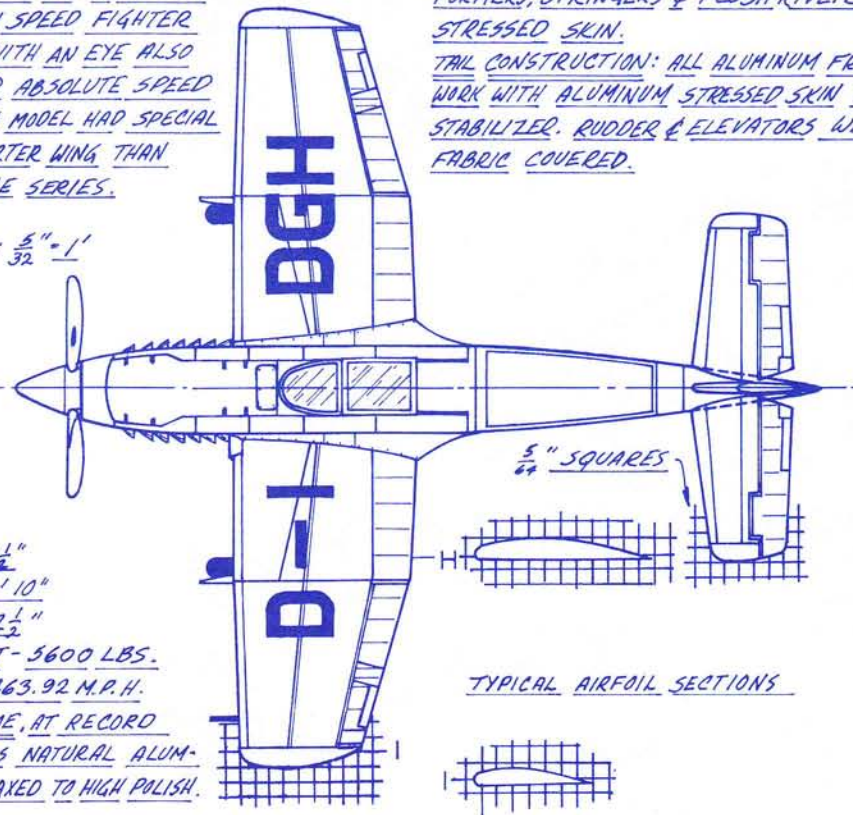


SPAN - 24' 11 1/2"  
 LENGTH - 26' 10"  
 HEIGHT - 8' 2 1/2"  
 GROSS WEIGHT - 5600 LBS.  
 MAX. SPEED - 463.92 M.P.H.  
 COLOR SCHEME, AT RECORD ATTEMPT, WAS NATURAL ALUMINUM CLEAR WAXED TO HIGH POLISH.

WING CONSTRUCTION: ALUMINUM SPARS AND RIBS WITH FLUSH RIVETED STRESSED SKIN.AILERONS WERE FABRIC COVERED.

FUSELAGE CONSTRUCTION: ALL ALUMINUM FORMERS, STRINGERS & FLUSH RIVETED STRESSED SKIN.

TAIL CONSTRUCTION: ALL ALUMINUM FRAMEWORK WITH ALUMINUM STRESSED SKIN FIN & STABILIZER. RUDDER & ELEVATORS WERE FABRIC COVERED.

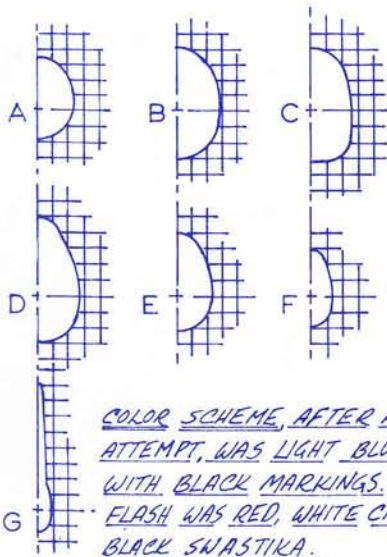


TYPICAL AIRFOIL SECTIONS

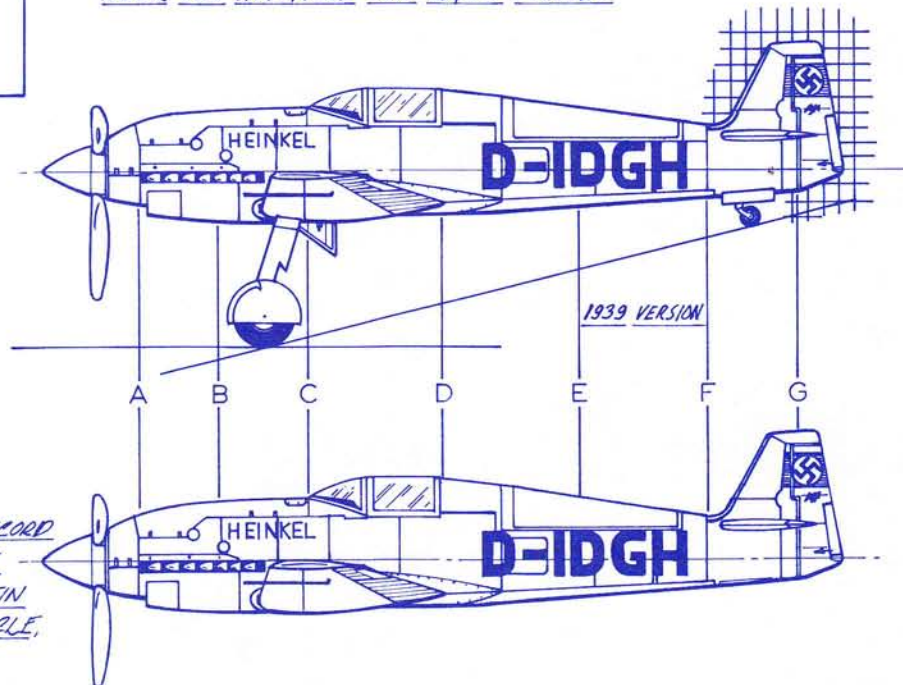


HEINKEL HE 100  
 V-8

POWERPLANT: DAIMLER-BENZ DB 601 R - 1800 HORSEPOWER @ 3000 RPM WITH METHYL ALCOHOL INJECTION. ENGINE WAS 12 CYLINDER VEE INVERTED AND LIQUID COOLED.



COLOR SCHEME, AFTER RECORD ATTEMPT, WAS LIGHT BLUE WITH BLACK MARKINGS. FIN FLASH WAS RED, WHITE CIRCLE, BLACK SWASTIKA.



AT ORANIENBURG MARCH 30, 1939 CAPTAIN HANS DIETERLE SET WORLD SPEED RECORD AT 463.92 MPH. WHICH LASTED 3000 FT.

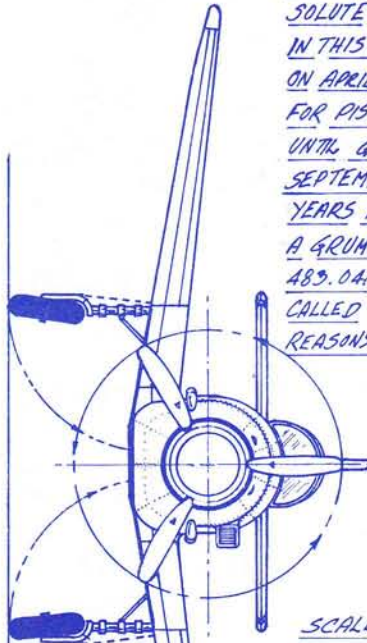
MESSERSCHMITT'S CHIEF TEST PILOT, FRITZ WENDEL, SET A WORLD ABSOLUTE AIRCRAFT SPEED RECORD IN THIS AIRCRAFT OF 469.22 MPH. ON APRIL 26, 1939, THIS RECORD FOR PISTON ENGINED PLANES STOOD UNTIL GREENAMYER BESTED IT ON SEPTEMBER 21, 1969 - OVER THIRTY YEARS LATER. GREENAMYER FLEW A GRUMMAN F8F-2 'BEARCAT' TO 489.041 M.P.H. AT TIME PLANE WAS CALLED ME-109R FOR PROPAGANDA REASONS.

WING CONSTRUCTION: ALUMINUM RIBS, SPARS COVERED WITH ALUMINUM FLUSH RIVETED STRESSED SKIN.

FUSELAGE CONSTRUCTION: ALL ALUMINUM SEMI-MONOCOQUE FLUSH RIVETED CONSTRUCTION.

TAIL CONSTRUCTION: METAL FRAMEWORK WITH FLUSH RIVETED STRESSED SKIN.

NOTE: WING ACTED AS RADIATOR FOR EVAPORATIVE COOLING SYSTEM.



SCALE:  $\frac{3}{16} = 1'$



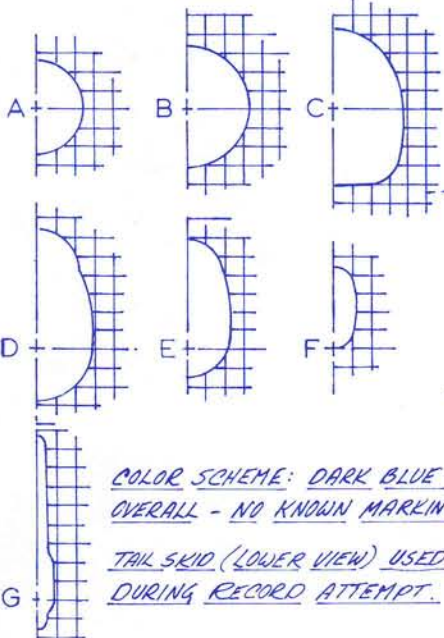
SPAN - 25' 7"  
WING AREA - 114.097 FT<sup>2</sup>  
LENGTH - 23' 9 1/2"  
GROSS WEIGHT - 5545 LBS.  
MAX. SPEED - 469.22 M.P.H.

$\frac{3}{32}$  SQUARES

TYPICAL AIRFOIL SECTIONS

POWERPLANT: DAIMLER-BENZ DB 601 A/J 12 CYLINDER INVERTED 'V' 2300 H.P. LIQUID COOLED.

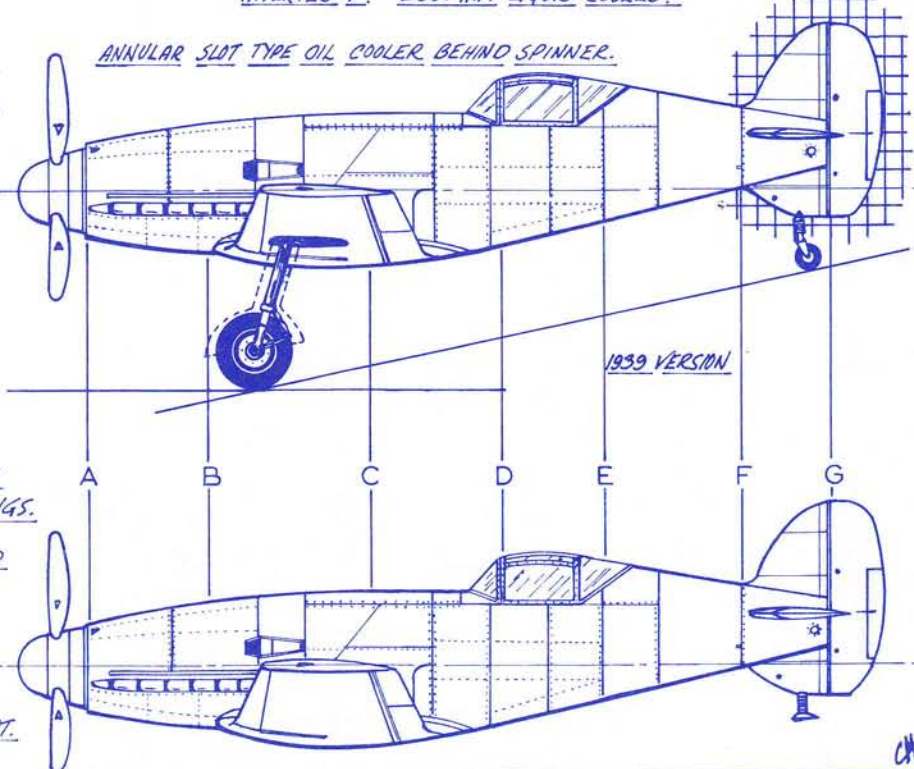
ANNULAR SLOT TYPE OIL COOLER BEHIND SPINNER.



COLOR SCHEME: DARK BLUE OVERALL - NO KNOWN MARKINGS.

TAIL SKID (LOWER VIEW) USED DURING RECORD ATTEMPT.

HYDRAULICALLY OPERATED MAIN LANDING GEAR HAD WHEEL WELL COVERS (SHOWN DOTTED) AT RECORD ATTEMPT.



1939 VERSION

MAJOR MODIFICATIONS FROM STD:

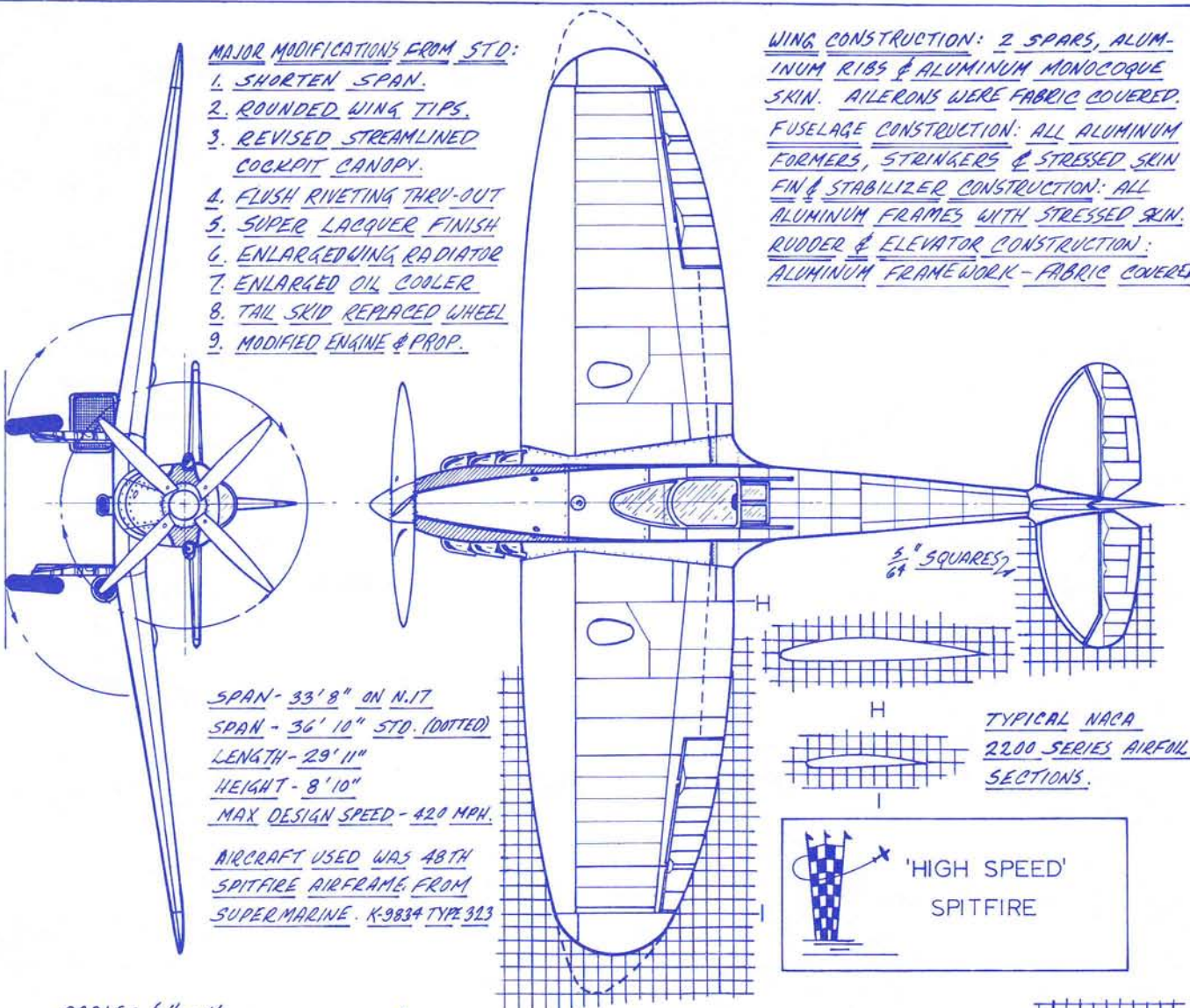
1. SHORTEN SPAN.
2. ROUNDED WING TIPS.
3. REVISED STREAMLINED COCKPIT CANOPY.
4. FLUSH RIVETING THRU-OUT
5. SUPER LACQUER FINISH
6. ENLARGED WING RADIATOR
7. ENLARGED OIL COOLER
8. TAIL SKID REPLACED WHEEL
9. MODIFIED ENGINE & PROP.

WING CONSTRUCTION: 2 SPARS, ALUMINUM RIBS & ALUMINUM MONOCOQUE SKIN. AILERONS WERE FABRIC COVERED.

FUSELAGE CONSTRUCTION: ALL ALUMINUM FORMERS, STRINGERS & STRESSED SKIN

FIN & STABILIZER CONSTRUCTION: ALL ALUMINUM FRAMES WITH STRESSED SKIN.

RUDDER & ELEVATOR CONSTRUCTION: ALUMINUM FRAMEWORK - FABRIC COVERED



SPAN - 33' 8" ON N.17  
SPAN - 36' 10" STD. (DOTTED)  
LENGTH - 29' 11"  
HEIGHT - 8' 10"  
MAX DESIGN SPEED - 420 MPH.

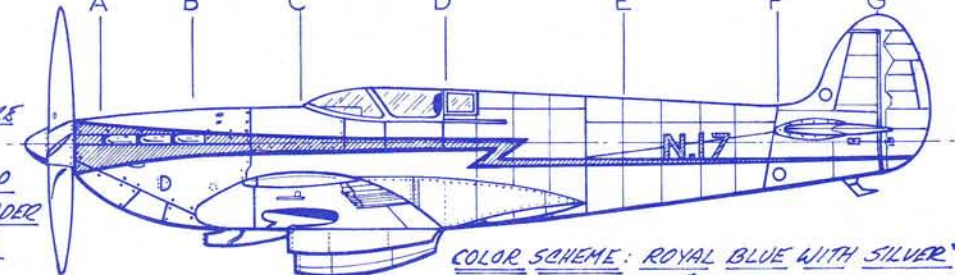
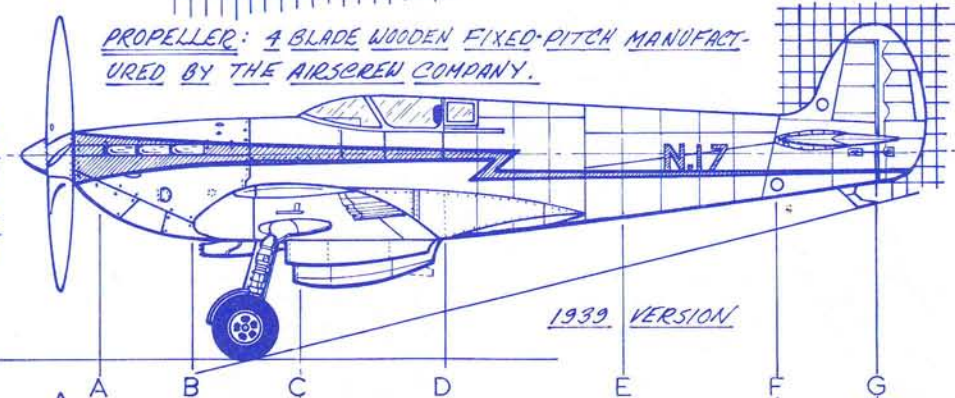
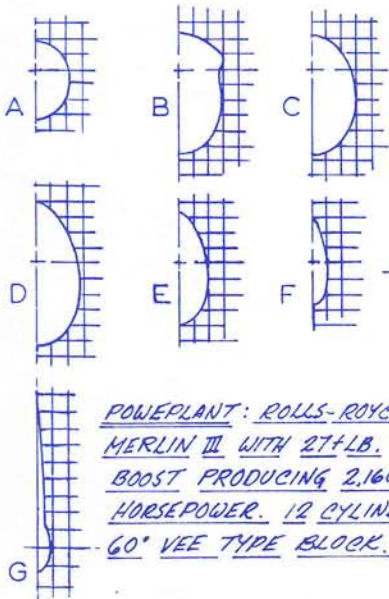
AIRCRAFT USED WAS 48TH SPITFIRE AIRFRAME FROM SUPERMARINE. K-9834 TYPE 313

TYPICAL NACA 2200 SERIES AIRFOIL SECTIONS.



SCALE: 5/32" = 1'

PROPELLER: 4 BLADE WOODEN FIXED-PITCH MANUFACTURED BY THE AIRSCREW COMPANY.



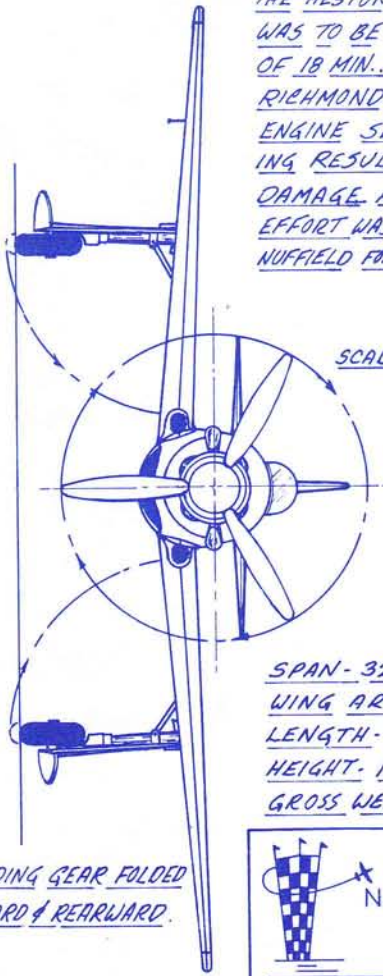
POWERPLANT: ROLLS-ROYCE MERLIN III WITH 27+LB. BOOST PRODUCING 2,160 HORSEPOWER. 12 CYLINDER 60° VEE TYPE BLOCK.

COLOR SCHEME: ROYAL BLUE WITH SILVER\* CHEAT LINE & N.17. (\*SOME REFS. SAY GOLD)

ALTHOUGH FLOWN FOR TEST, CRAFT DID NOT TRY FOR WORLD SPEED RECORD AS THE HEINKEL HE-100V-8 RAISED THE RECORD TO 463.67 ON MARCH 30, 1939. THIS MARK WAS SOMEWHAT ABOVE N.17'S DESIGN POTENTIAL. CM

THE HESTON TYPE '5' RACER WAS DESIGNED BY A.E. HAGG & G. CORNWALL & BUILT BY THE HESTON AIRCRAFT CO. LTD.. SPEED WAS TO BE 480 M.P.H. FOR A DURATION OF 18 MIN.. FLOWN BY S/LDR. G.L.G. RICHMOND JUNE 12, 1940. PLANE'S ENGINE SEIZED AND FORCED LANDING RESULTED IN UNREPAIRABLE DAMAGE AFTER 5 MIN. FLIGHT. EFFORT WAS FINANCED BY LORD NUFFIELD FOR WORLD SPEED RECORD.

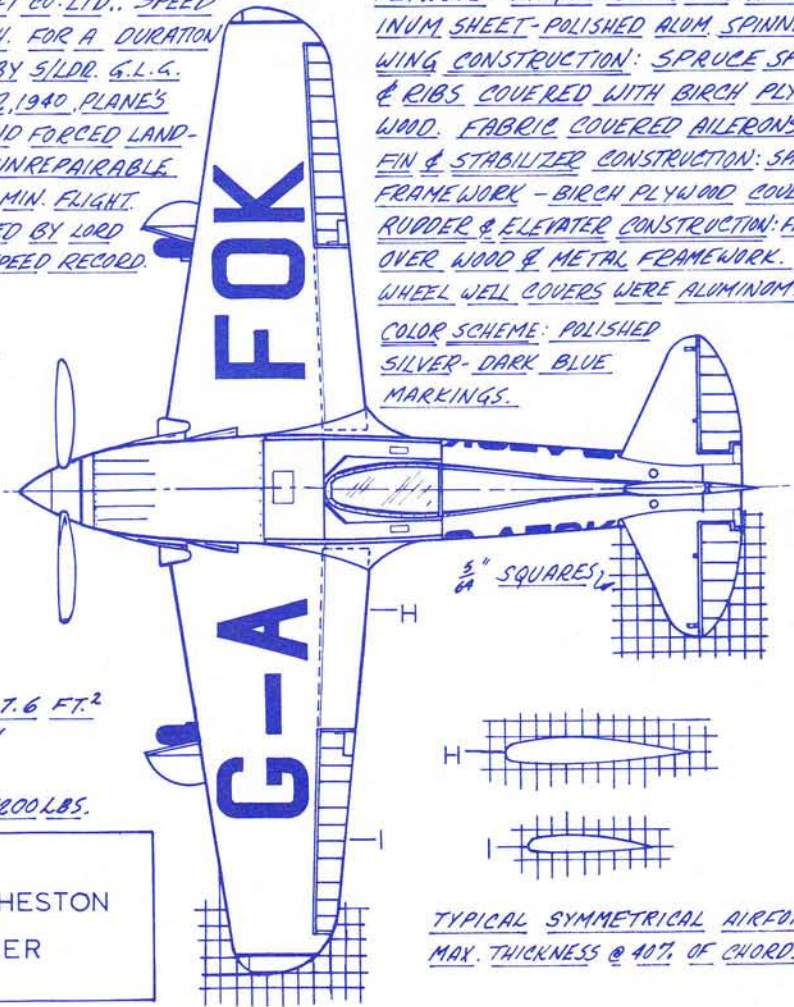
FUSELAGE CONSTRUCTION: SPRUCE FORMERS & LONGERONS. ENTIRE ASSEMBLY COVERED WITH BIRCH PLYWOOD.- ENGINE COWL WAS ALUMINUM SHEET-POLISHED ALUM. SPINNER.  
WING CONSTRUCTION: SPRUCE SPARS & RIBS COVERED WITH BIRCH PLYWOOD. FABRIC COVERED AILERONS.  
FIN & STABILIZER CONSTRUCTION: SPRUCE FRAMEWORK - BIRCH PLYWOOD COVER.  
RUDDER & ELEVATOR CONSTRUCTION: FABRIC OVER WOOD & METAL FRAMEWORK.  
 WHEEL WELL COVERS WERE ALUMINUM.  
COLOR SCHEME: POLISHED SILVER-DARK BLUE MARKINGS.



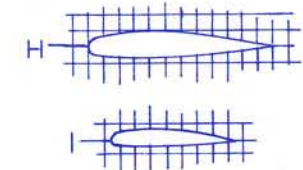
SCALE:  $\frac{5}{32}'' = 1'$

SPAN -  $32' \frac{1}{2}''$   
 WING AREA - 167.6 FT.<sup>2</sup>  
 LENGTH -  $24' 7 \frac{1}{4}''$   
 HEIGHT -  $11' 10''$   
 GROSS WEIGHT - 7200 LBS.

LANDING GEAR FOLDED UPWARD & REARWARD.



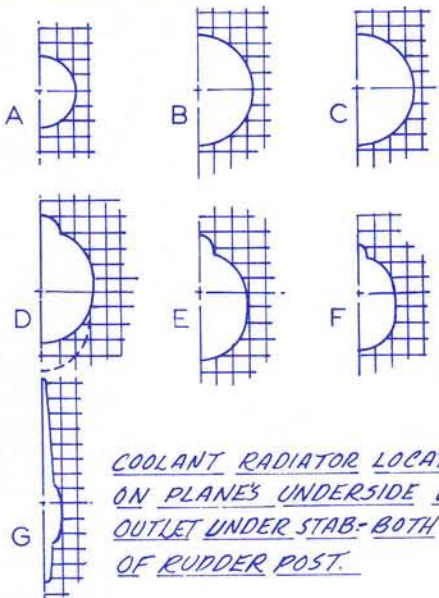
$\frac{5}{8}''$  SQUARES



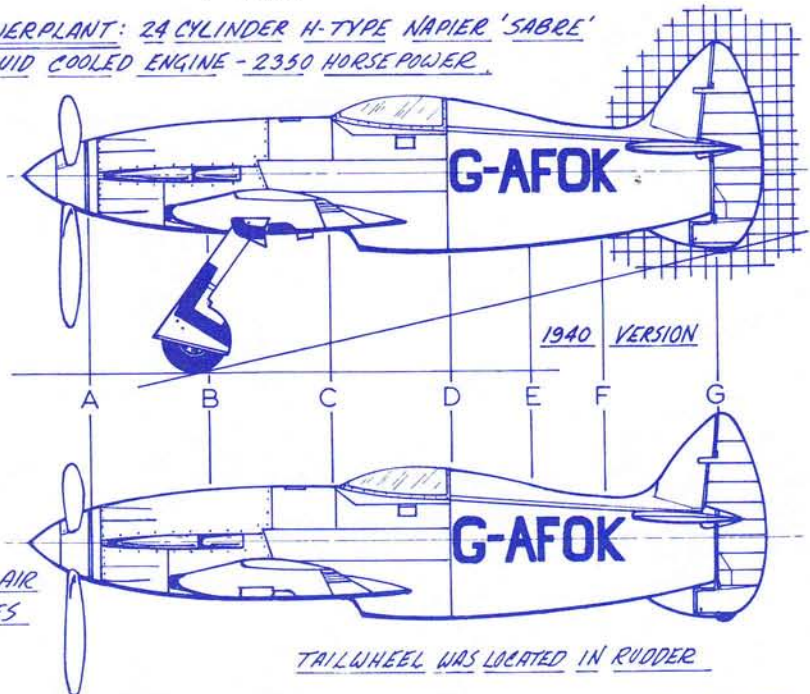
TYPICAL SYMMETRICAL AIRFOIL  
 MAX. THICKNESS @ 40% OF CHORD.

PROPELLER: 3 BLADE D.H.-HAMILTON CONSTANT SPEED.

POWERPLANT: 24 CYLINDER H-TYPE NAPIER 'SABRE' LIQUID COOLED ENGINE - 2350 HORSE POWER.

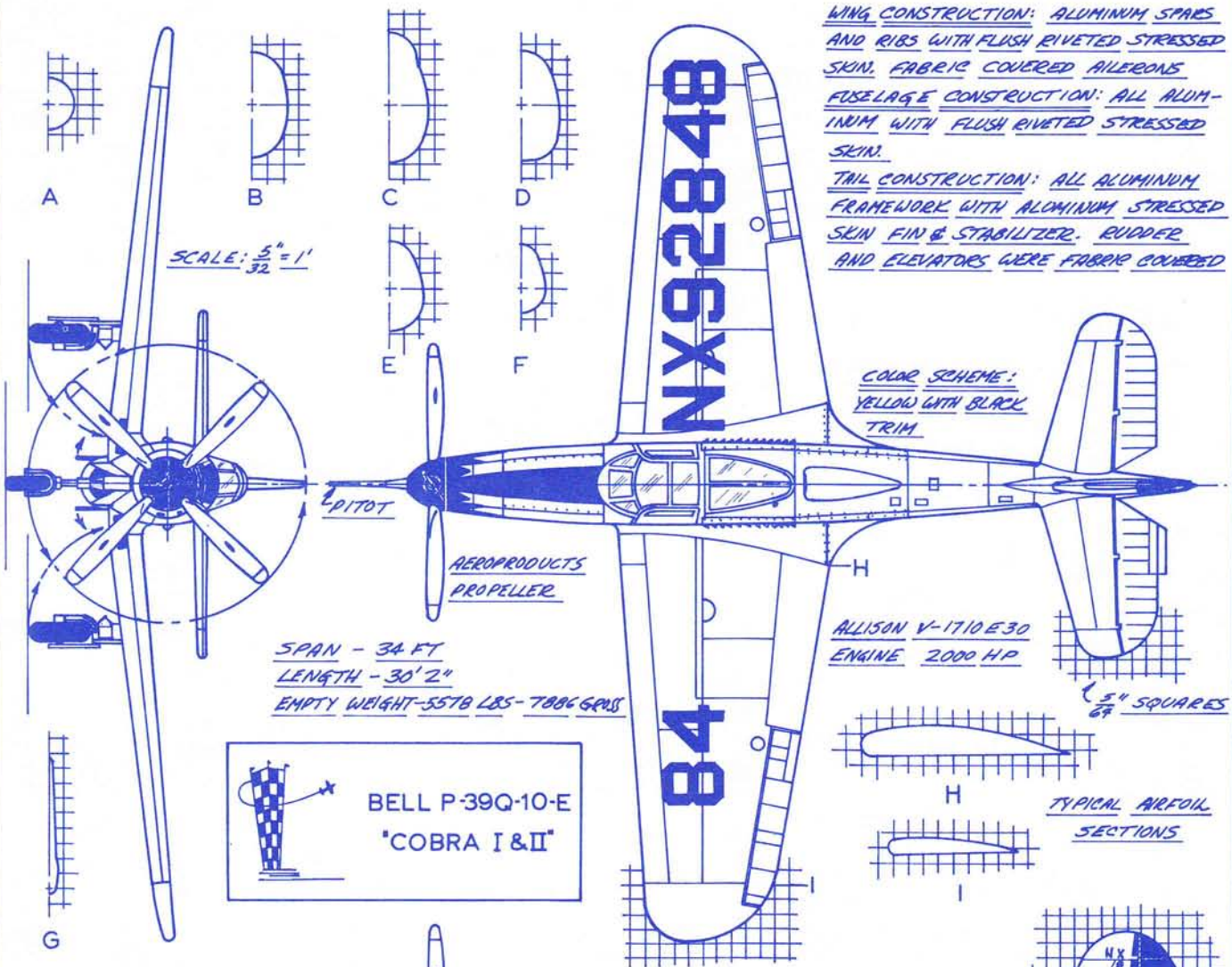


COOLANT RADIATOR LOCATED ON PLANE'S UNDERSIDE WITH AIR OUTLET UNDER STAB-BOTH SIDES OF RUDDER POST.



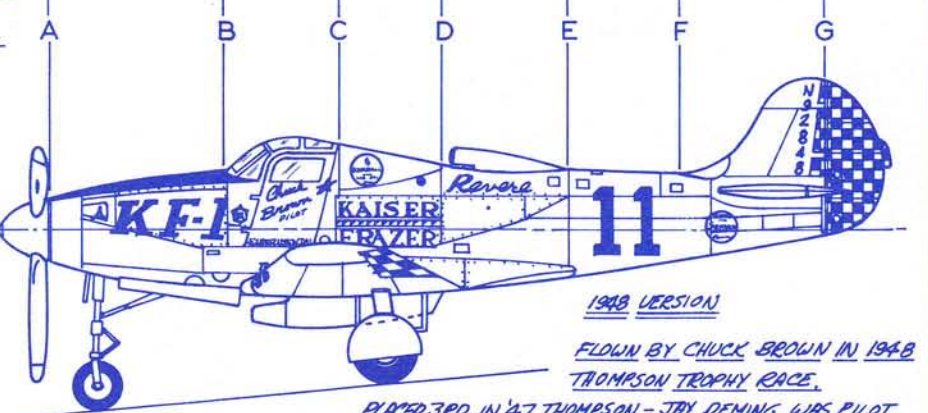
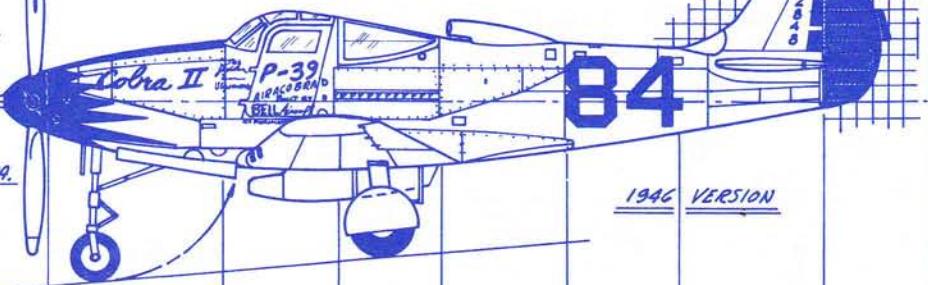
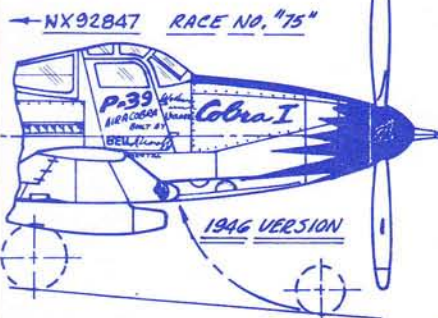
TAILWHEEL WAS LOCATED IN RUDDER

SISTER SHIP OF ABOVE CRAFT WAS LICENSED "G-AFOL" HOWEVER NEVER COMPLETED DUE TO WORLD WAR II. CK



THOUGH NEVER A POPULAR FIGHTER DURING WORLD WAR II DUE TO LACK OF PERFORMANCE, THESE RACING "COBRAS" WERE FITTED WITH THE MORE POWERFUL ENGINES USED ON THE P-63 KING COBRA. THE RESULTS WERE A TREMENDOUS INCREASE IN SPEED & PERFORMANCE.

COBRA I BELOW CRASHED DUE TO REAR FUSELAGE STRUCTURAL FAILURE. COLOR SCHEME: YELLOW WITH RED TRIM.

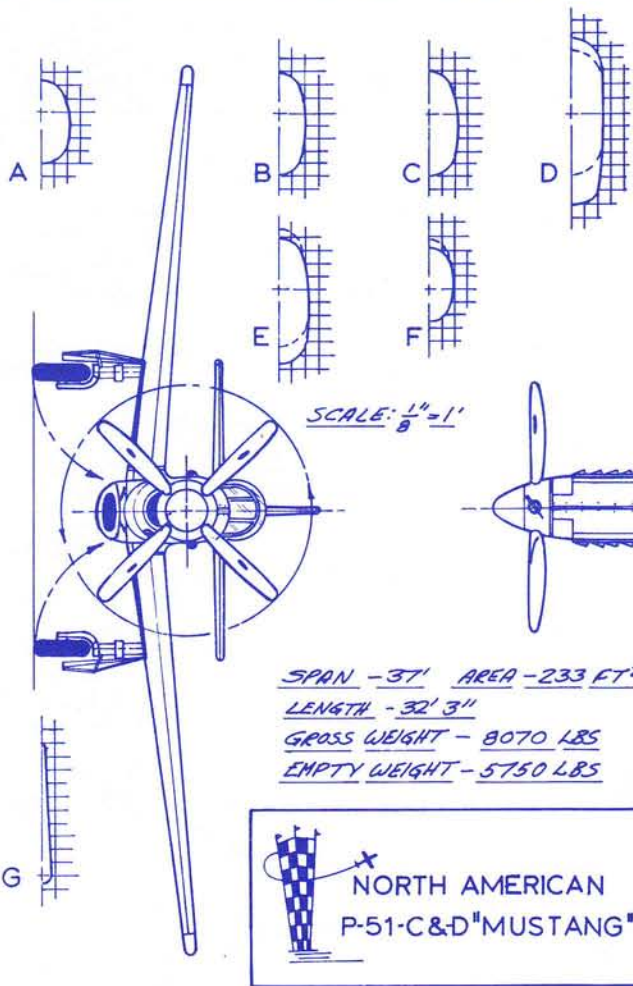


ABOVE VIEW SHOWING LANDING GEAR RETRACTED AND WHEEL WELL DOORS CLOSED

COBRA II FLOWN BY TEX JOHNSTON WON THE 1946 THOMPSON TROPHY RACE AT AVERAGE SPEED OF 373.908 MILES PER HOUR.

FLOWN BY CHUCK BROWN IN 1948 THOMPSON TROPHY RACE.

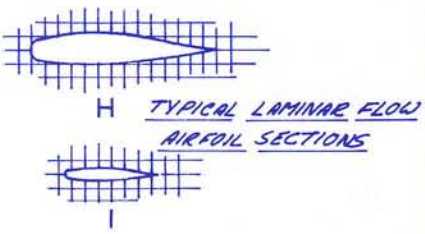
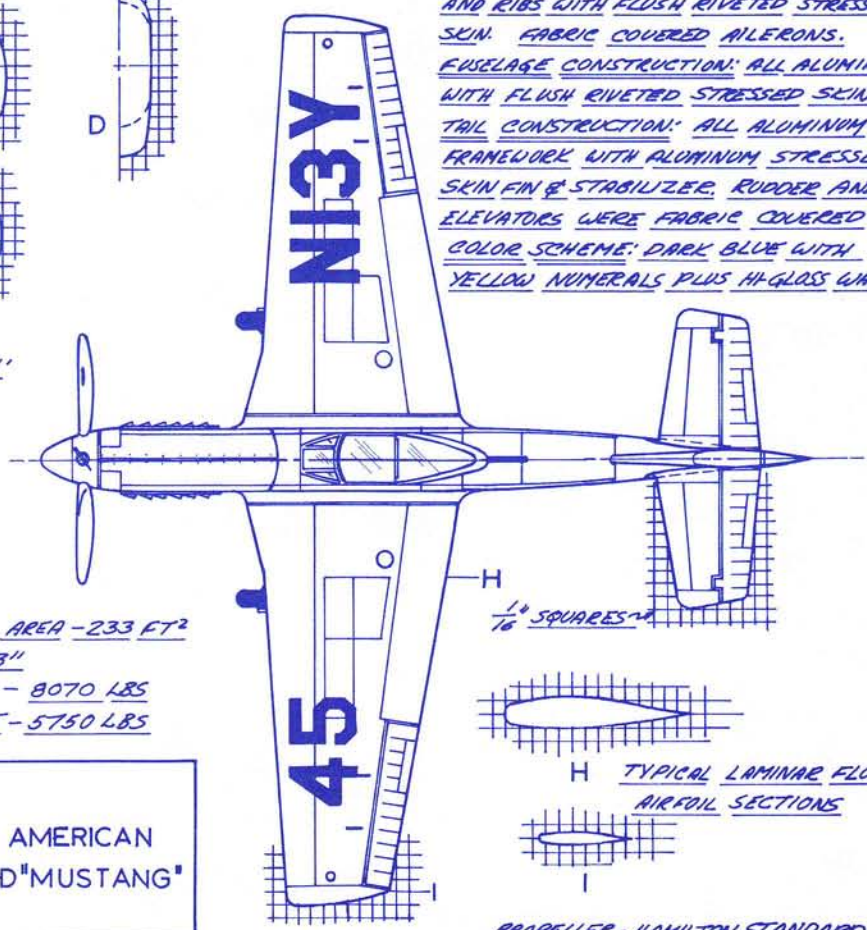
PLACED 3RD IN '47 THOMPSON - JIM DEMING WAS PILOT



SPAN - 37' AREA - 233 FT<sup>2</sup>  
 LENGTH - 32' 3"  
 GROSS WEIGHT - 8070 LBS  
 EMPTY WEIGHT - 5750 LBS

NORTH AMERICAN  
 P-51-C&D "MUSTANG"

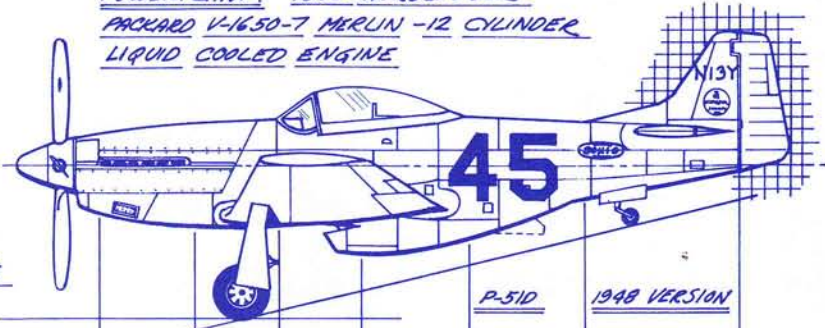
WING CONSTRUCTION: ALUMINUM SPARS AND RIBS WITH FLUSH RIVETED STRESSED SKIN. FABRIC COVERED AILERONS.  
FUSELAGE CONSTRUCTION: ALL ALUMINUM WITH FLUSH RIVETED STRESSED SKIN.  
TAIL CONSTRUCTION: ALL ALUMINUM FRAMEWORK WITH ALUMINUM STRESSED SKIN FIN & STABILIZER. RUDDER AND ELEVATORS WERE FABRIC COVERED.  
COLOR SCHEME: DARK BLUE WITH YELLOW NUMERALS PLUS HI-GLOSS WAX.



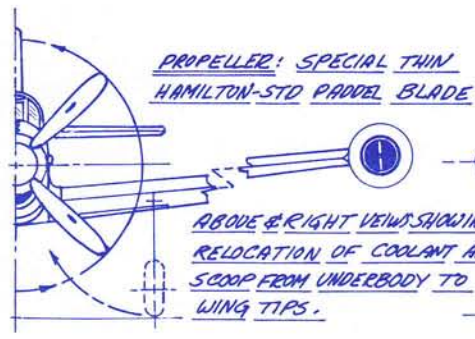
PROPELLER - HAMILTON STANDARD  
 11'2" CONTROLLABLE PITCH

THE P-51 MUSTANG OF WORLD WAR II, PERHAPS THE BEST FIGHTER OF THE PERIOD, FLEW ON TO FAME AT THE NATIONAL AIR RACES 1946-1949. IT WON EVERY BENDIX TROPHY RACE DURING THIS PERIOD - THE FIRST THREE YEARS FLOWN BY PAUL MANTZ AND IN 1949 FLOWN BY JOE DE BONA. MANY OF THESE EXCELLENT MACHINES ARE STILL BEING FLOWN IN AIR RACES TODAY - OVER THIRTY YEARS AFTER THE PROTOTYPE FLEW!

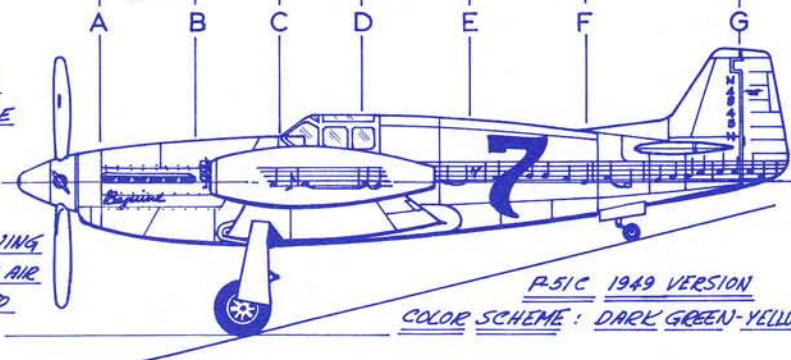
POWERPLANT: 1695 HORSEPOWER  
 PACKARD V-1650-7 MERLIN - 12 CYLINDER  
 LIQUID COOLED ENGINE



P-51D 1948 VERSION

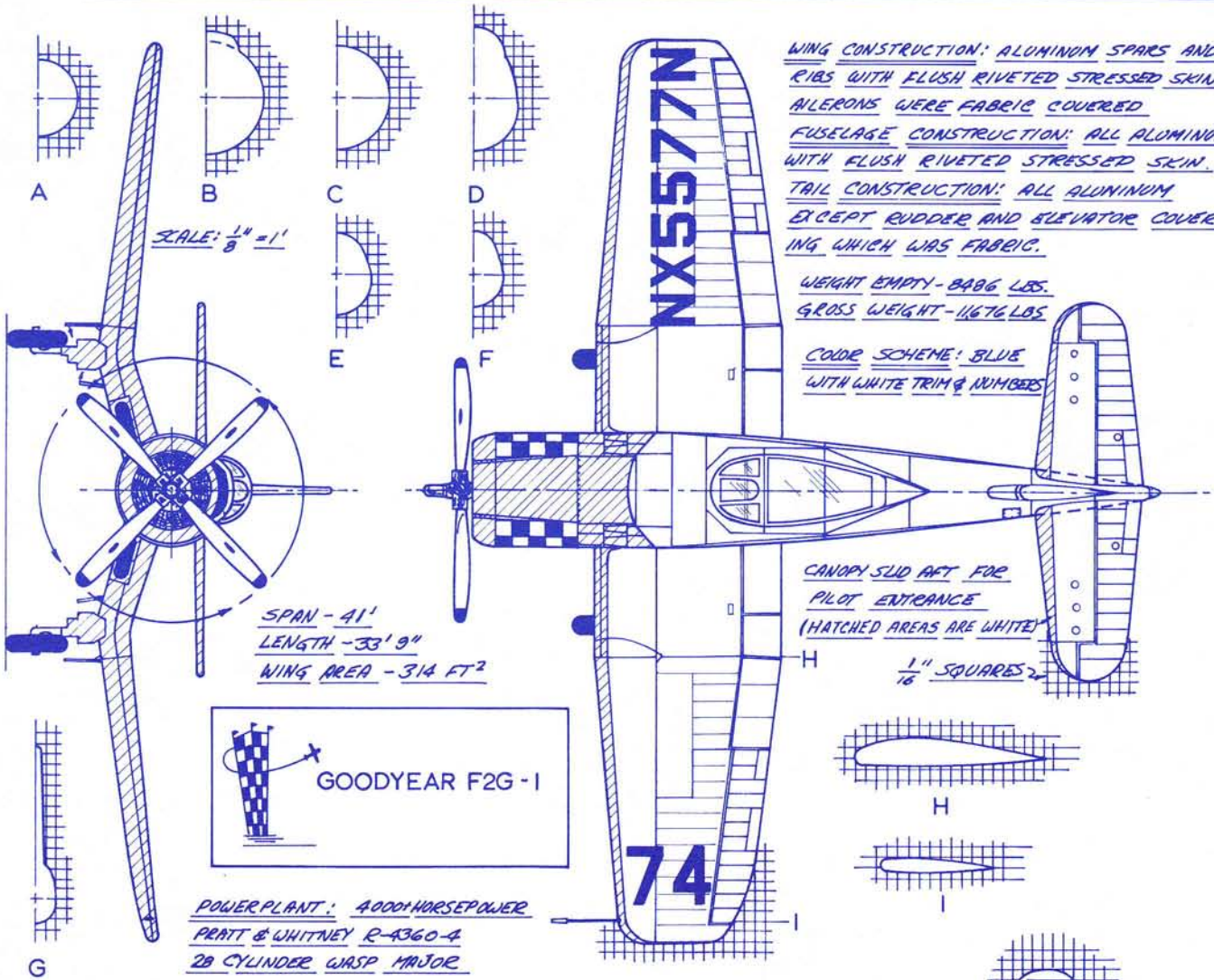


PROPELLER: SPECIAL THIN HAMILTON-STD PADDLE BLADE  
 ABOVE & RIGHT VIEWS SHOWING RELOCATION OF COOLANT AIR SCOP FROM UNDERBODY TO WING TIPS.



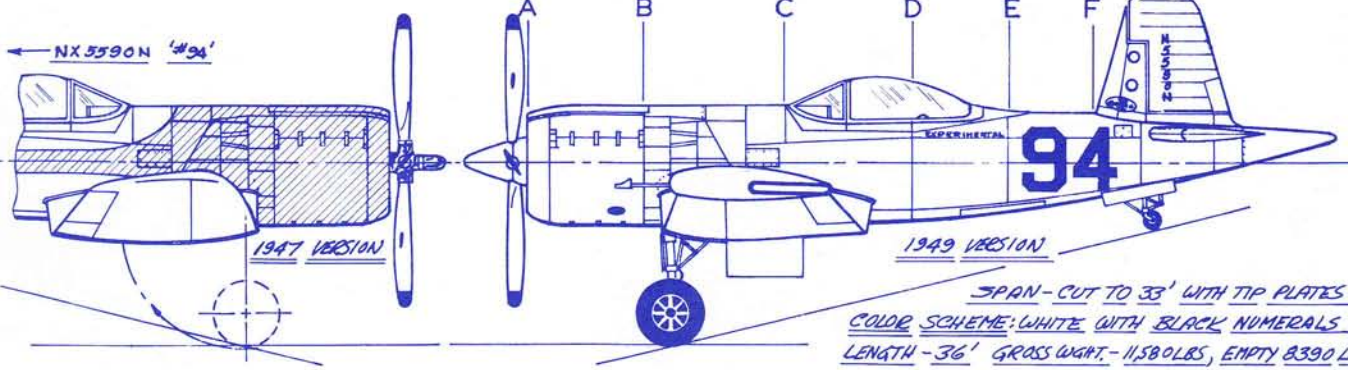
P-51C 1949 VERSION  
 COLOR SCHEME: DARK GREEN-YELLOW TRIM.

ABOVE AIRCRAFT NO. 45 WAS WINNER OF 1948 THOMPSON TROPHY RACE FLOWN BY ANSON JOHNSON AT AN AVERAGE SPEED OF 383.767 MILES PER HOUR. WILLIAM ODOM CRASHED NO. 7 DURING THE 1949 THOMPSON ALTHOUGH THE MUCH MODIFIED AIRCRAFT WOULD POSSIBLY HAVE WON HAD THIS NOT BEEN THE CASE.



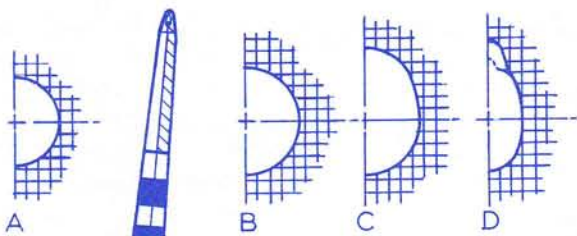
THE GOODYEAR F2G-1 WAS A DEVELOPMENT OF THE FAMOUS CHANCE-VOUGHT 'CORSAIR' F4U-4 NAVAL FIGHTER AIRCRAFT OF WORLD WAR II. THE PRIMARY MODIFICATION WAS THE ADDITION OF THE BIG P&W ENGINE FOR SUPER-PERFORMANCE AGAINST ENEMY SUICIDE AIRCRAFT - ONLY 5 BUILT AT WARS END.

NOTE SQUARED OFF WING TIP MODIFICATION SHOWN ABOVE



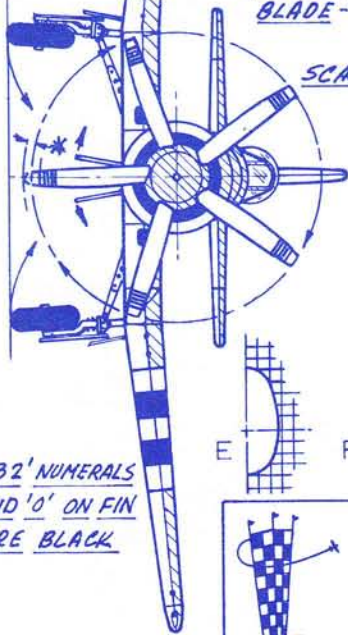
THE ABOVE TWO AIRCRAFT WERE FLOWN TO THOMPSON TROPHY RACE VICTORIES BY OWNER-PILOT COOL CLELAND. NO. 74 WON THE 1947 RACE AVERAGING 396.131 MPH, NO. 94 WON IN 1949 WITH AVERAGE SPEED OF 397.071 MPH.





PROPELLER: 12'9" ROTAL FIVE  
BLADE - 3" TAKEN OFF EACH TIP.

SCALE: 1/8" = 1'

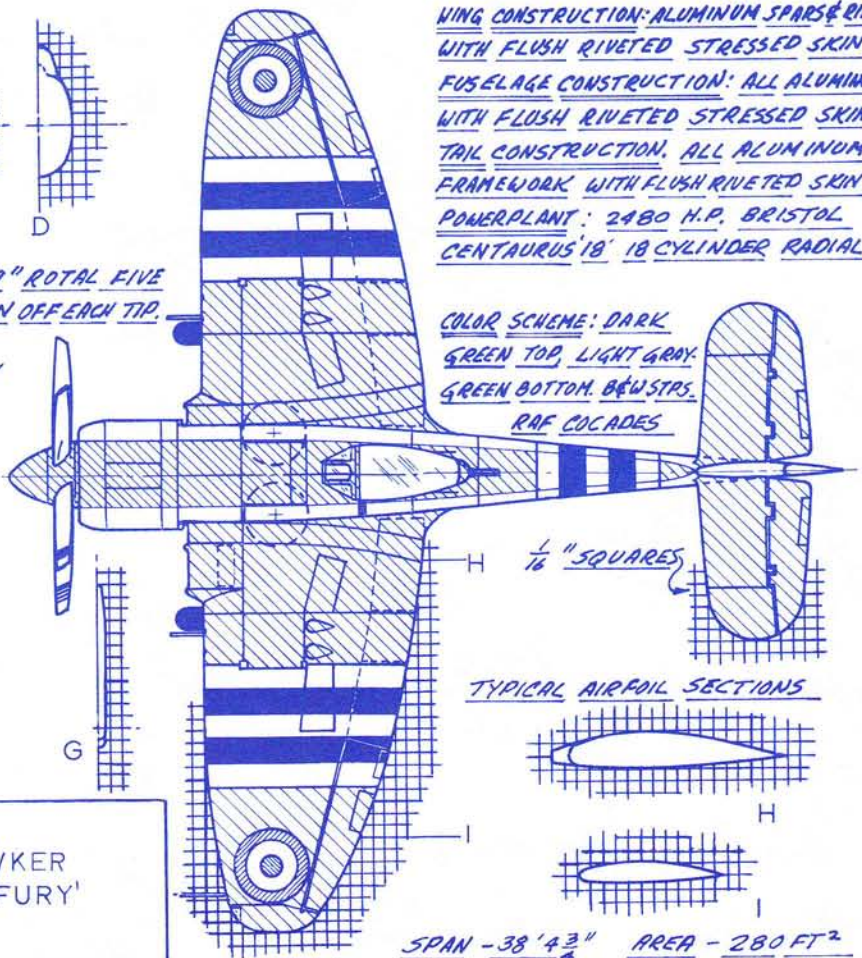


'232' NUMERALS  
AND '0' ON FIN  
ARE BLACK



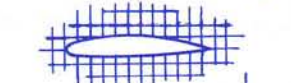
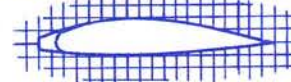
WING CONSTRUCTION: ALUMINUM SPARS & RIBS  
WITH FLUSH RIVETED STRESSED SKIN.  
FUSELAGE CONSTRUCTION: ALL ALUMINUM  
WITH FLUSH RIVETED STRESSED SKIN.  
TAIL CONSTRUCTION: ALL ALUMINUM  
FRAMEWORK WITH FLUSH RIVETED SKIN.  
POWERPLANT: 2480 H.P. BRISTOL  
CENTAURUS '18' 18 CYLINDER RADIAL.

COLOR SCHEME: DARK  
GREEN TOP, LIGHT GRAY  
GREEN BOTTOM. B&W STRS.  
RAF COCADES



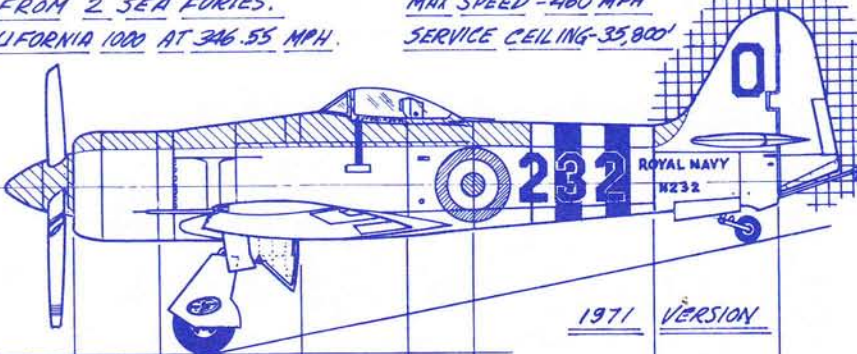
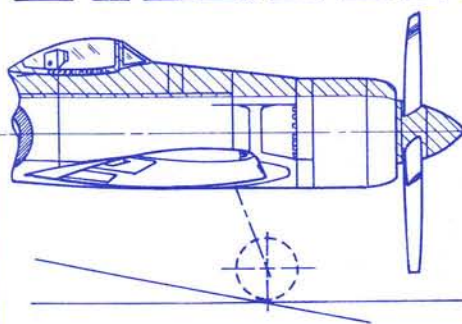
1/16" SQUARES

TYPICAL AIRFOIL SECTIONS



SPAN - 38' 4 3/4" AREA - 280 FT<sup>2</sup>  
LENGTH - 34' 8" WEIGHT EMPTY - 9240 LBS.  
MAX SPEED - 460 MPH  
SERVICE CEILING - 35,000'

AIRCRAFT REBUILT BY FRANK SANDERS FROM 2 SEA FURIES.  
FLOWN BY SANDERS, PLANE WON 1971 CALIFORNIA 1000 AT 346.55 MPH.

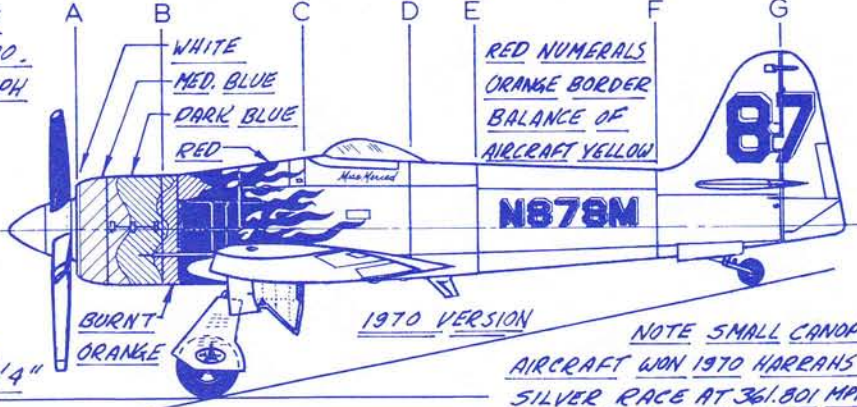


1971 VERSION

BLACK '87' USED IN  
1970 CALIFORNIA 1000.  
WON 1ST AT 347.56 MPH



TOP VIEW SHOWING  
WINGS CLIPPED TO 32' 4"



1970 VERSION

RED NUMERALS  
ORANGE BORDER  
BALANCE OF  
AIRCRAFT YELLOW

WHITE  
MED. BLUE  
DARK BLUE  
RED

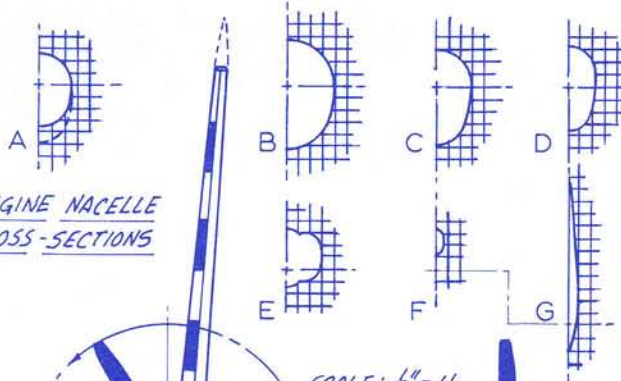
BURNT  
ORANGE

NOTE SMALL CANOPY.  
AIRCRAFT WON 1970 HARRAH'S  
SILVER RACE AT 361.801 MPH

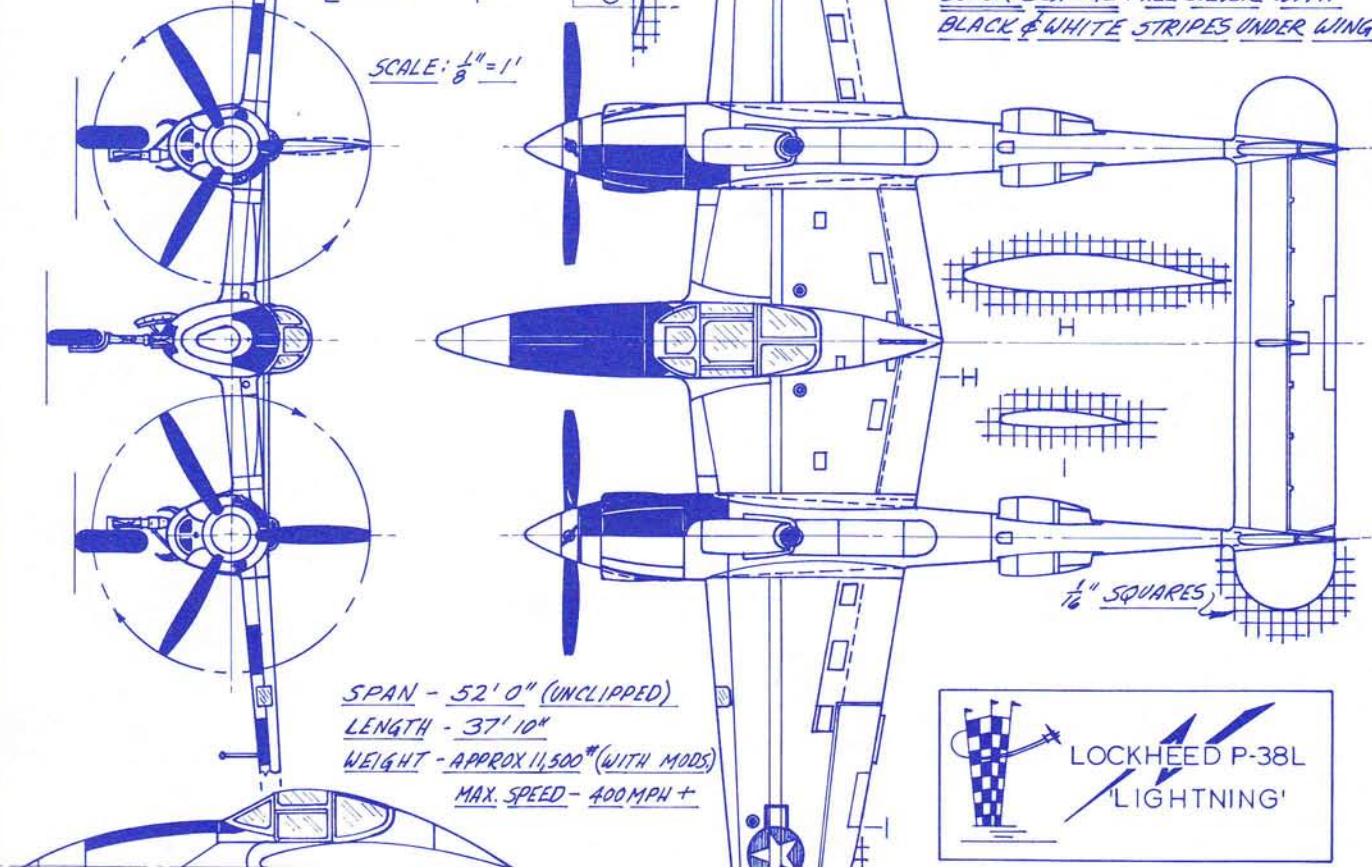
NUMBER 87 'MISS MERCED' IS OWNED AND FLOWN BY ORTHODONTIST, DR. WM. SHERMAN COOPER.

WING CONSTRUCTION: ALUMINUM SPARS AND RIBS WITH FLUSH RIVETED SKIN.  
FUSELAGE & NACELLE CONSTRUCTION: FLUSH RIVETED ALUMINUM STRESSED SKIN  
TAIL CONSTRUCTION: ALL ALUMINUM FRAMEWORK WITH ALUMINUM SKIN.  
 1973 VERSION OF AIRCRAFT SHOWN HAS TURBO-SUPERCHARGERS REMOVED  
AS WELL AS CLIPPED WING TIPS.  
COLOR SCHEME: ALL SILVER WITH BLACK & WHITE STRIPES UNDER WING.

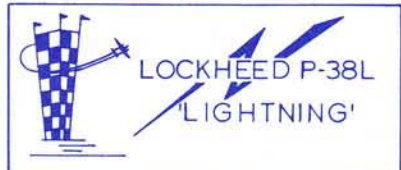
ENGINE NACELLE CROSS-SECTIONS



SCALE:  $\frac{1}{8}'' = 1'$



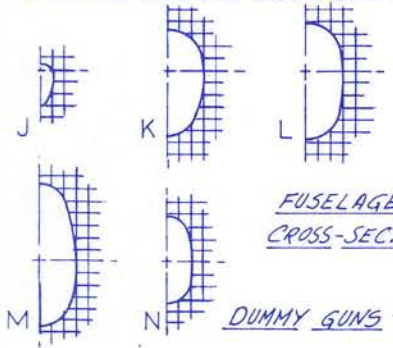
SPAN - 52' 0" (UNCLIPPED)  
 LENGTH - 37' 10"  
 WEIGHT - APPROX 11,500\* (WITH MODS)  
 MAX. SPEED - 400MPH +



POWERPLANTS: TWO 1425 HP.  
ALLISON V-1710-89/91 12  
CYLINDER LIQUID COOLED ENGINES

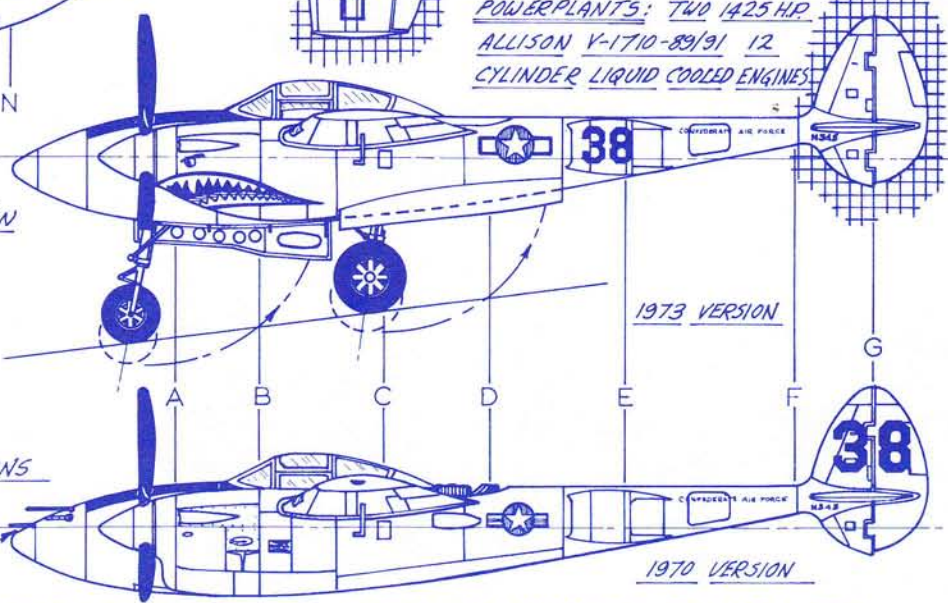
FUSELAGE SIDE VIEW ABOVE

NOTE CHANGE TO MODEL 322  
 ENGINE COOLING ON '73 VERSION



FUSELAGE CROSS-SECTIONS

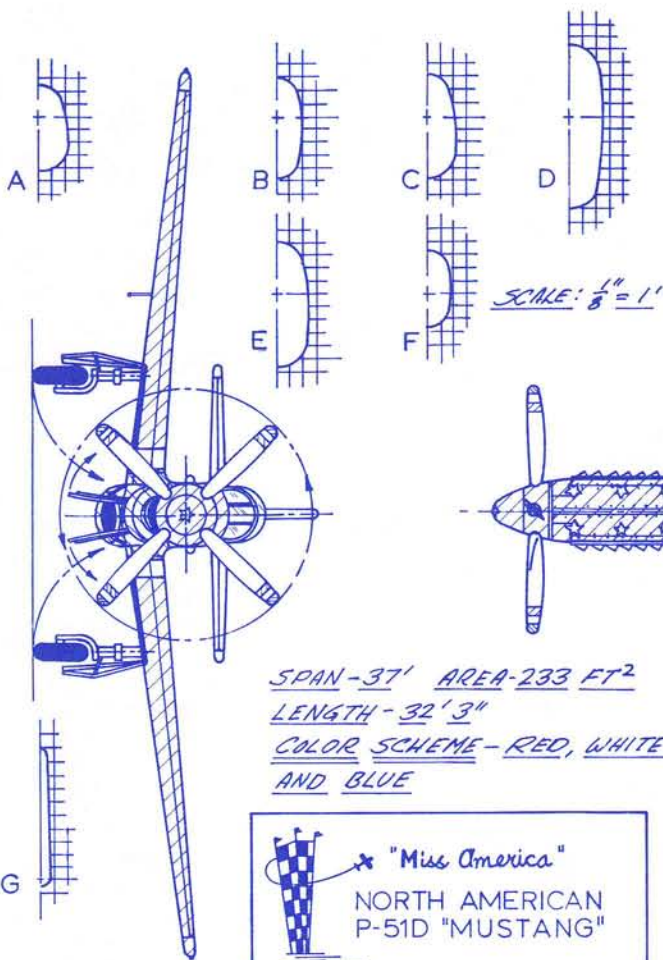
DUMMY GUNS



1973 VERSION

1970 VERSION

AIRCRAFT IS OWNED AND RACED BY GARY R. LEVITZ. CRAFT HAS COMPETED AT MIAMI AND THE RENO NATIONAL CHAMPIONSHIPS. CRAFT, WHILE FAST, HAS DIFFICULTY COMPETING WITH F-51S & BEARCATS. CH

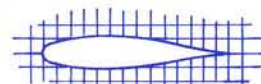


SPAN - 37' AREA - 233 FT<sup>2</sup>  
 LENGTH - 32' 3"  
 COLOR SCHEME - RED, WHITE  
 AND BLUE

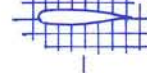


WING CONSTRUCTION: ALUMINUM SPARS  
 AND RIBS WITH FLUSH RIVETED STRESSED  
 SKIN -AILERONS ALSO METAL COVERED.  
FUSELAGE CONSTRUCTION: ALL ALUM-  
 INUM WITH FLUSH RIVETED STRESSED SKIN  
TAIL CONSTRUCTION: ALL ALUMINUM  
 FRAMEWORK WITH ALUMINUM STRESSED  
 SKIN FIN & STABILIZER, RUDDER AND  
 ELEVATORS ARE FABRIC COVERED.

$\frac{1}{16}$  SQUARES

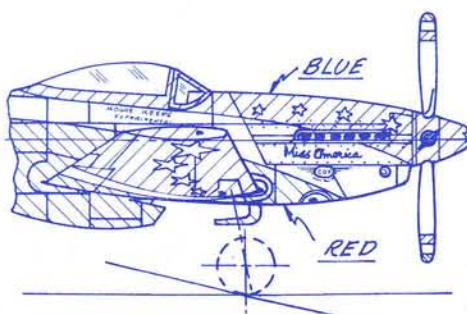


H TYPICAL LAMINAR FLOW  
 AIRFOIL SECTIONS

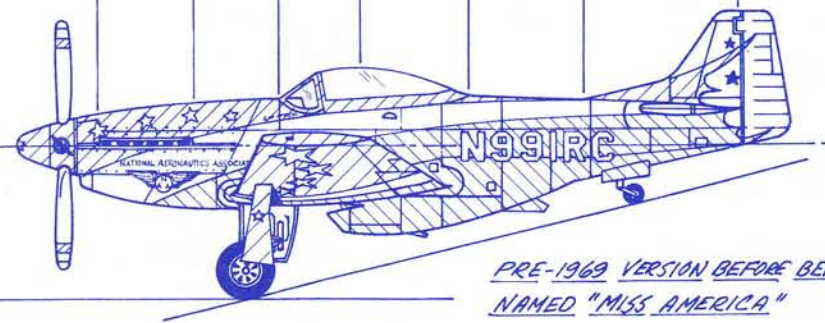
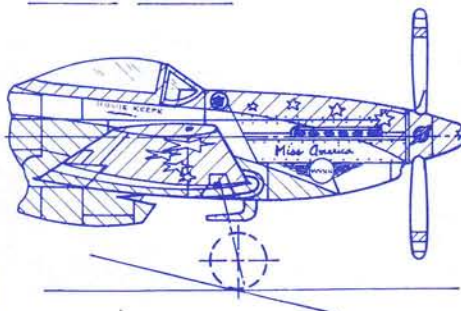
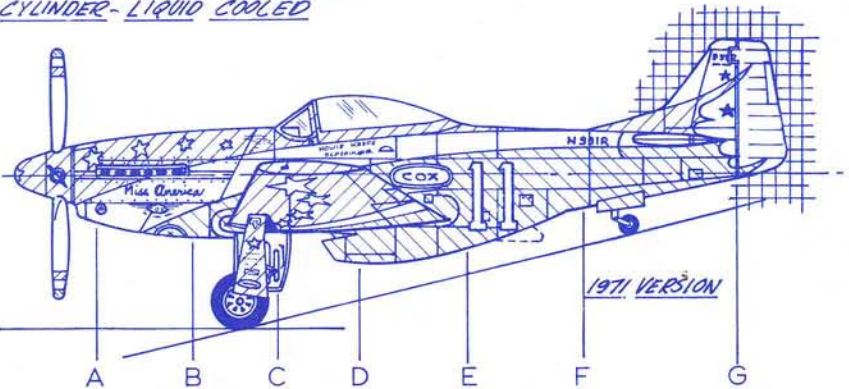


POWERPLANT: : 2000+ HORSEPOWER PACKARD  
 V-1650-7 MERLIN -12 CYLINDER - LIQUID COOLED

USE OF RUBBER BLADDER TANKS IN WING  
 GUN BAYS GIVES 780 GAL FUEL CAPACITY



1969 "WYNN" SPONSORED VERSION  
 SHOWN BELOW



PRE-1969 VERSION BEFORE BEING  
 NAMED "MISS AMERICA"

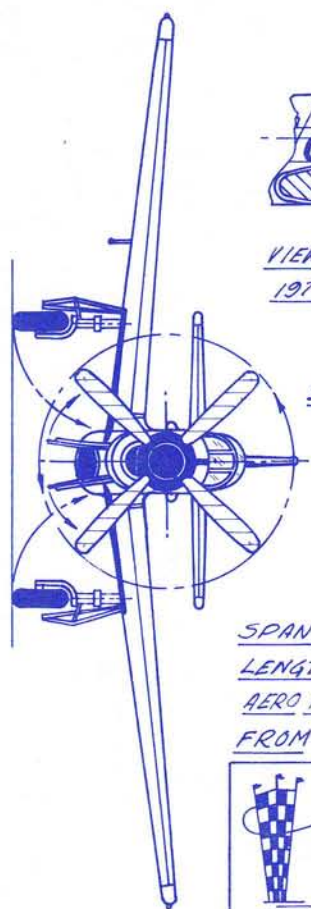
THIS COLORFUL UNLIMITED IS OWNED AND FLOWN BY HOWARD M. KEEFE. IT HAS PARTICIPATED IN  
 MOST OF THE MAJOR UNLIMITED AIR RACES SINCE 1969. IT PLACED 3RD AT RENO IN '69 AVERAGING 412.6 MPH

NOTE: CONSTRUCTION DATA IS SAME AS "MISS AMERICA" ON FACING PAGE. AIRCRAFT HAS A 33 GALLON ANTI-DETONATION TANK AND A 33 GALLON WATER TANK FOR MAX. POWER INJECTION. TANKS ARE LOCATED IN WING BAYS. AVERAGE SPEED ON RACE COURSE IS CLOSE TO 400 MPH.

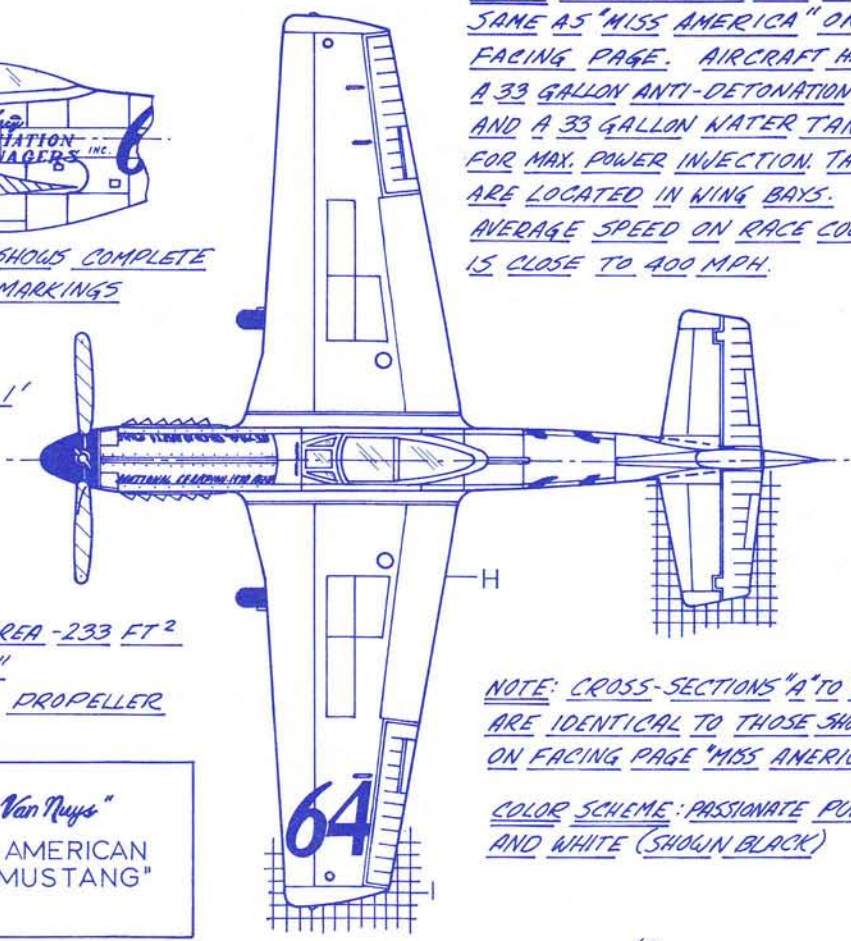


VIEW ABOVE SHOWS COMPLETE 1970 SIDE MARKINGS

SCALE: 1/8" = 1'



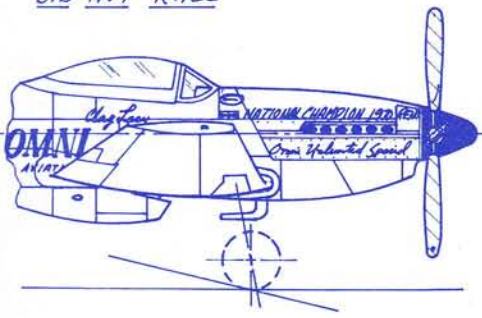
SPAN - 31' AREA - 233 FT<sup>2</sup>  
LENGTH - 32' 3"  
AERO PRODUCTS PROPELLER FROM P-51H



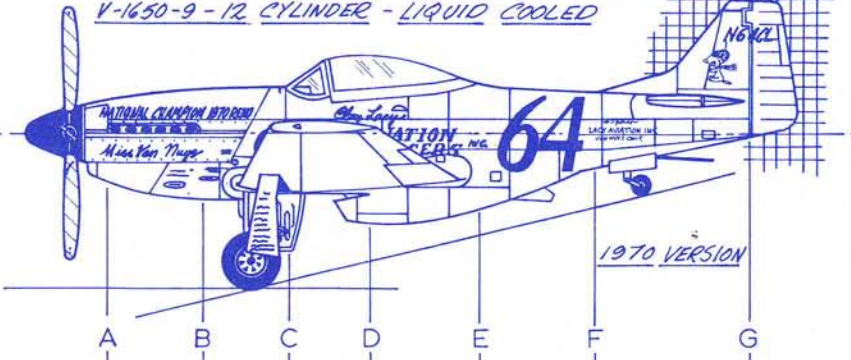
NOTE: CROSS-SECTIONS "A" TO "I" ARE IDENTICAL TO THOSE SHOWN ON FACING PAGE "MISS AMERICA"

COLOR SCHEME: PASSIONATE PURPLE AND WHITE (SHOWN BLACK)

1971 VERSION SHOWN BELOW DID NOT RACE

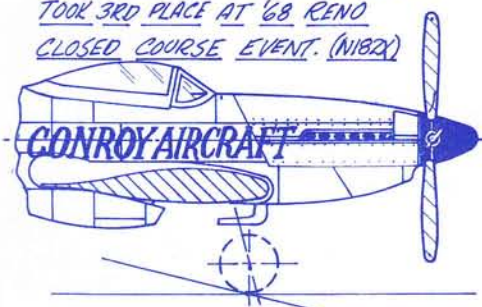


POWERPLANT: 2000+ H.P. PACKARD MERLIN V-1650-9-12 CYLINDER - LIQUID COOLED



1/16" SQUARES

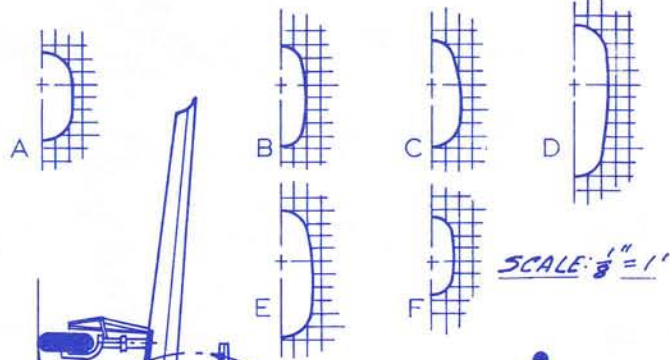
1968 VERSION SHOWN BELOW TOOK 3RD PLACE AT '68 RENO CLOSED COURSE EVENT. (N182X)



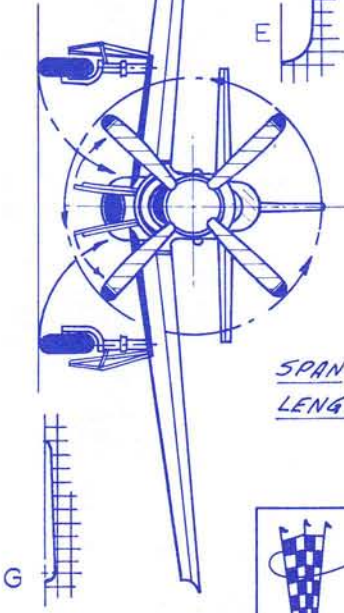
1967 VERSION AT RENO

AIRCRAFT IS OWNED AND FLOWN BY CLAY LACY. AIRCRAFT HAS BEEN FLOWN IN ALL UNLIMITED RACES FROM 1964 UNTIL 1971 WHEN MAGNETO FAILURE MADE QUALIFICATION IMPOSSIBLE

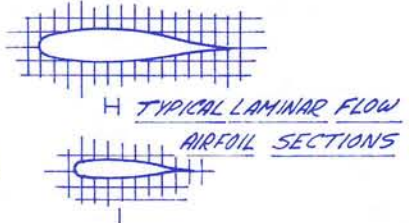
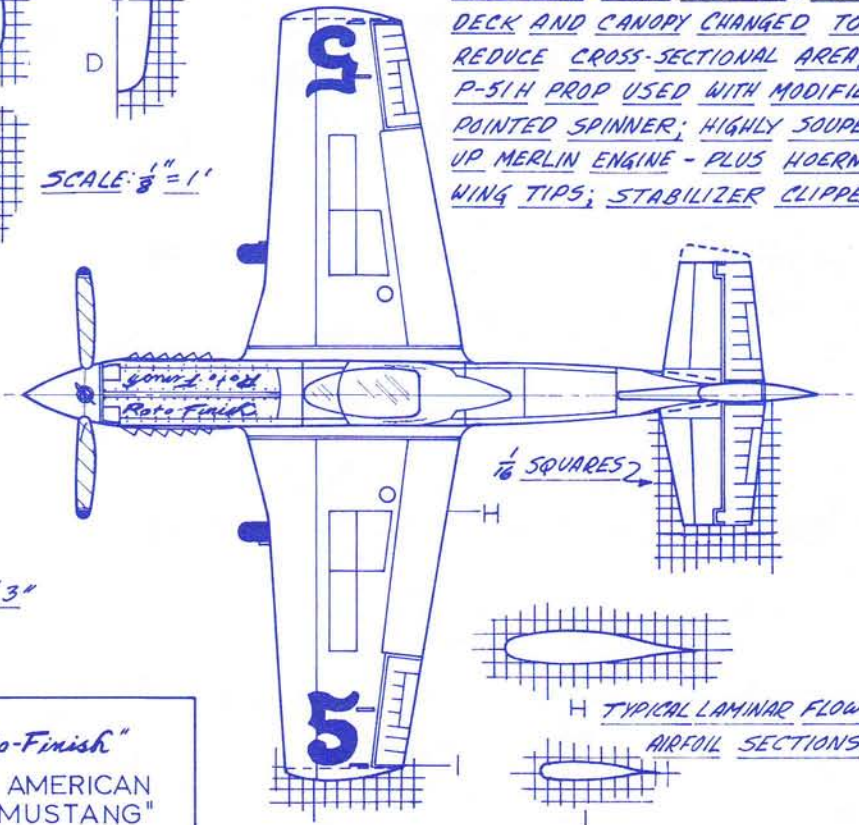
AIRCRAFT CONSTRUCTION IS SAME AS "MISS AMERICA" EXCEPT FOR FOLLOWING: SPAN REDUCED; TURTLE DECK AND CANOPY CHANGED TO REDUCE CROSS-SECTIONAL AREA; P-51H PROP USED WITH MODIFIED POINTED SPINNER; HIGHLY SOUPED UP MERLIN ENGINE - PLUS HOERNER WING TIPS; STABILIZER CLIPPED



SCALE:  $\frac{1}{8}'' = 1'$

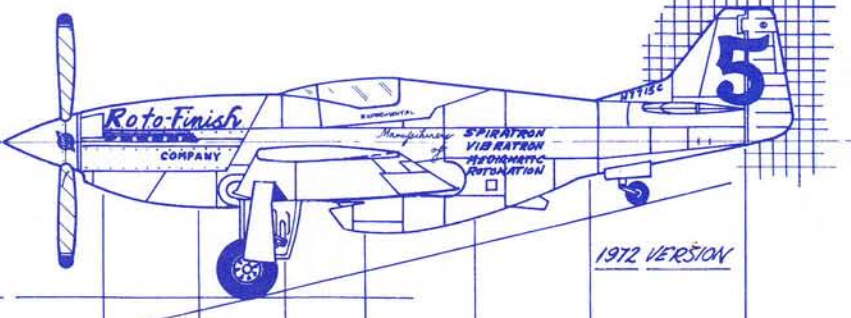
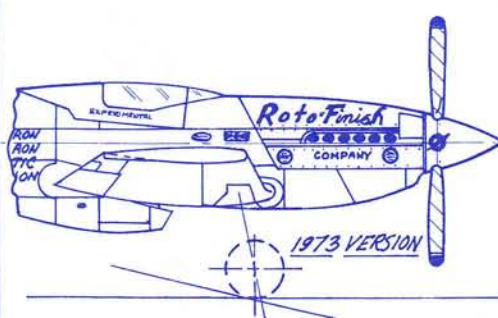


SPAN - 33'  
LENGTH - 32' 3"

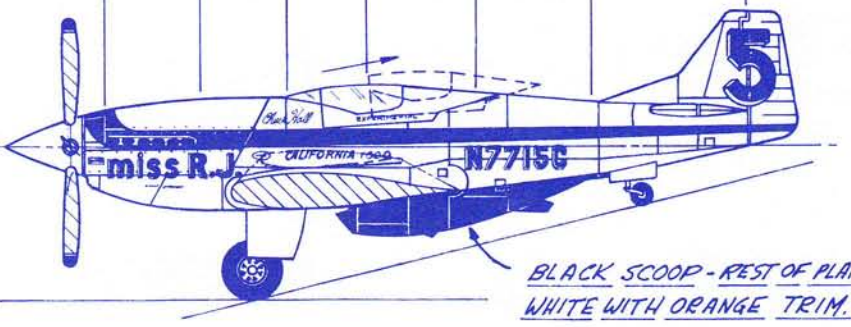
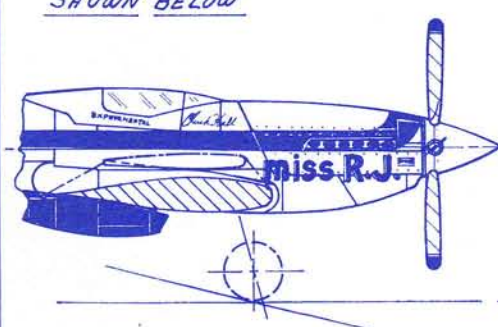


COLOR SCHEME: ALUMINUM SILVER PAINT - BLACK MARKINGS

POWERPLANT: 2000+ HORSEPOWER PACKARD V-1650-9 MERLIN V-12 CYLINDER - LIQUID COOLED



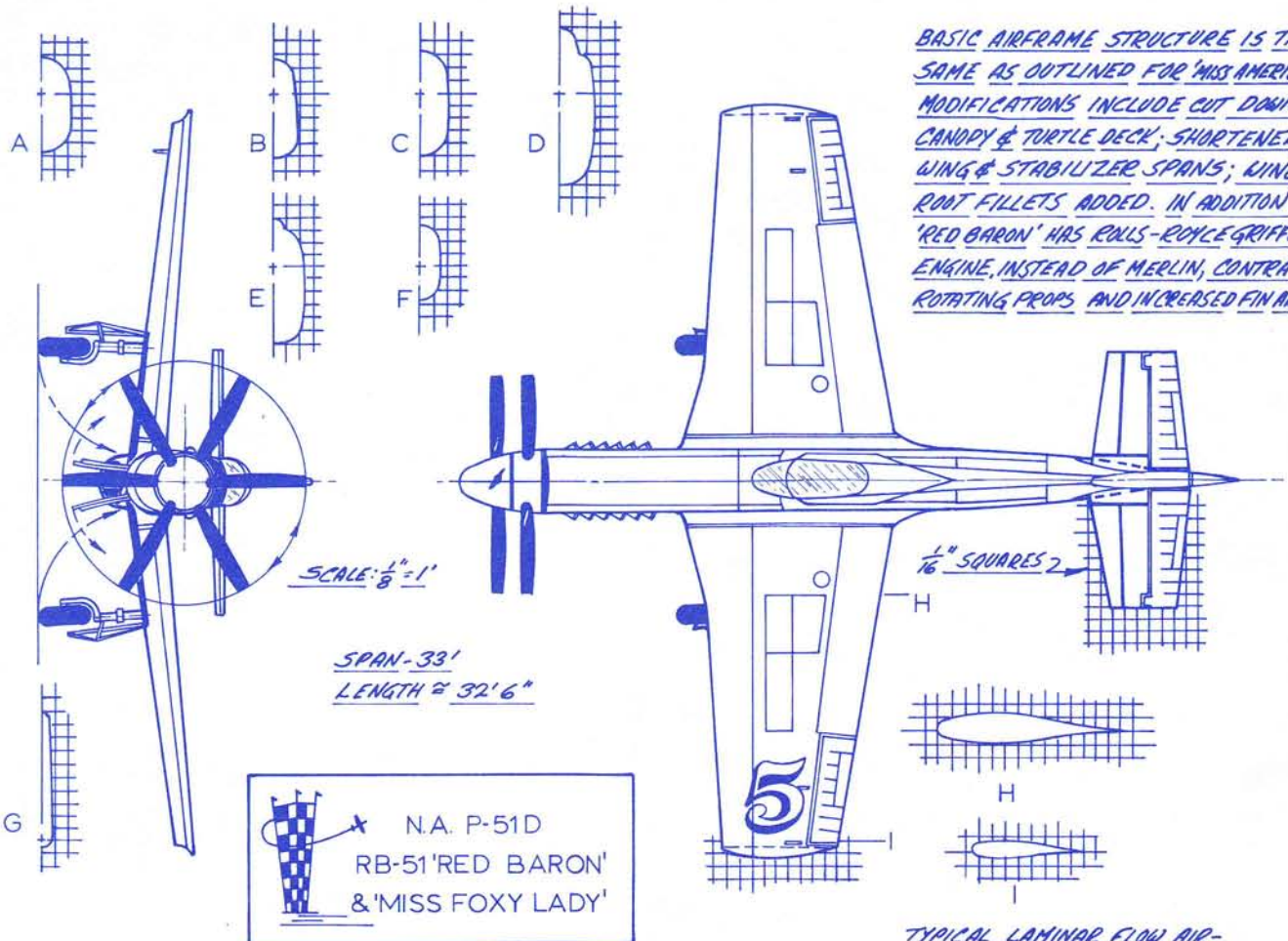
CHUCK HALL'S 1970 VERSION SHOWN BELOW



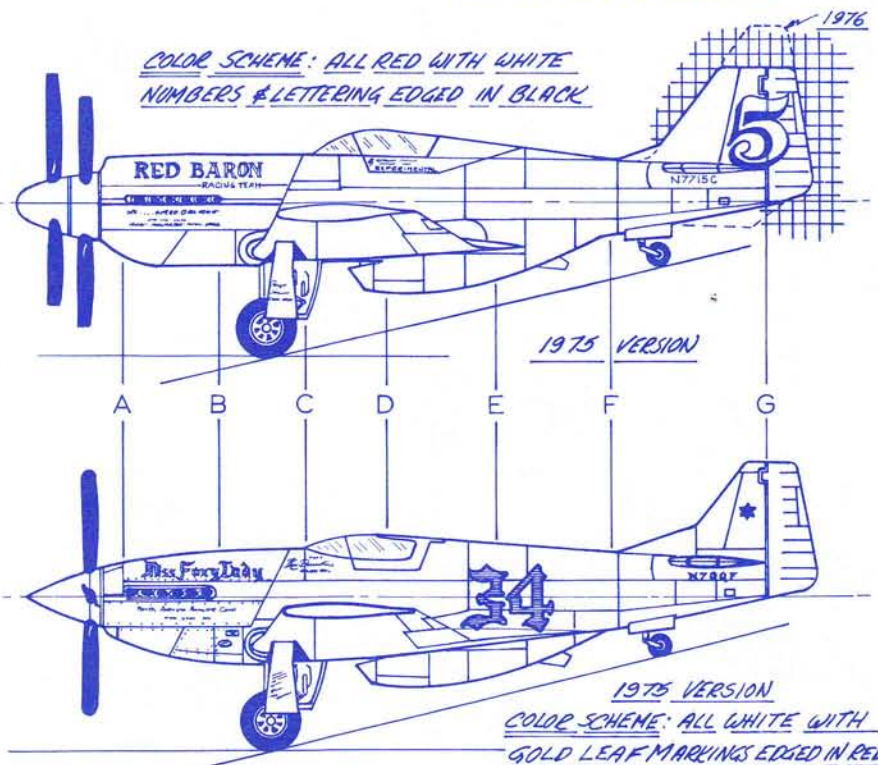
BLACK SCOOP - REST OF PLANE WHITE WITH ORANGE TRIM.

AIRCRAFT WAS PURCHASED AND FLOWN BY GUNTHER W. BALZ AT RENO IN 1971 AND 1972. HE WON THE UNLIMITED EVENT IN 1972 @ 416.19 MPH.

BASIC AIRFRAME STRUCTURE IS THE SAME AS OUTLINED FOR 'MISS AMERICA'. MODIFICATIONS INCLUDE CUT DOWN CANDY & TURTLE DECK; SHORTENED WING & STABILIZER SPANS; KING ROOT FILLETS ADDED. IN ADDITION 'RED BARON' HAS ROLLS-ROYCE GRIFFON ENGINE, INSTEAD OF MERLIN, CONTRA-ROTATING PROPS AND INCREASED FIN AREA.



THESE TWO HIGHLY MODIFIED P-51D 'MUSTANGS' ARE THE LATEST IN THE CONTINUING EFFORT TO GAIN EVER MORE PERFORMANCE OUT OF THE FAMOUS WORLD WAR II FIGHTER. THE PROTOTYPE 'MUSTANG' ROARED DOWN THE RUNWAY OCTOBER 26, 1940, OVER 35 YEARS AGO, ON ITS MAIDEN FLIGHT. ORDERED BY THE BRITISH FOR THE RAF, THE USAF WANTED NO PART OF IT AT THE TIME. LATER, THE P-51 WAS RATED AS THE BEST OF THE WORLD WAR II FIGHTERS AND "THE MOST AERODYNAMICALLY PERFECT PURSUIT PLANE IN EXISTANCE." THE MUSTANG RETURNED TO COMBAT DURING THE KOREAN WAR THEN STAYED ON TO SERVE IN MANY NATIONAL GUARD & RESERVE SQUADRONS THRU 1955. P-51'S WON ALL THE POST WAR BENDIX TROPHY RACES - 1946 THRU 1949



AT MOJAVE '75 ROY McCLAIN QUALIFIED #5 @ 401.52 M.P.H. KEN BURNSTINE #39, WAS 7TH @ 355.97 DUE TO CUT PALAN AT RENO 1975 Mc CLAIN FLEW TO 2ND PLACE @ 427.31 MPH IN CHAMPIONSHIP RACE. BURNSTINE (39) PLACED 4TH.

CONSTRUCTION: SAME AS GRUMMAN F8F-2 "BEARCAT" AS SHOWN ON PAGE OPPOSITE. HOWEVER THE ELECTRICAL AND HYDRAULIC SYSTEMS HAVE BEEN REMOVED TO ELIMINATE WEIGHT.

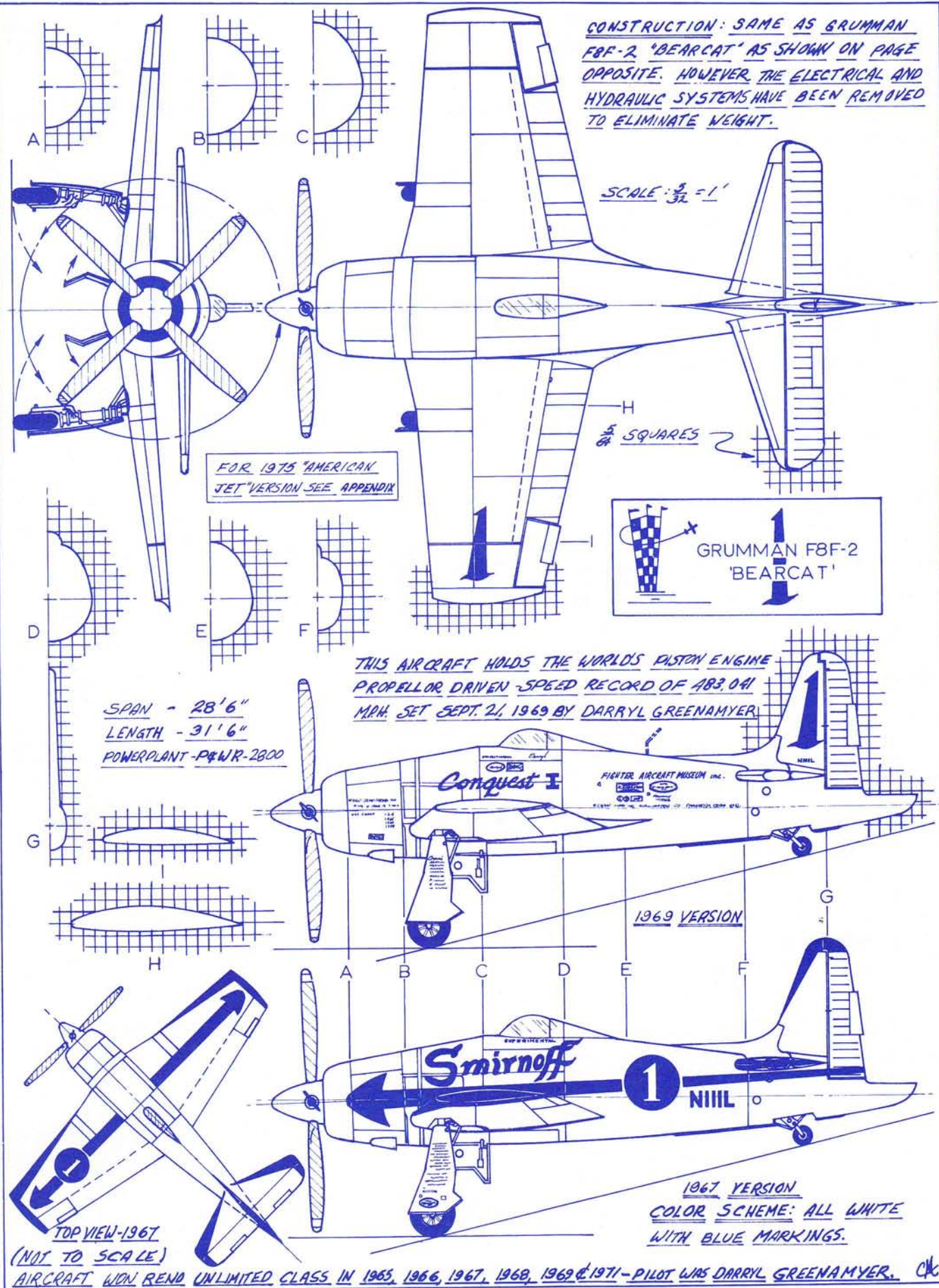
SCALE:  $\frac{5}{32} = 1'$



FOR 1975 "AMERICAN JET" VERSION SEE APPENDIX

THIS AIRCRAFT HOLDS THE WORLD'S PISTON ENGINE PROPELLOR DRIVEN SPEED RECORD OF 483.041 MPH. SET SEPT. 21, 1969 BY DARRYL GREENAMYER.

SPAN - 28'6"  
 LENGTH - 31'6"  
 POWERPLANT - P&WR-2800



TOP VIEW-1967  
 (NOT TO SCALE)

1967 VERSION  
 COLOR SCHEME: ALL WHITE  
 WITH BLUE MARKINGS.

AIRCRAFT WON REND UNLIMITED CLASS IN 1965, 1966, 1967, 1968, 1969 & 1971 - PILOT WAS DARRYL GREENAMYER. CLK

ENTIRE AIRCRAFT IS ALUMINUM WITH  
 FLUSH RIVETED STRESSED SKIN. RUDDER,  
 ELEVATORS AND AILERONS ARE FABRIC  
 COVERED. PROPELLOR AND SPINNER  
 ARE FROM A DOUGLAS DC-7

SCALE:  $\frac{5}{32} = 1'$

$\frac{5}{64}$  SQUARES 2

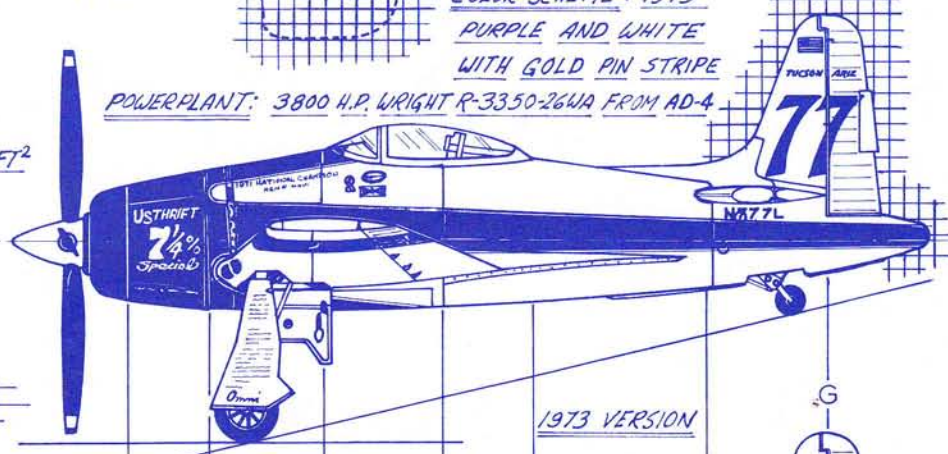
AS "AIRCRAFT CYLINDER INC. SPL."  
 CRAFT WON RENO '75 @ 429.92 MPH.



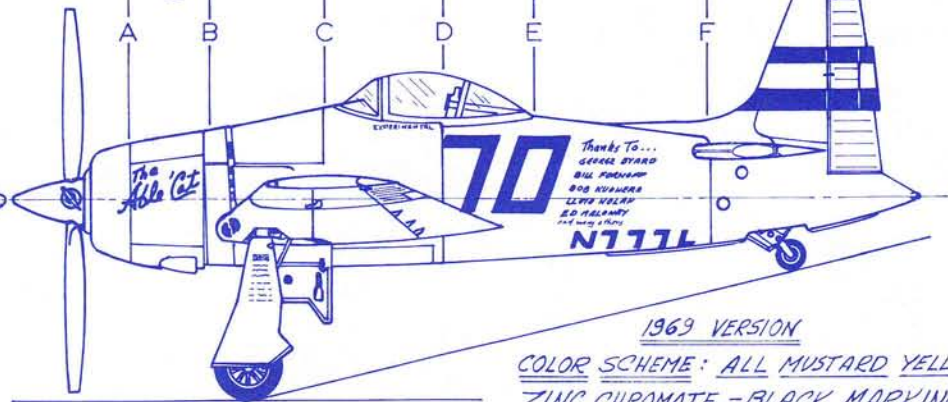
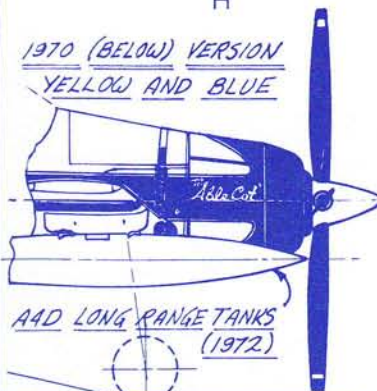
COLOR SCHEME: 1973  
 PURPLE AND WHITE  
 WITH GOLD PIN STRIPE

POWERPLANT: 3800 H.P. WRIGHT R-3350-26WA FROM AD-4

SPAN  $\approx$  30'  
 LENGTH - 28'3"  
 WING AREA - 244 FT<sup>2</sup>  
 HEIGHT - 6'8"

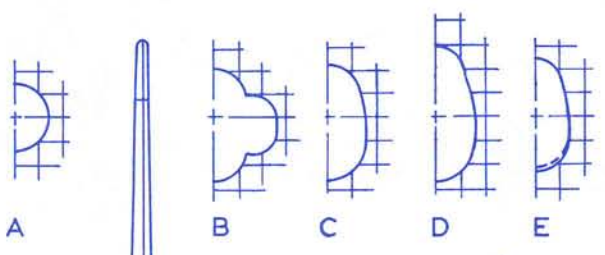


1970 (BELOW) VERSION  
 YELLOW AND BLUE

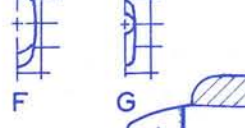


OWNED & FLOWN BY LYLE SHELTON TO UNLIMITED CLASS VICTORY AT 428.155 MPH. - RENO 1973. *ck*



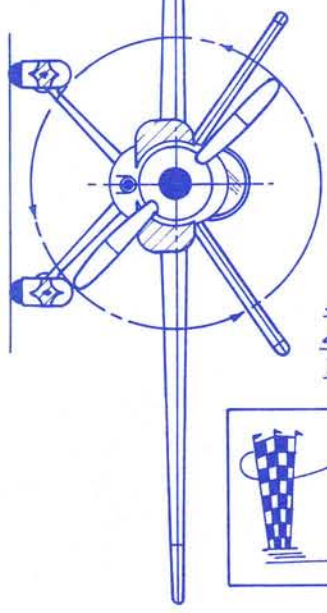


SCALE:  $\frac{1}{4}'' = 1'$



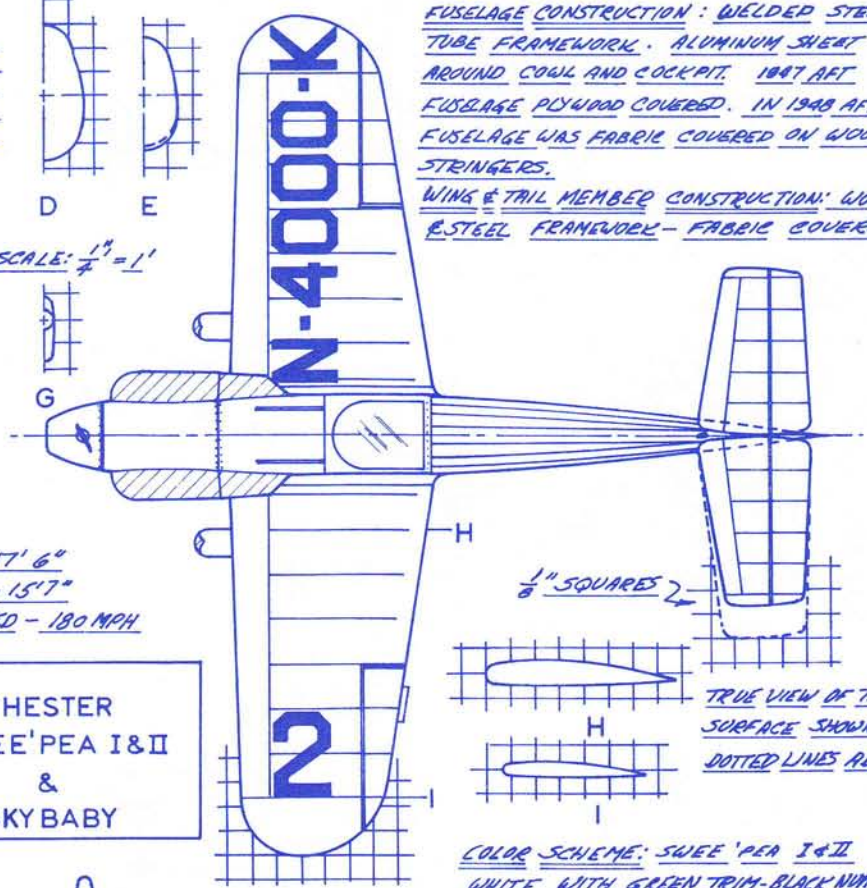
FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK. ALUMINUM SHEET AROUND COUL AND COCKPIT. 1947 AFT FUSELAGE PLYWOOD COVERED. IN 1948 AFT FUSELAGE WAS FABRIC COVERED ON WOOD STRINGERS.

WING & TAIL MEMBER CONSTRUCTION: WOOD & STEEL FRAMEWORK - FABRIC COVERED

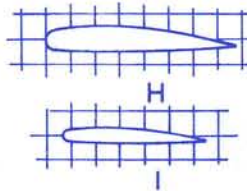


SPAN - 17' 6"  
LENGTH - 15' 7"  
TOP SPEED - 180 MPH

CHESTER  
SWEE'PEA I&II  
&  
SKYBABY



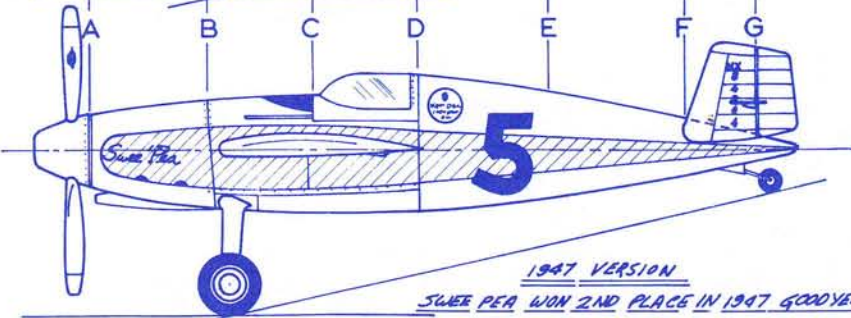
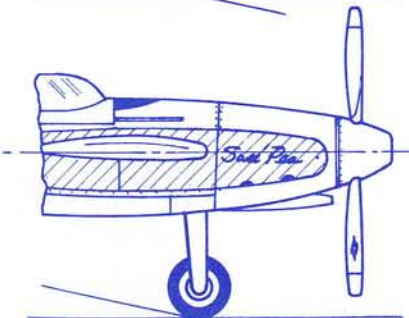
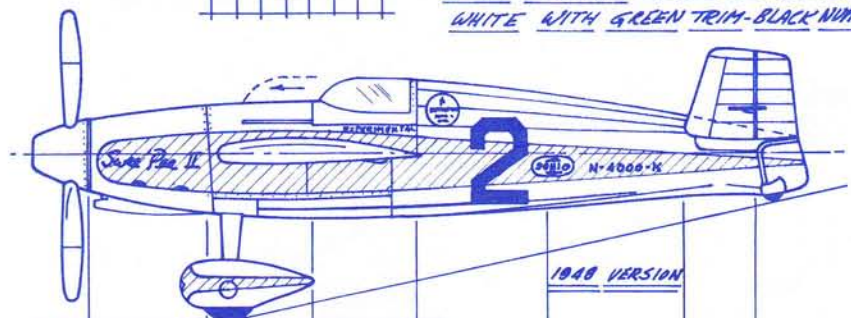
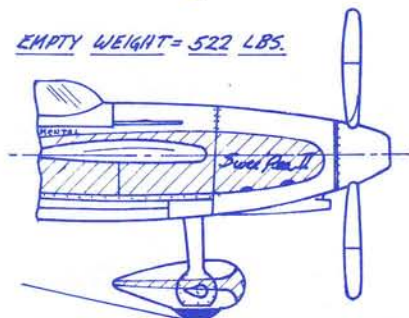
$\frac{1}{8}''$  SQUARES



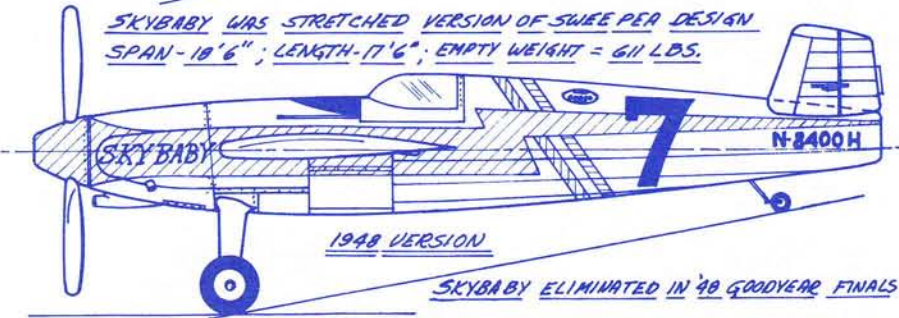
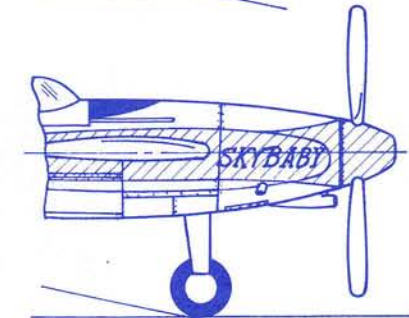
TRUE VIEW OF TAIL SURFACE SHOWN BY DOTTED LINES ABOVE

COLOR SCHEME: SWEE'PEA I&II WHITE WITH GREEN TRIM-BLACK NUMBERS

EMPTY WEIGHT = 522 LBS.



1948 VERSION



1947 VERSION

SWEE'PEA WON 2ND PLACE IN 1947 GOODYEAR

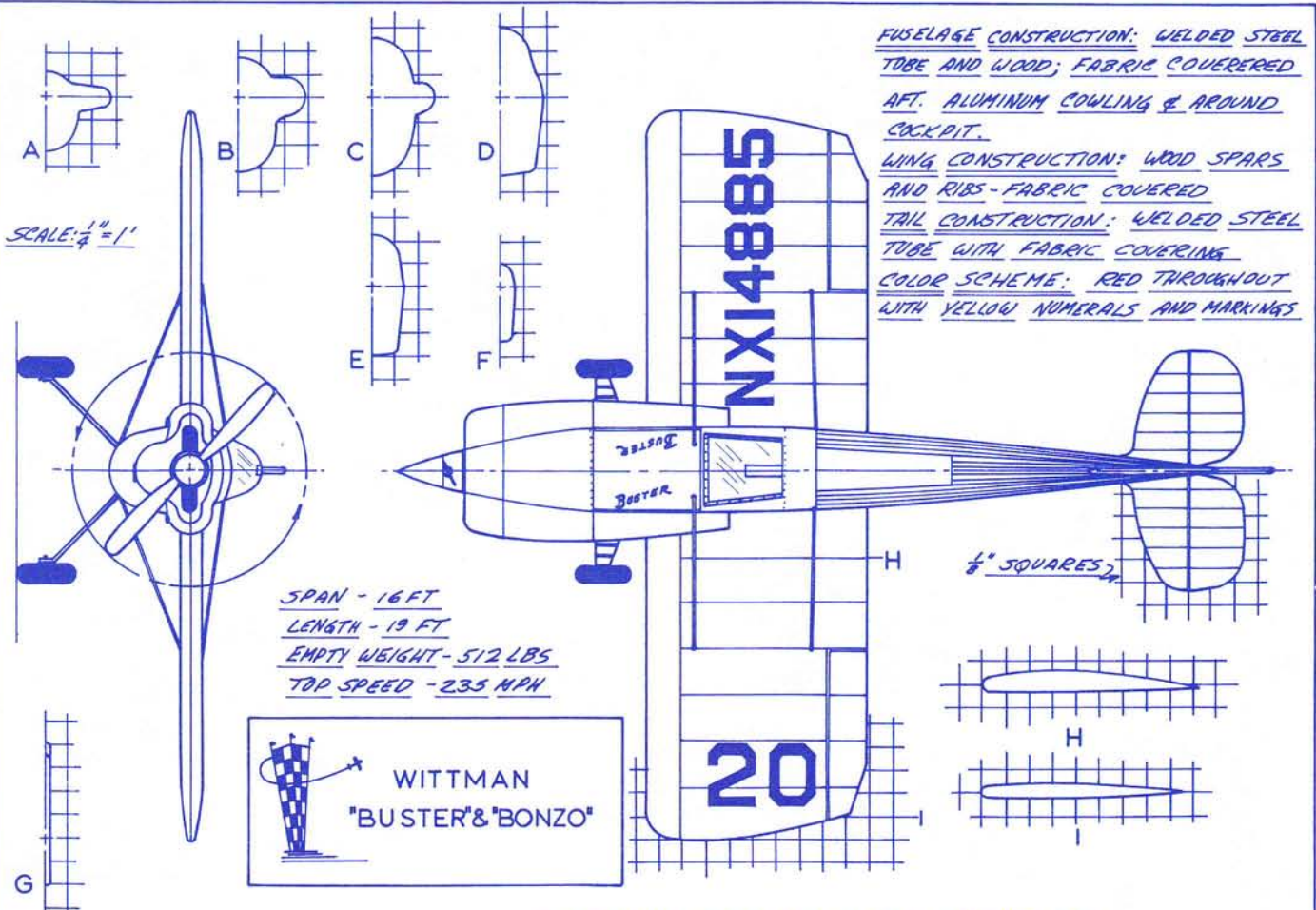
SKYBABY WAS STRETCHED VERSION OF SWEE'PEA DESIGN  
SPAN - 18' 6"; LENGTH - 17' 6"; EMPTY WEIGHT = 611 LBS.

1948 VERSION

SKYBABY ELIMINATED IN '48 GOODYEAR FINALS

'42 SWEE'PEA II TOOK 3RD IN '48 GOODYEAR - AFT CHESTER-PILOT

VIEWS ABOVE SHOW INNER SIDE OF L.G.

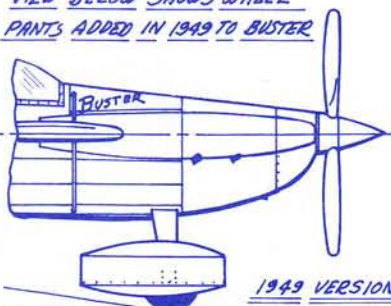


FUSELAGE CONSTRUCTION: WELDED STEEL TUBE AND WOOD; FABRIC COVERED AFT. ALUMINUM COUPLING & AROUND COCKPIT.  
WING CONSTRUCTION: WOOD SPARS AND RIBS - FABRIC COVERED  
TAIL CONSTRUCTION: WELDED STEEL TUBE WITH FABRIC COVERING  
COLOR SCHEME: RED THROUGHOUT WITH YELLOW NUMERALS AND MARKINGS

SPAN - 16 FT  
 LENGTH - 19 FT  
 EMPTY WEIGHT - 512 LBS  
 TOP SPEED - 235 MPH

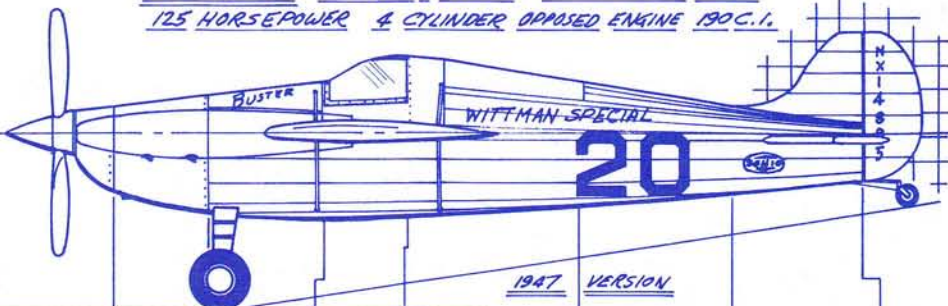


VIEW BELOW SHOWS WHEEL PANTS ADDED IN 1949 TO BUSTER

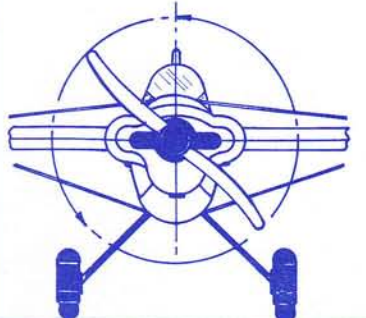


1949 VERSION

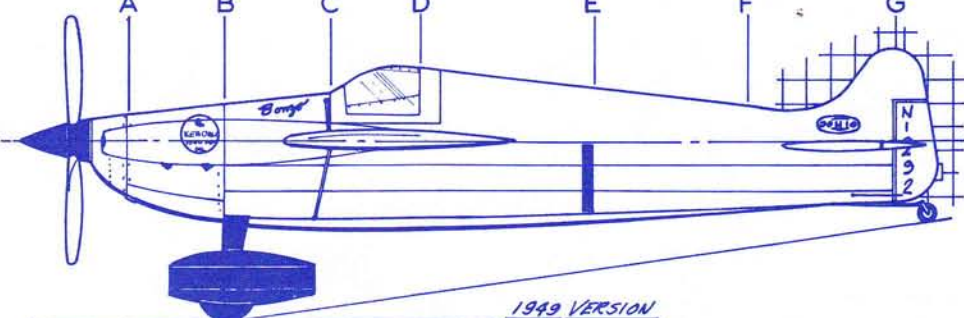
POWERPLANT - (BUSTER & BONZO) CONTINENTAL C-85 125 HORSEPOWER 4 CYLINDER OPPOSED ENGINE 190 C.I.



1947 VERSION



ABOVE VIEW SHOWING WITTMAN SCIMITAR PROP WHICH CHANGED PITCH IN FLIGHT



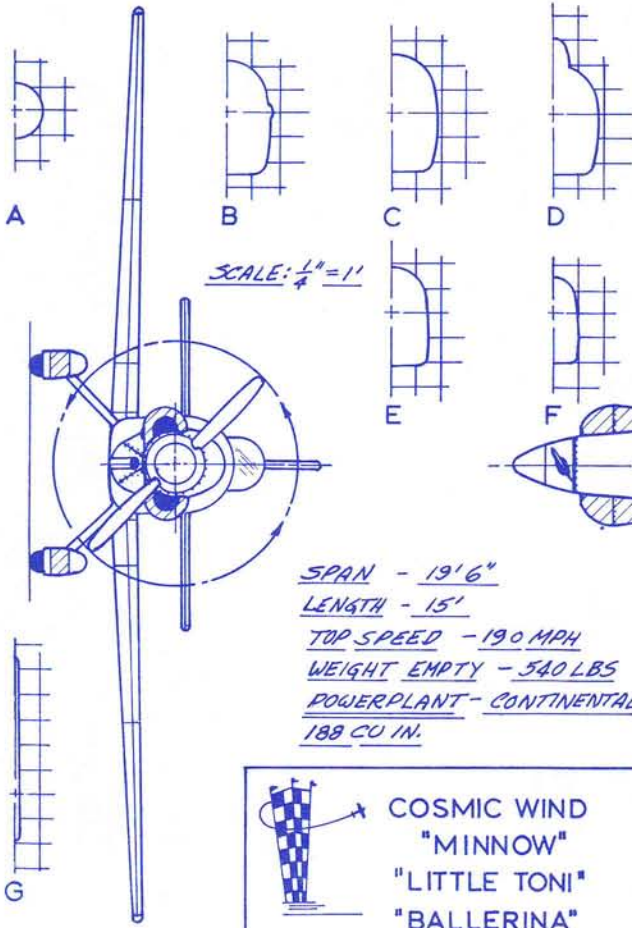
1949 VERSION

ABOVE VIEW SHOWS BONZO - SISTER SHIP TO BUSTER. SPAN - 15'4" LENGTH - 19' EMPTY WEIGHT - 508 LBS. TOP SPEED - 235 MPH  
COLOR SCHEME: YELLOW WITH RED NUMERALS & MARKINGS

FLOWN BY WILLIAM BRENNAN BUSTER #20 WON 1947 AND 1949 GOODYEAR TROPHY RACES, ALSO THE 1948 CONTINENTAL TROPHY RACE. AIRCRAFT NOW MAY BE SEEN IN THE SMITHSONIAN INSTITUTION HALL OF FAMOUS AIRCRAFT. BONZO, FLOWN BY OWNER, DESIGNER STEVE WITTMAN WON THE CONTINENTAL TROPHY IN 1949, 1950 & 1952. IN 1948 WITTMAN PLACED SECOND IN GOODYEAR TROPHY RACE AT 168.69 MILES PER HOUR.

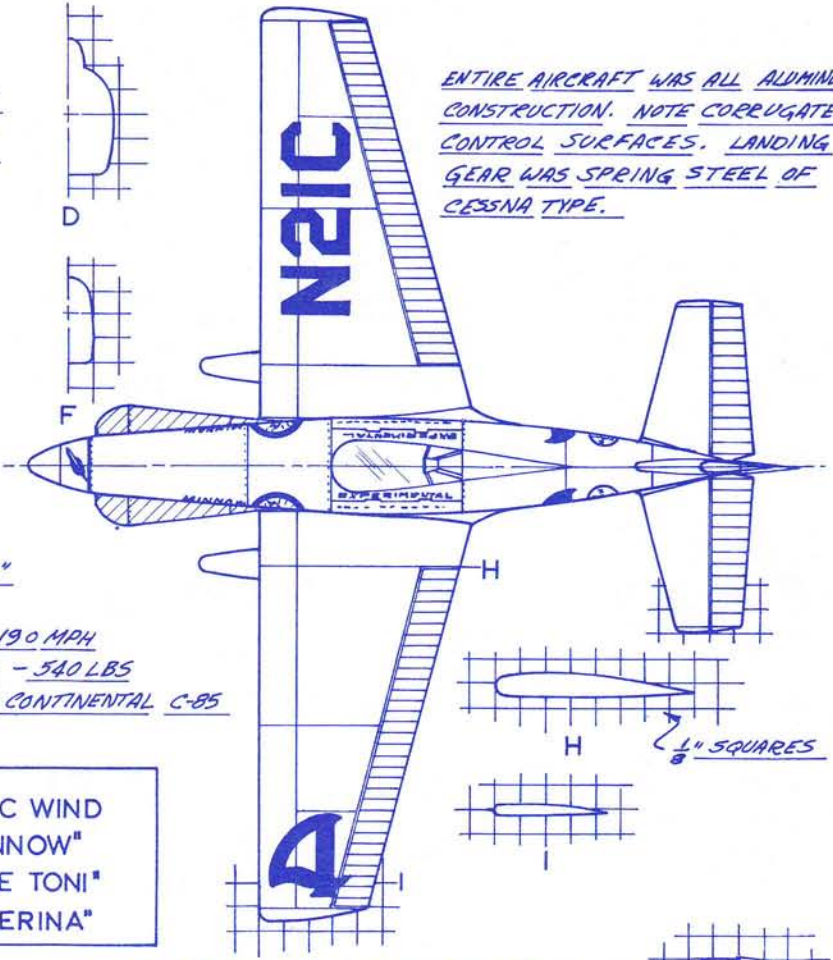
SM

ENTIRE AIRCRAFT WAS ALL ALUMINUM CONSTRUCTION. NOTE CORRUGATED CONTROL SURFACES. LANDING GEAR WAS SPRING STEEL OF CESSNA TYPE.

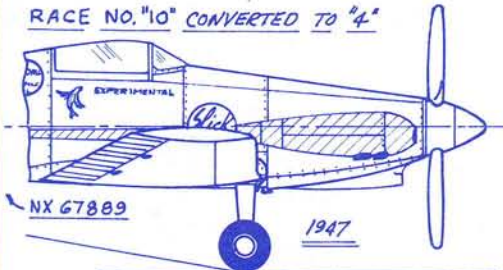


SPAN - 19' 6"  
 LENGTH - 15'  
 TOP SPEED - 190 MPH  
 WEIGHT EMPTY - 540 LBS  
 POWERPLANT - CONTINENTAL C-85  
 188 CU IN.

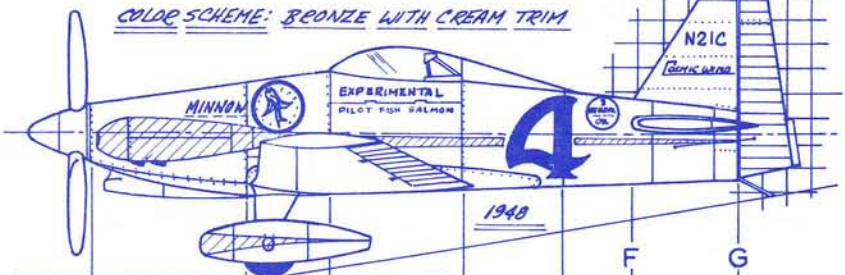
COSMIC WIND  
 "MINNOW"  
 "LITTLE TONI"  
 "BALLERINA"



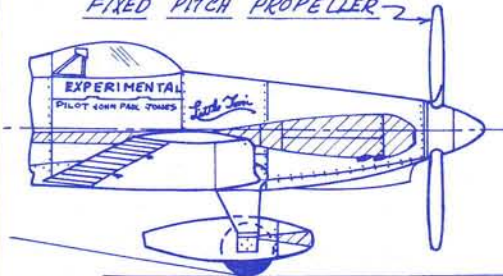
RACE NO. "10" CONVERTED TO "4"



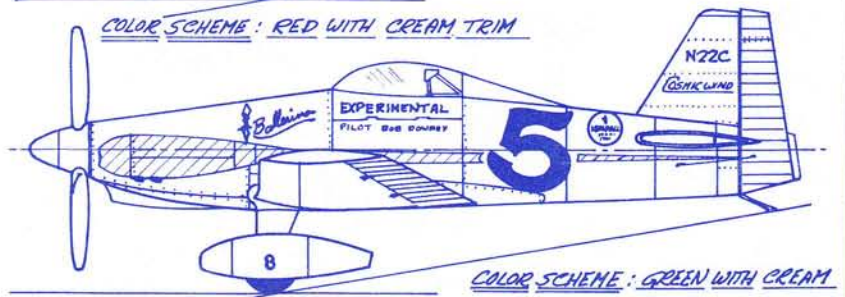
COLOR SCHEME: BRONZE WITH CREAM TRIM



FIXED PITCH PROPELLER

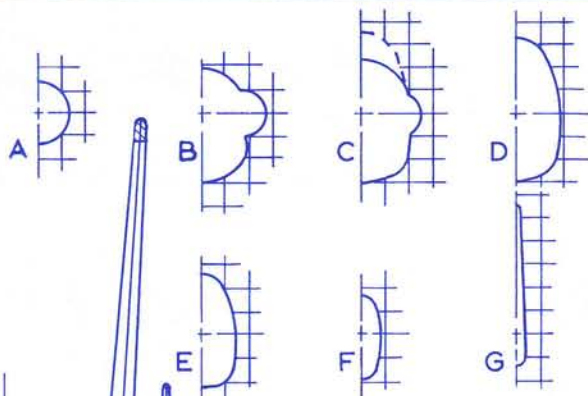


COLOR SCHEME: RED WITH CREAM TRIM



COLOR SCHEME: GREEN WITH CREAM TRIM.

NUMBER "4" FLOWN BY HERMAN "FISH" SALMON TO 1ST PLACE IN 1948 GOODYEAR TROPHY RACE. NUMBER "3" WAS 5TH.

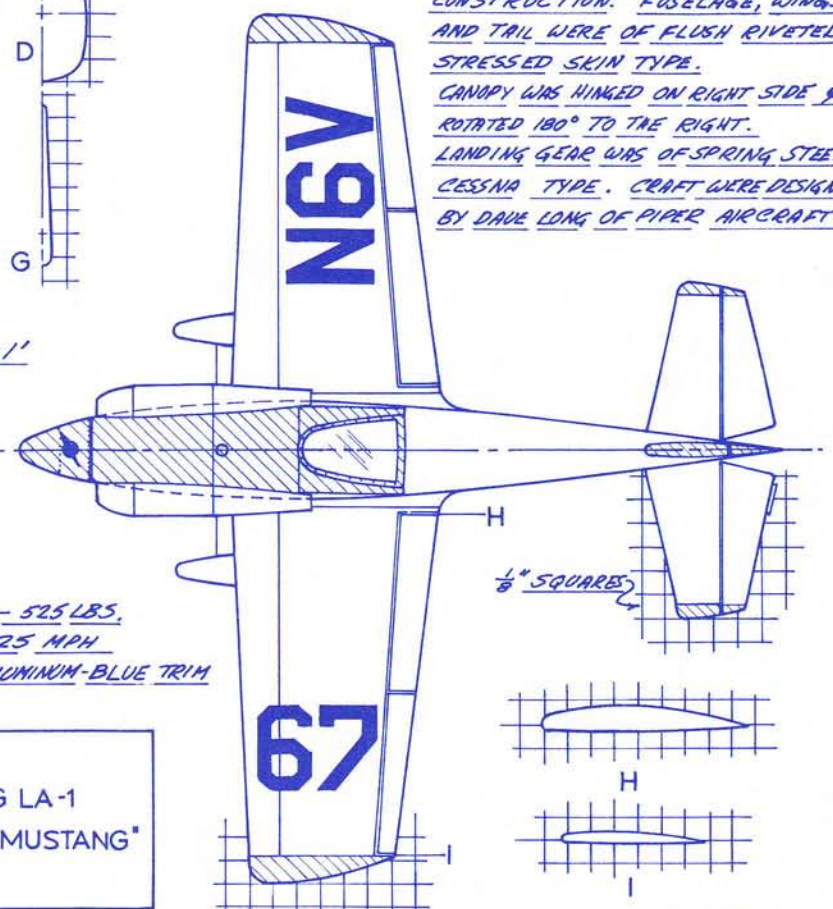


SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 18'5"  
 LENGTH - 16'  
 EMPTY WEIGHT - 525 LBS.  
 TOP SPEED - 225 MPH  
 COLOR SCHEME: ALUMINUM-BLUE TRIM



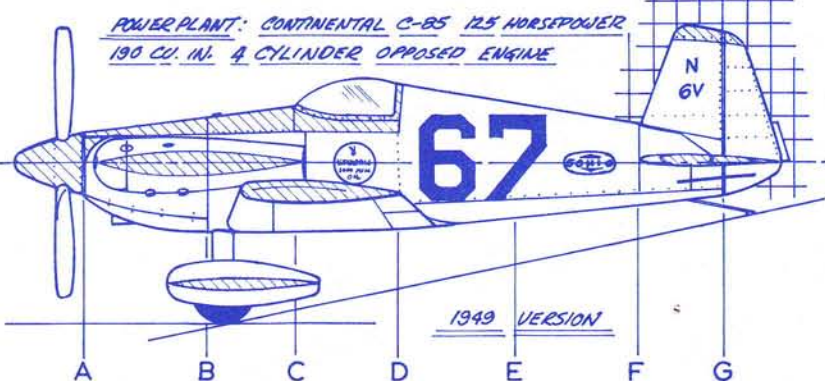
ENTIRE AIRCRAFT WAS ALL ALUMINUM CONSTRUCTION. FUSELAGE, WINGS AND TAIL WERE OF FLUSH RIVETED STRESSED SKIN TYPE.  
 CANOPY WAS HINGED ON RIGHT SIDE & ROTATED 180° TO THE RIGHT.  
 LANDING GEAR WAS OF SPRING STEEL CESSNA TYPE. CRAFT WERE DESIGNED BY DAVE LONG OF PIPER AIRCRAFT



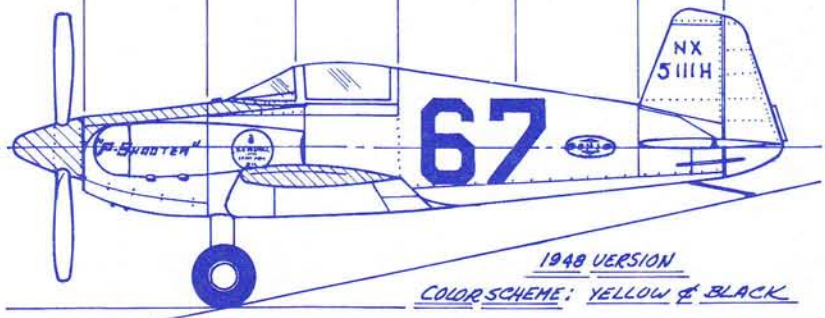
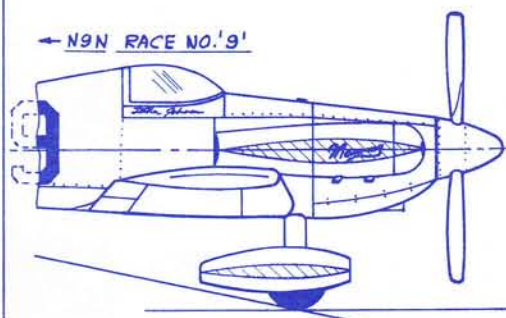
VIEW BELOW SHOWS INBOARD VIEW OF LANDING GEAR STRUT



POWER PLANT: CONTINENTAL C-85 125 HORSEPOWER  
 190 CU. IN. 4 CYLINDER OPPOSED ENGINE

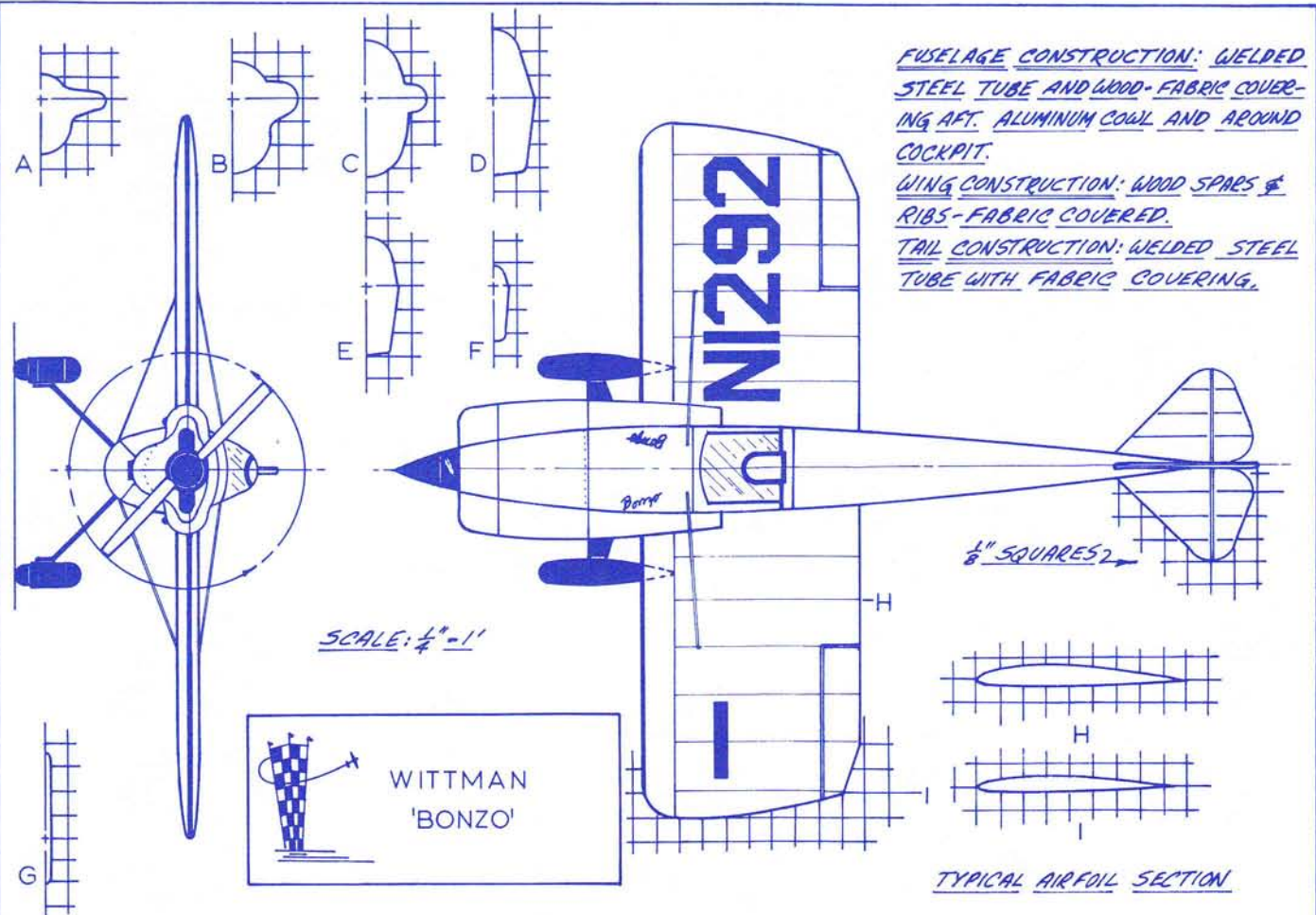


← N9N RACE NO. '9'



LONG-JOHNSON "MAMMY" A SISTER SHIP OF "P-SHOOTER" FLOWN BY LUTHER JOHNSON. NOTE DIFFERENCE IN WHEEL PAINT SHAPE. JOHNSON ALSO OWNED "67" "P-SHOOTER"

AIRCRAFT HAS BEEN RACED FREQUENTLY SINCE BEING BUILT IN 1947. SHIP WON 4TH PLACE IN 1949 CONTINENTAL MOTORS RACE, FLOWN BY DAVE LONG AT AN AVERAGE SPEED OF 166.763 MILES PER HOUR. - ALSO 8TH PLACE IN 1949 GOODYEAR AT 167.308 MPH

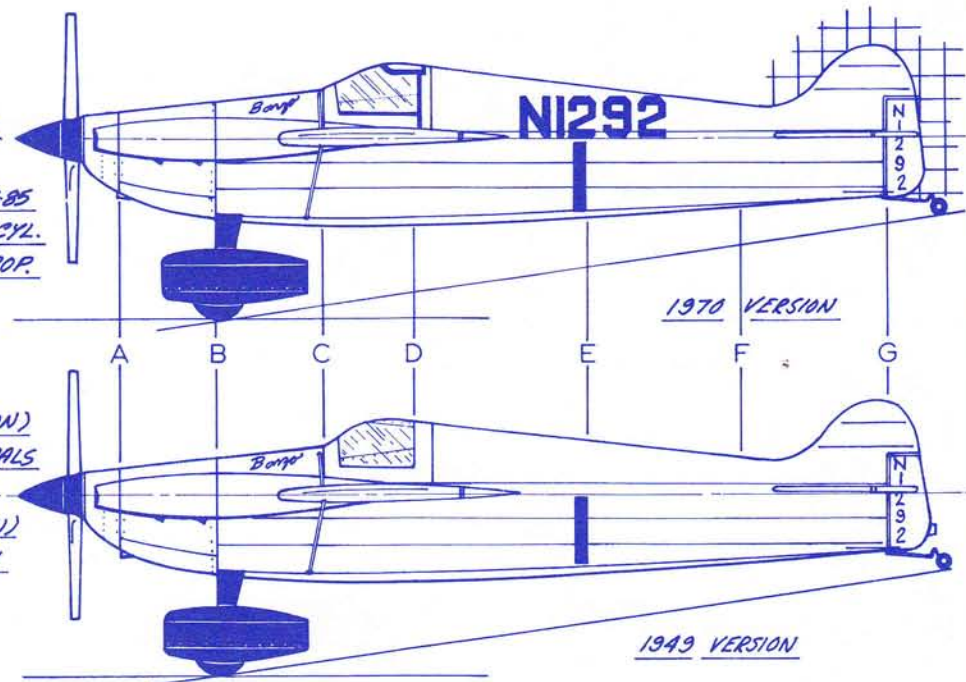


LENGTH - 19'  
SPAN - 15' 4"  
EMPTY WEIGHT - 508 LBS.  
TOP SPEED - 240 MPH.

POWERPLANT: CONTINENTAL C-85  
125 HORSEPOWER - 190 C.I. - 4 CYL.  
IN 1948 CRAFT HAD SCIMITAR PROP.

COLOR SCHEME: (1949 VERSION)  
ALL YELLOW WITH RED NUMERALS  
AND MARKINGS.

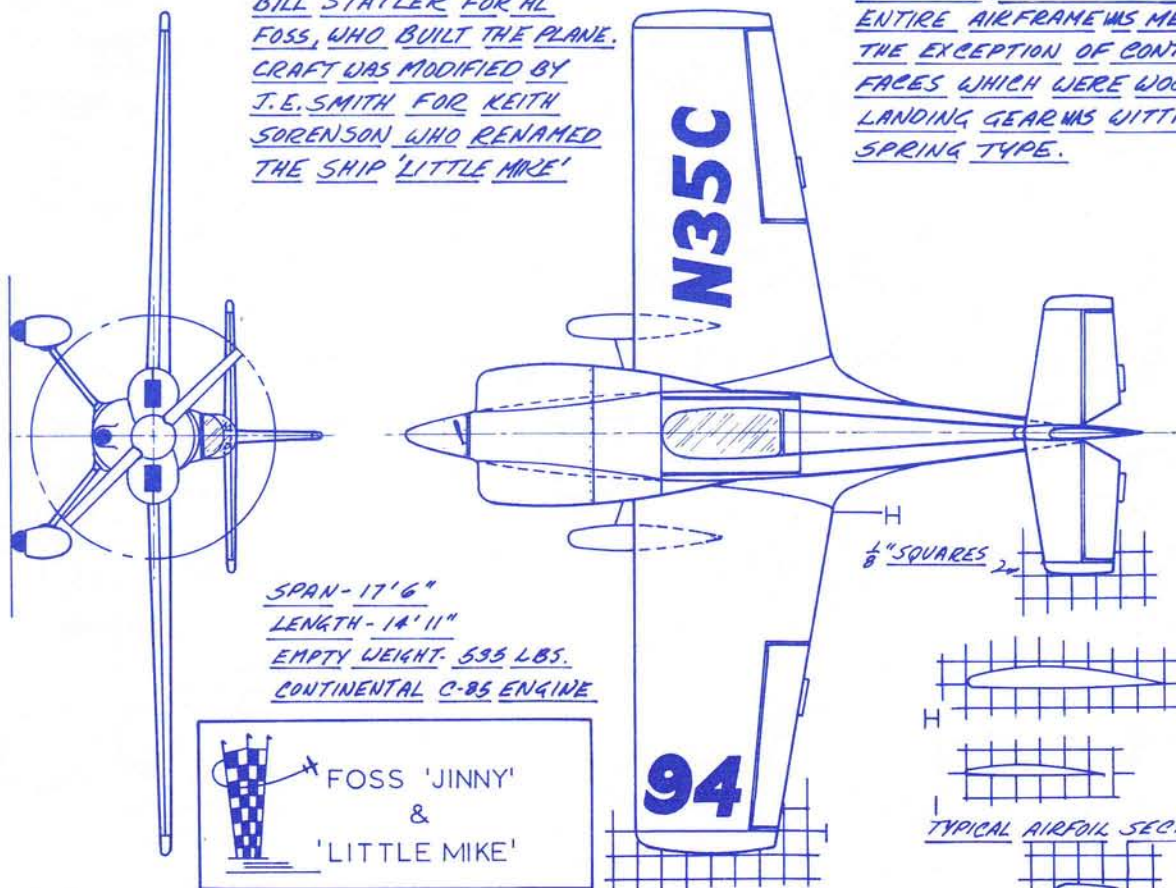
COLOR SCHEME: (1970 VERSION)  
ALL YELLOW WITH BLUE TRIM



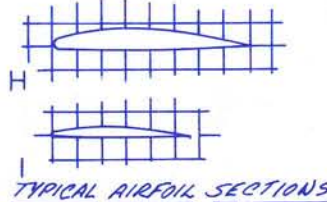
'BONZO', A SISTER SHIP OF WITTMAN'S OLD 'BUSTER' WAS BUILT AND FLOWN BY STEVE WITTMAN FOR THE 1948 GOODYEAR TROPHY RACE, PLACING 2ND AT 168.69 MPH. AMONG OTHER RACES, CRAFT LATER WON 1949, '50 & '52 CONTINENTAL TROPHY RACE; 1950 & '51 READING RACES; 1956 & '57 OSHKOSH RACES; 2ND IN 1964 & '66 CHAMPIONSHIP FORMULA 1 RACES AT RENO.

'JINNY' WAS DESIGNED BY  
BILL STATLER FOR AL  
FOSS, WHO BUILT THE PLANE.  
CRAFT WAS MODIFIED BY  
J. E. SMITH FOR KEITH  
SORENSEN WHO RENAMED  
THE SHIP 'LITTLE MIKE'

AIRCRAFT CONSTRUCTION:  
ENTIRE AIRFRAME WAS METAL WITH  
THE EXCEPTION OF CONTROL SUR-  
FACES WHICH WERE WOOD FRAMED.  
LANDING GEAR WAS WITTMAN  
SPRING TYPE.

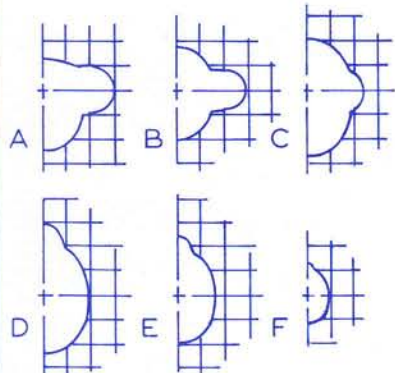


SPAN - 17' 6"  
LENGTH - 14' 11"  
EMPTY WEIGHT - 535 LBS.  
CONTINENTAL C-85 ENGINE

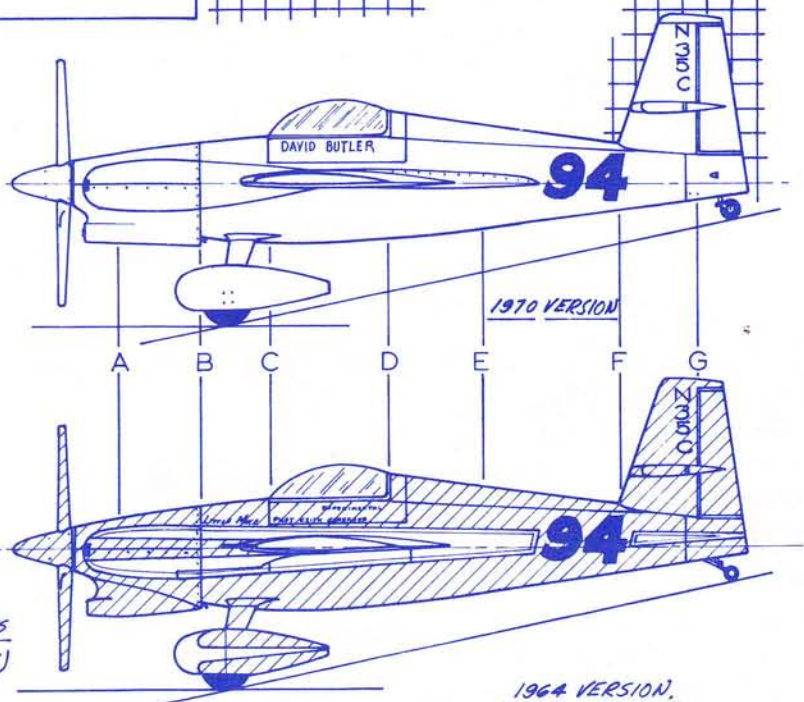


TYPICAL AIRFOIL SECTIONS

COLOR SCHEME: (1970) ALL  
WHITE WITH GOLD NUMERALS  
EDGED IN BLACK.

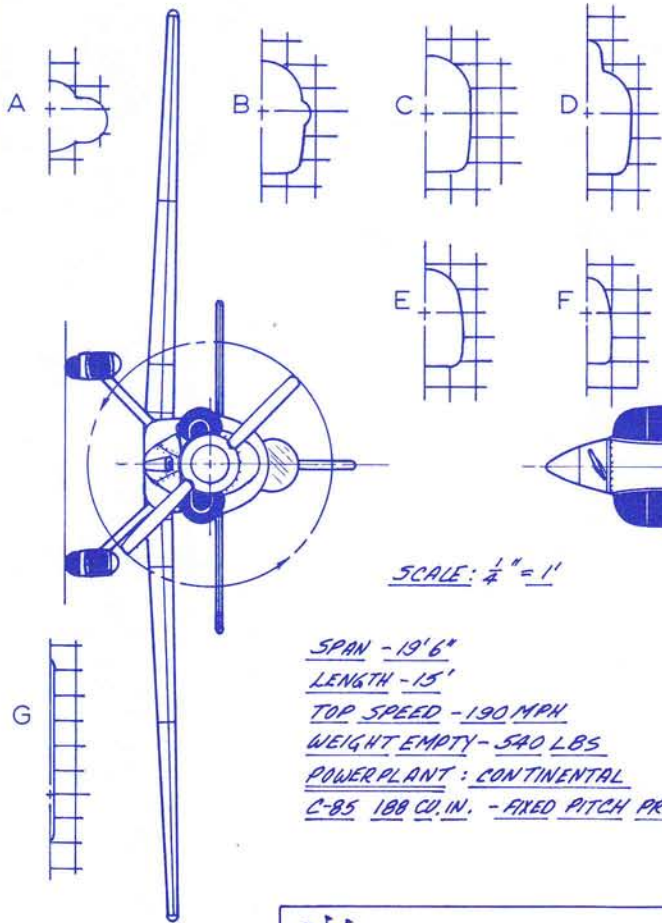


COLOR SCHEME: NAVY  
BLUE WITH WHITE STRIPES  
AND NUMERALS (SHOWN BLACK)  
EDGED IN GOLD.



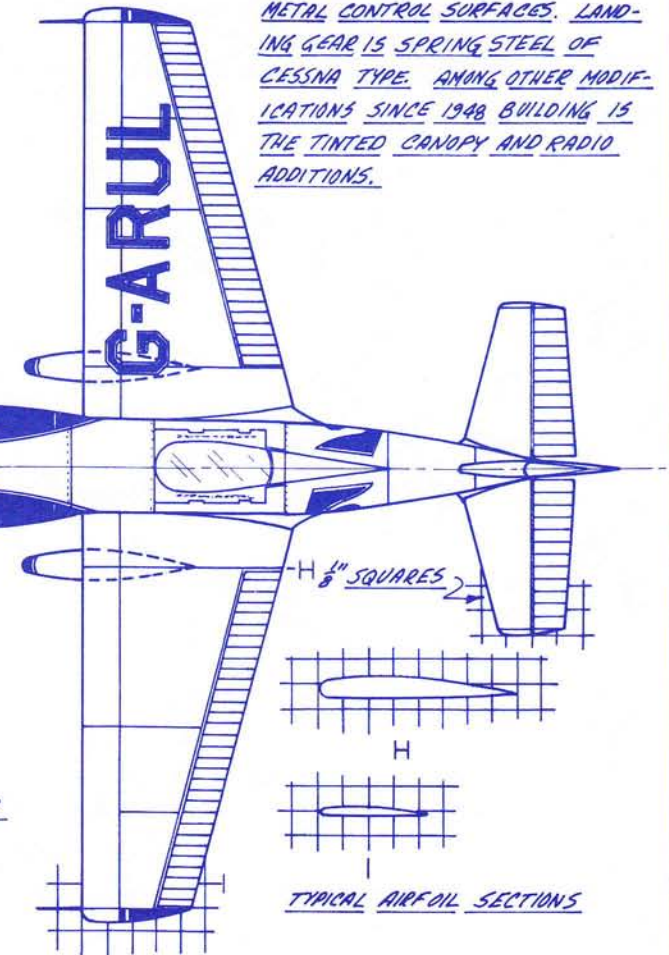
'JINNY' WAS BUILT IN 1949 FOR THE GOODYEAR TROPHY RACES AT THE CLEVELAND NATIONAL AIR RACES FOR THAT YEAR. SHE FAILED TO FINISH THIS RACE BUT KEITH SORENSON TOOK A 3RD WITH HER (NOW A HIM & RENAMED 'LITTLE MIKE') FOR 1951 DETROIT CONTINENTAL TROPHY. AT RENO IN 1964 SHE WAS QUALIFIED AT 172.38 MPH.; IN 1970 & 71 SHE WAS RACED AT RENO BY DAVID BUTLER.

ENTIRE AIRCRAFT IS ALL ALUMINUM CONSTRUCTION. NOTE CORRUGATED METAL CONTROL SURFACES. LANDING GEAR IS SPRING STEEL OF CESSNA TYPE. AMONG OTHER MODIFICATIONS SINCE 1948 BUILDING IS THE TINTED CANOPY AND RADIO ADDITIONS.



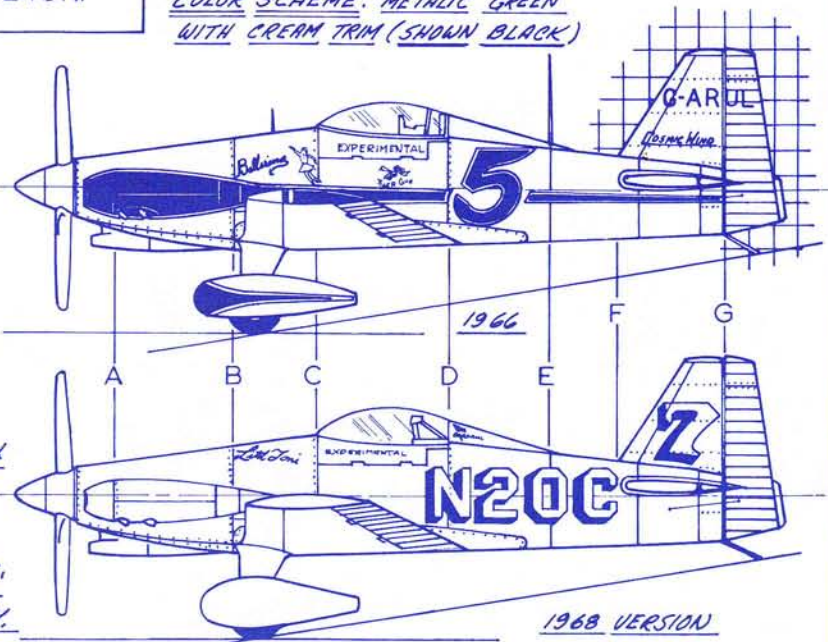
SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 19'6"  
 LENGTH - 15'  
 TOP SPEED - 190 MPH  
 WEIGHT EMPTY - 540 LBS  
 POWERPLANT: CONTINENTAL  
 C-85 188 CU. IN. - FIXED PITCH PROP.

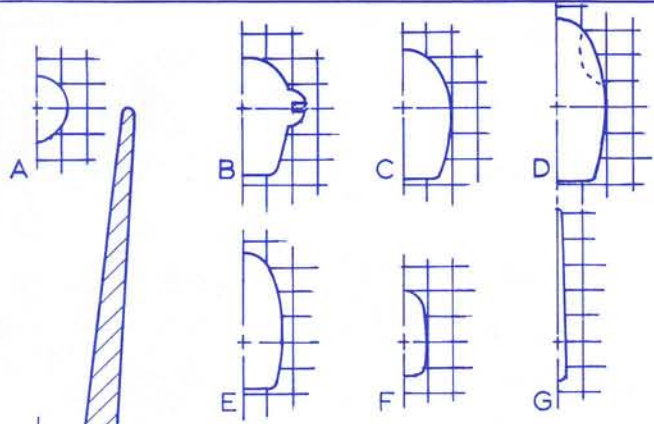


COLOR SCHEME: METALIC GREEN WITH CREAM TRIM (SHOWN BLACK)

THE 'COSMIC WIND' SERIES OF RACERS WERE DEVELOPED AND BUILT BY TONY LEVIER AND ASSOCIATES FOR ENTRY IN THE GOODYEAR TROPHY RACES OF THE LATE 1940'S. DUE TO THEIR EXCELLENCE IN CONSTRUCTION & DESIGN THEY HAVE CONTINUED TO BE FLOWN IN RACES BOTH IN ENGLAND AND THE UNITED STATES SINCE THEN. 'BALLERINA' CRASHED IN ENGLAND IN 1966 HOWEVER HAS SINCE BEEN REBUILT & RACED IN 1973 BY WM. WALKER. THE CORRUGATED SURFACES (AS SHOWN) WERE REPLACED WITH SMOOTH METAL. 'LITTLE TONI' (THE 'FRENCH QUARTER SPECIAL' IN 1965) WAS RACED IN 1968 BY ROY BERRY. AIRCRAFT IS NOW LICENSED G-AYRJ IN ENGLAND.



COLOR SCHEME: METALIC BLUE WITH WHITE NUMERALS EDGED IN BLACK.



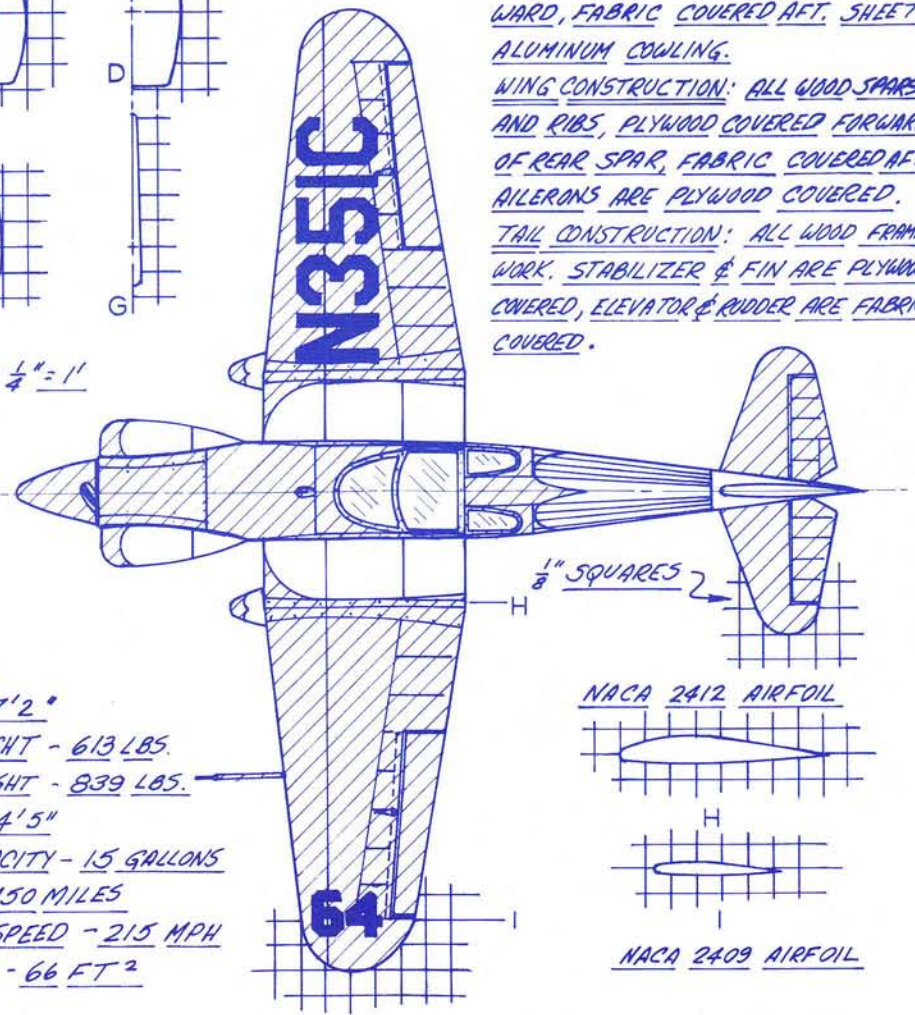
SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 20'  
 LENGTH - 17'2"  
 EMPTY WEIGHT - 613 LBS.  
 GROSS WEIGHT - 839 LBS.  
 HEIGHT - 4'5"  
 FUEL CAPACITY - 15 GALLONS  
 RANGE - 450 MILES  
 MAXIMUM SPEED - 215 MPH  
 WING AREA - 66 FT<sup>2</sup>

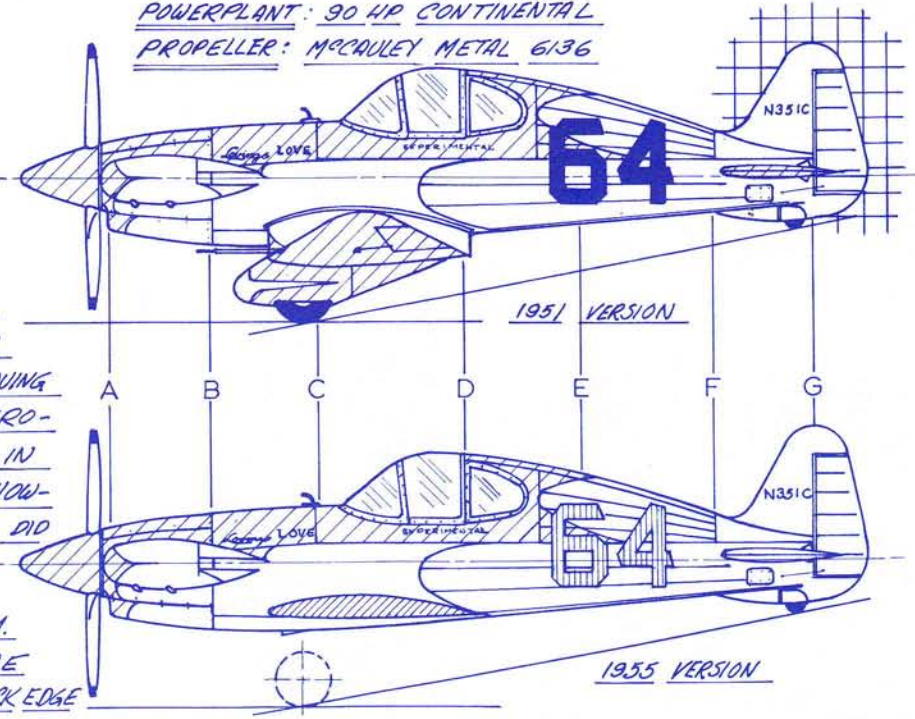
FUSELAGE CONSTRUCTION: ALL WOOD FRAMEWORK, PLYWOOD COVERED FORWARD, FABRIC COVERED AFT. SHEET ALUMINUM COWLING.

WING CONSTRUCTION: ALL WOOD SPARS AND RIBS, PLYWOOD COVERED FORWARD OF REAR SPAR, FABRIC COVERED AFT. AILERONS ARE PLYWOOD COVERED.

TAIL CONSTRUCTION: ALL WOOD FRAMEWORK. STABILIZER & FIN ARE PLYWOOD COVERED, ELEVATOR & RUDDER ARE FABRIC COVERED.



POWERPLANT: 90 HP CONTINENTAL  
PROPELLER: McCAULEY METAL 6136



THE LOVING-WAYNE WR-1 WAS DESIGNED AND BUILT UNDER THE SUPERVISION OF NEIL LOVING BY THE WAYNE SCHOOL OF AERONAUTICS. CRAFT WAS ENTERED IN 1951 GOODYEAR TROPHY RACE-HOWEVER PROBLEMS WITH SPINNER DID NOT ALLOW IT TO RACE.

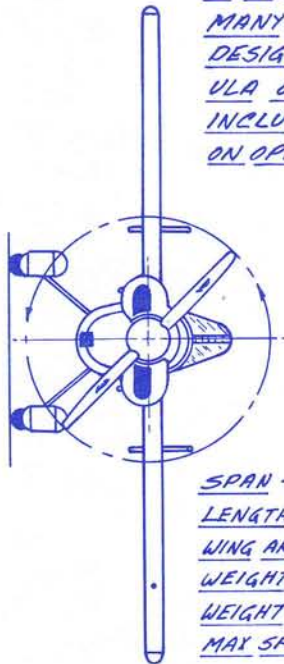
COLOR SCHEME: MAROON & CREAM.  
RACE NUMBERS 1951 VERSION WERE BLACK, 1955 VERSION-SILVER-BLACK EDGE

THIS AIRCRAFT IS NOW PRESERVED IN THE EXPERIMENTAL AIRCRAFT ASSOCIATION MUSEUM.

CH

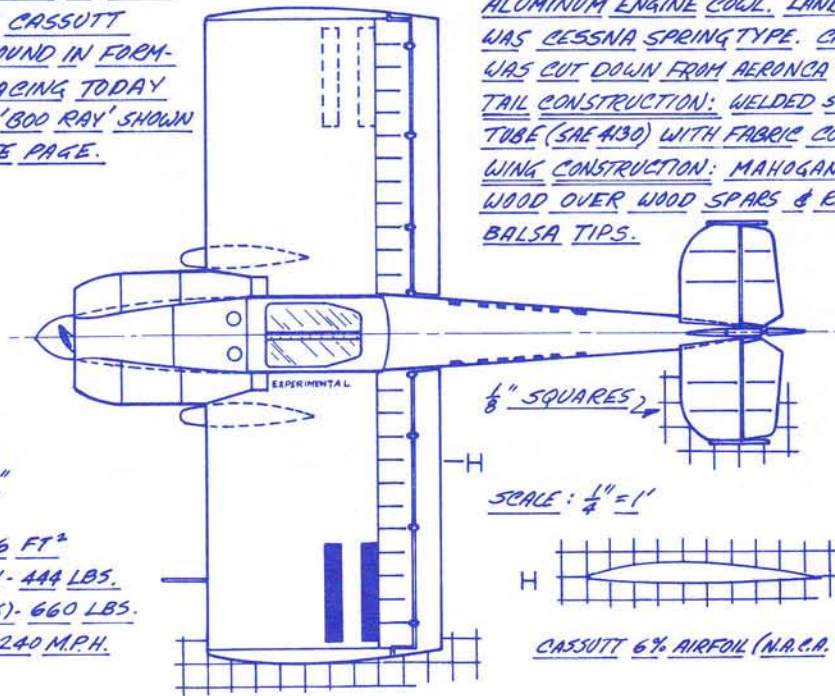


THIS FINE CASSUTT DESIGN IS AN ANCESTOR OF THE MANY FINE CASSUTT DESIGNS FOUND IN FORMULA ONE RACING TODAY INCLUDING 'BOO RAY' SHOWN ON OPPOSITE PAGE.



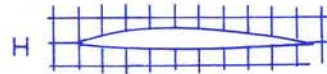
SPAN - 13' 8"  
LENGTH - 16'  
WING AREA - 66 FT<sup>2</sup>  
WEIGHT EMPTY - 444 LBS.  
WEIGHT (GROSS) - 660 LBS.  
MAX SPEED - 240 M.P.H.

FUSELAGE CONSTRUCTION: SAE #130 STEEL TUBING WELDED IN FRAMEWORK AND FABRIC COVERED AFT OF ALUMINUM ENGINE COWL. LANDING GEAR WAS CESSNA SPRINGTYPE. CANOPY WAS CUT DOWN FROM AERONCA UNIT. TAIL CONSTRUCTION: WELDED STEEL TUBE (SAE #130) WITH FABRIC COVERING. WING CONSTRUCTION: MAHOGANY PLY-WOOD OVER WOOD SPARS & RIBS WITH Balsa TIPS.

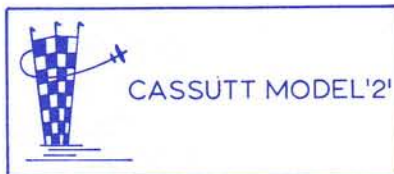


1/8" SQUARES

SCALE: 1/4" = 1'



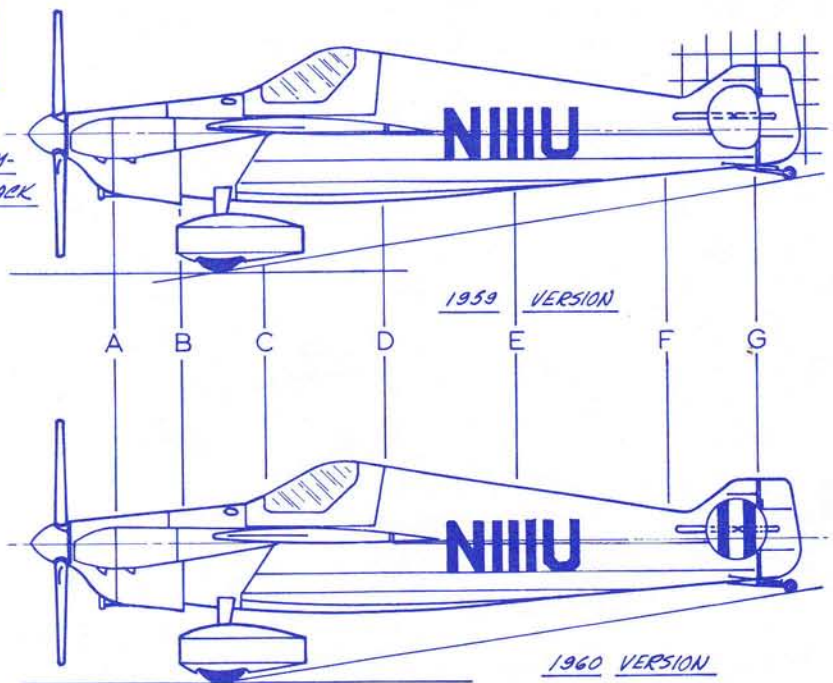
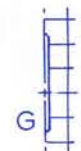
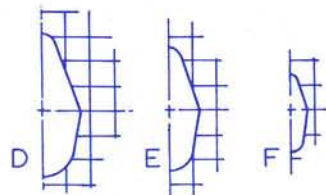
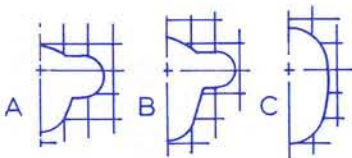
CASSUTT 6% AIRFOIL (N.A.C.A. 23006 MOD.)



CASSUTT MODEL '2'

CASSUTT '2' POWERPLANT: CONTINENTAL C-85-BF  
PROPELLER: 58" DIA. x 5.6" SENSENICH

COLOR SCHEME: ALL ALUMINUM WITH RED LICENSE AND RACE NUMBER. "11" ON 1960 TIP PLATES IS BLACK



MODEL "2" WAS DESIGNED, BUILT AND FLOWN BY TOM CASSUTT DURING THE LATE 50's AND EARLY 60's. FIRST FLIGHT OF CRAFT WAS IN SEPTEMBER 1959. WITHIN TEN DAYS, ON SEPTEMBER 20TH, CRAFT WAS RACED AT FT. WAYNE, IND, TAKING 4TH PLACE IN THE FINAL RACE AT 182.12 M.P.H. CASSUTT RACED MODEL "2" AGAIN IN JULY 1960 AT FT. WAYNE TAKING 5TH PLACE AT 193.73 M.P.H.

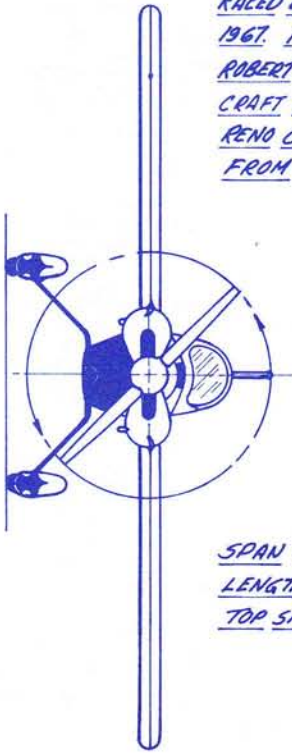
'BOO RAY' IS A MODIFIED CASSUTT  
 BUILT IN 1967 BY MARION BAKER  
 AND ASSOCIATES. IT WAS FIRST  
 RACED BY BAKER AT FT. WORTH IN  
 1967. IT WAS LATER SOLD TO  
 ROBERT MOELLER IN 1969. AIR-  
 CRAFT HAS RACED WELL IN ALL  
 RENO CHAMPIONSHIP RACES  
 FROM 1967 THROUGH 1975

WING CONSTRUCTION: WOOD SPARS AND  
 RIBS WITH PLYWOOD COVERING.

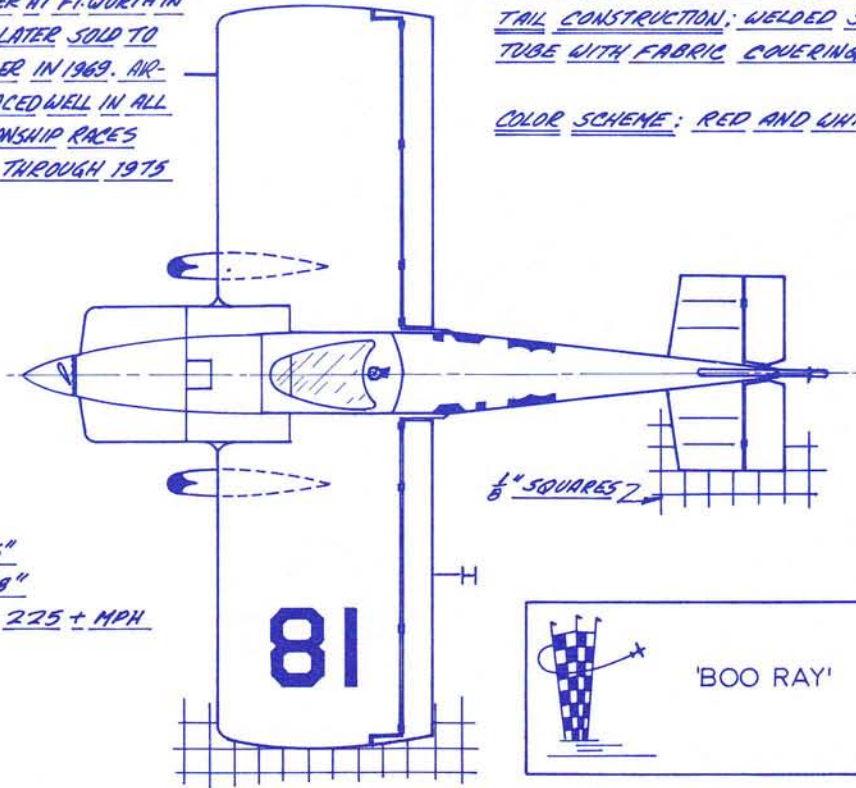
FUSELAGE CONSTRUCTION: WELDED  
 STEEL TUBE WITH FABRIC COVERING.

TAIL CONSTRUCTION: WELDED STEEL  
 TUBE WITH FABRIC COVERING.

COLOR SCHEME: RED AND WHITE

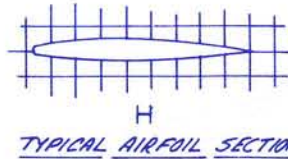


SPAN - 15' 6"  
 LENGTH - 16' 8"  
 TOP SPEED - 225 + MPH

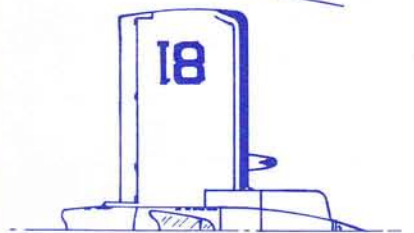
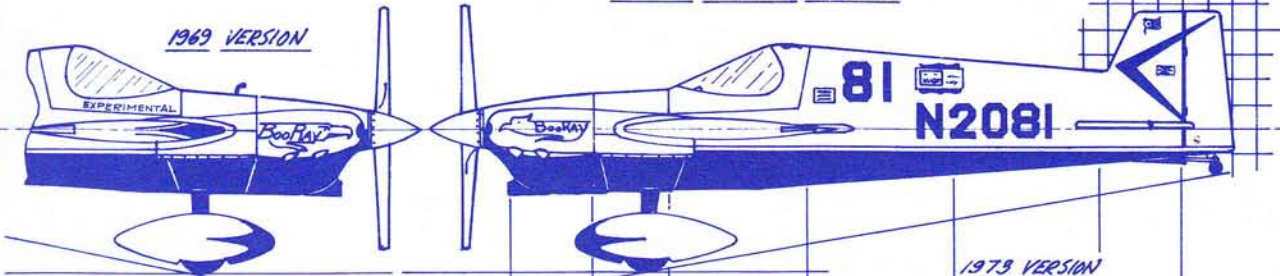


POWERPLANT: CONTINENTAL O-200  
 4 CYLINDER ENGINE

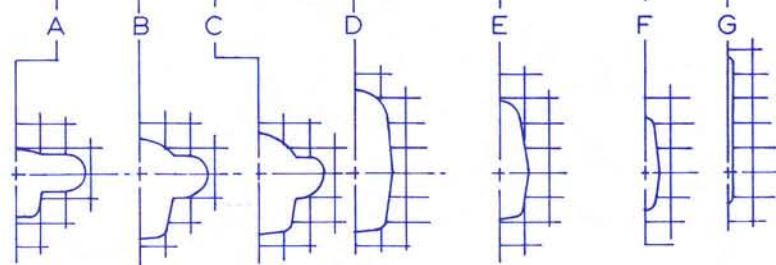
SCALE: 1/4" = 1'



TYPICAL AIRFOIL SECTION



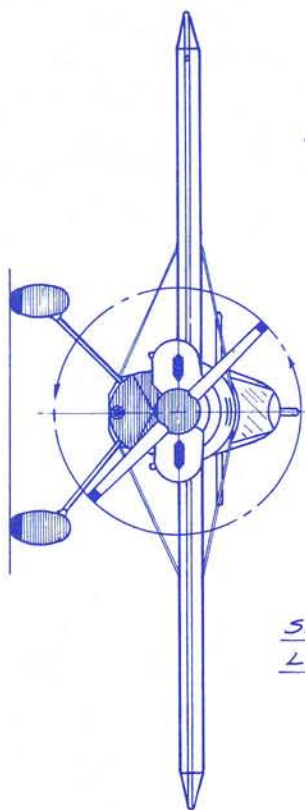
ABOVE PARTIAL VIEW (NOT TO SCALE)  
 SHOWS RED STRIPING ON WING  
 LEADING EDGE AND RED RACE  
 NUMBER STYLE. (1969)



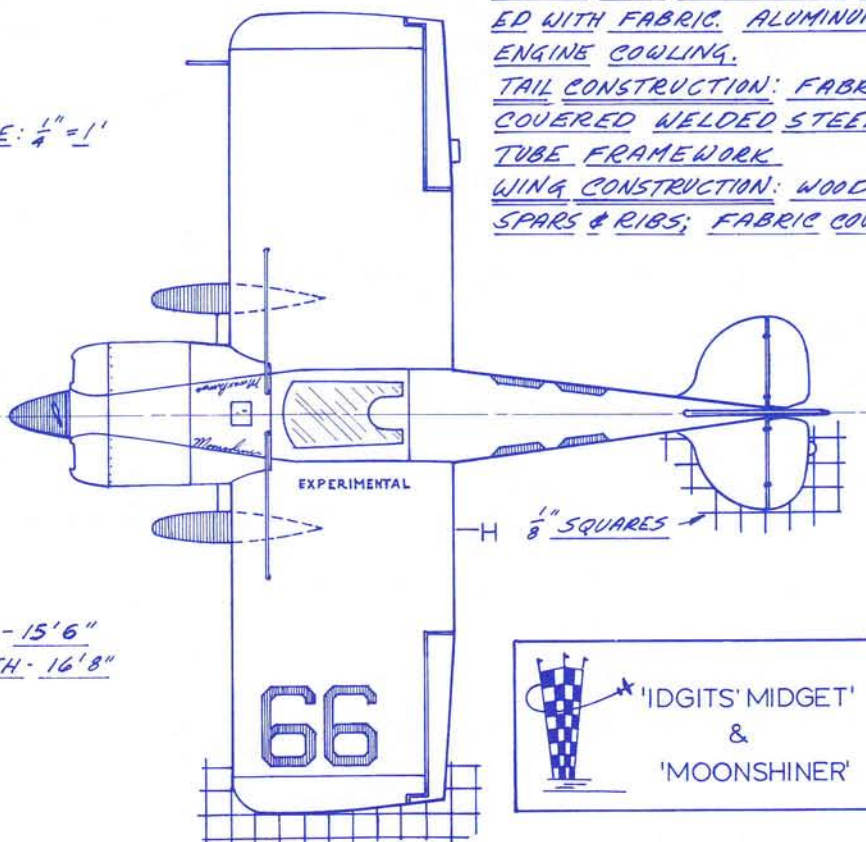
GH

FUSELAGE CONSTRUCTION: WELDED  
STEEL TUBE FRAMEWORK COVER-  
ED WITH FABRIC. ALUMINUM  
ENGINE COWLING.  
TAIL CONSTRUCTION: FABRIC  
COVERED WELDED STEEL  
TUBE FRAMEWORK.  
WING CONSTRUCTION: WOOD  
SPARS & RIBS; FABRIC COVERING.

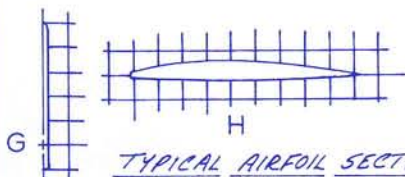
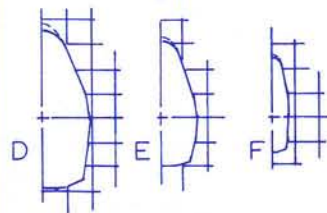
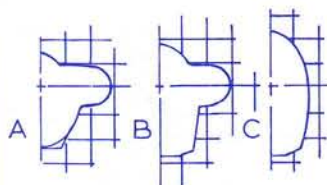
SCALE:  $\frac{1}{4}'' = 1'$



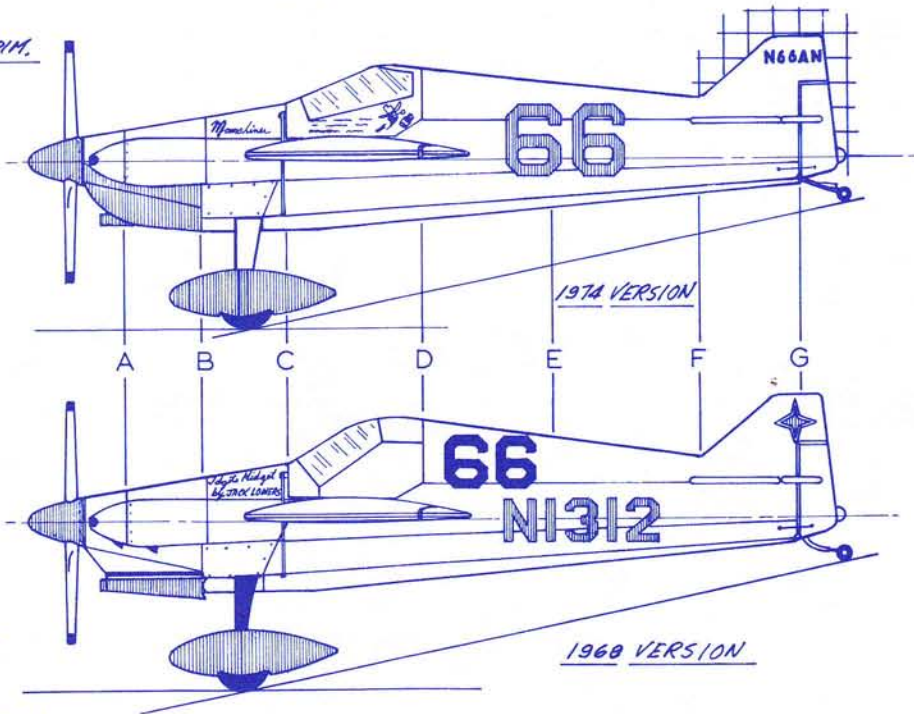
SPAN - 15'6"  
 LENGTH - 16'8"



COLOR SCHEME: (1974)  
 ALL YELLOW WITH RED TRIM.



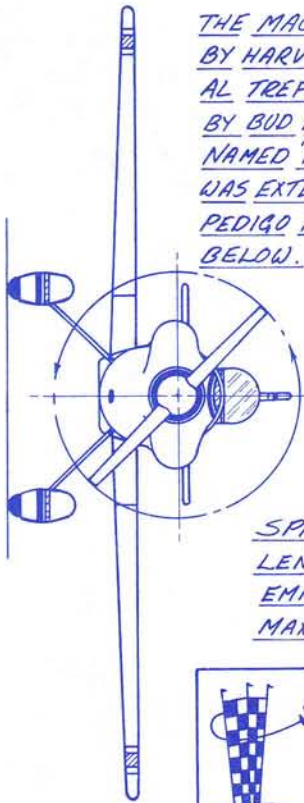
TYPICAL AIRFOIL SECTION



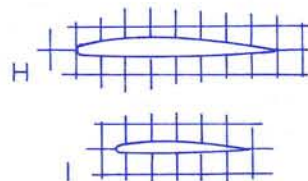
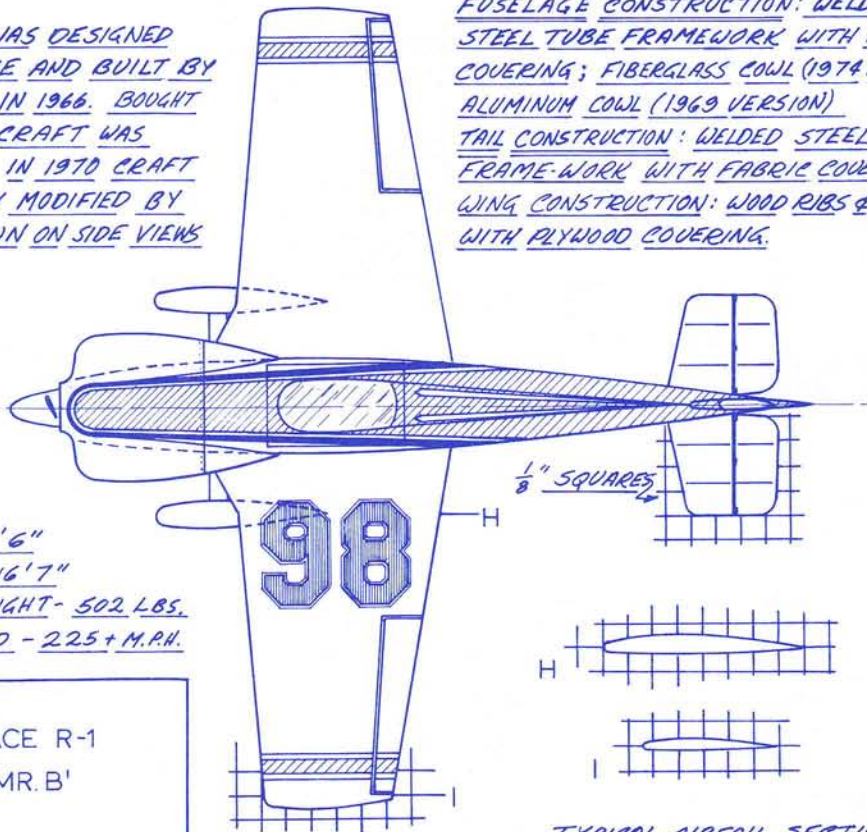
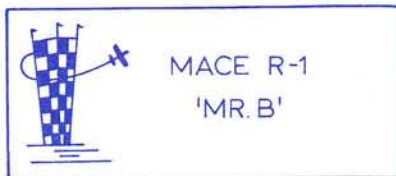
COLOR SCHEME: (1960) ALL YELLOW WITH RED SPINNER, WHEEL PANTS AND LICENSE NUMBER.  
 RACE NUMBER # AND SPRING STEEL LANDING GEAR STRUT WERE BLACK. BUILT BY JACK  
 LOWERS IN 1967, THIS MODIFIED CASSUTT WAS SOLD TO CHARLES ANDREWS IN 1969 AND NAME  
 CHANGED FROM 'DIGITS MIDGET' TO 'MOONSHINER'. CRAFT HAS BEEN RACED BY BOTH MEN EXTENSIVELY.

THE MACE R-1 WAS DESIGNED BY HARVEY MACE AND BUILT BY AL TREFETHAN IN 1966. BOUGHT BY BUD PEDIGO, CRAFT WAS NAMED 'MR. B'. IN 1970 CRAFT WAS EXTENSIVELY MODIFIED BY PEDIGO AS SHOWN ON SIDE VIEWS BELOW.

FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK WITH FABRIC COVERING; FIBERGLASS COWL (1974 VERSION), ALUMINUM COWL (1969 VERSION)  
 TAIL CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK WITH FABRIC COVERING  
 WING CONSTRUCTION: WOOD RIBS & SPARS WITH PLYWOOD COVERING.



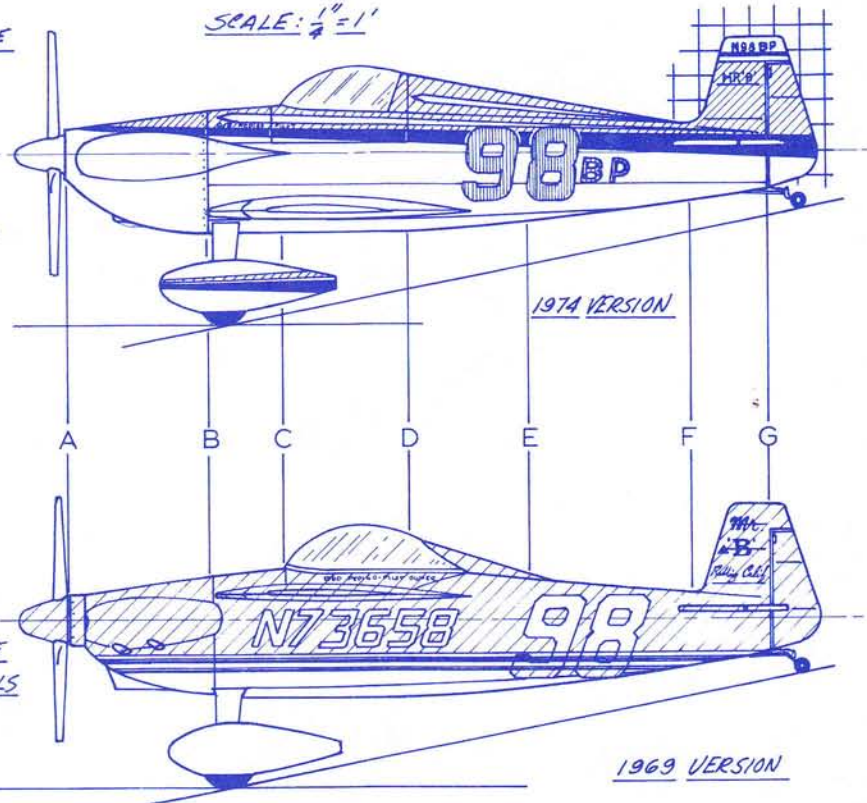
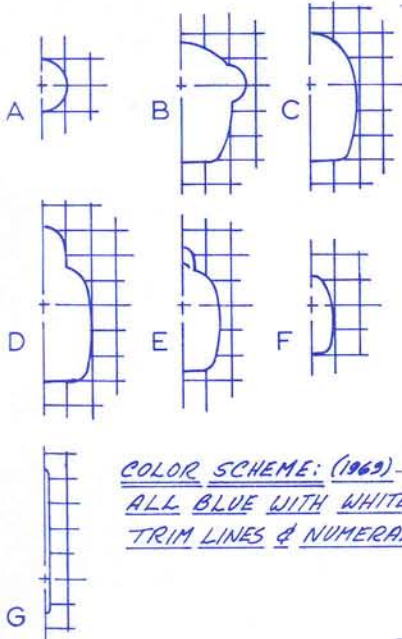
SPAN - 16'6"  
 LENGTH - 16'7"  
 EMPTY WEIGHT - 502 LBS.  
 MAX. SPEED - 225+ M.P.H.



TYPICAL AIRFOIL SECTIONS

COLOR SCHEME: (1974)  
 ALL WHITE WITH RED & BLUE TRIM.

SCALE:  $\frac{1}{4}'' = 1'$



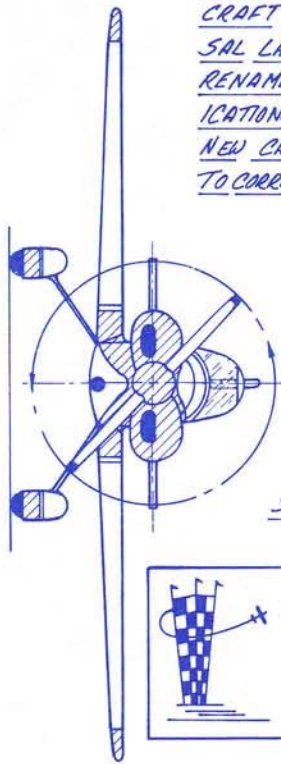
COLOR SCHEME: (1969)  
 ALL BLUE WITH WHITE TRIM LINES & NUMERALS

'MR. B' HAS BEEN WIDELY RACED BY MR. PEDIGO THRU THE YEARS SINCE HE ACQUIRED IT AND APPEARED AT RACES IN CALIFORNIA, FLORIDA, WILSON, N.C., AND OF COURSE RENO. IN 1974 HE PLACED 4TH IN THE RENO FORMULA ONE CONSOLATION RACE AT 209.435 M.P.H.

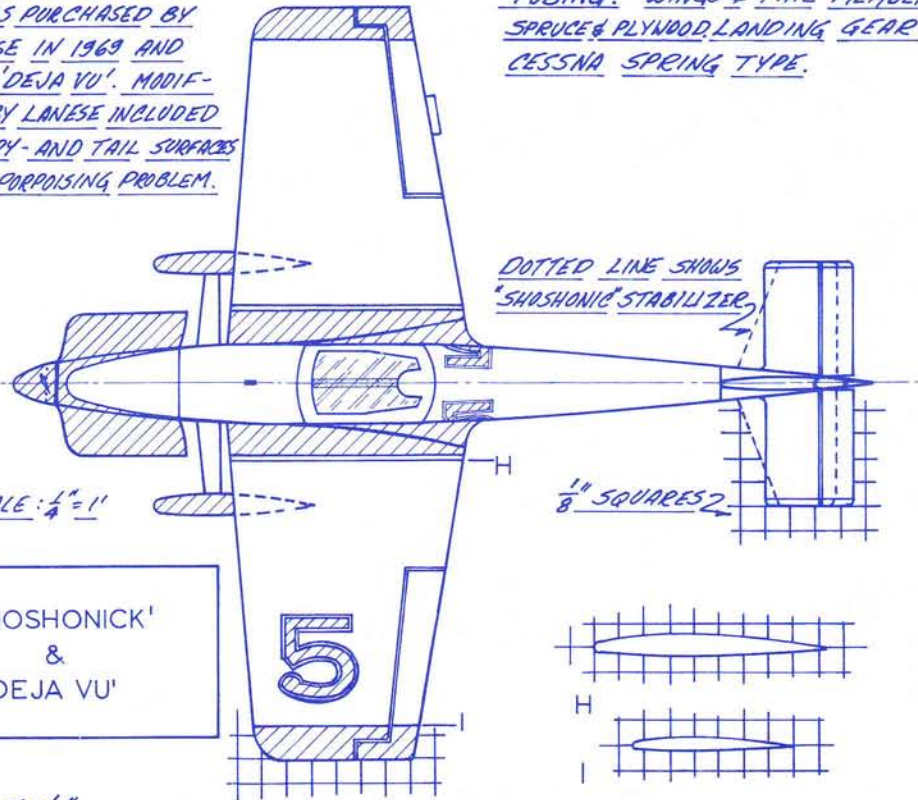
UK

"SHOSHONIC" WAS BUILT IN 1966  
 BY HOWARD & DALE TERRILL.  
 CRAFT WAS PURCHASED BY  
 SAL LANESE IN 1969 AND  
 RENAMED 'DEJA VU'. MODIF-  
 ICATIONS BY LANESE INCLUDED  
 NEW CANOPY AND TAIL SURFACES  
 TO CORRECT PORPOISING PROBLEM.

FUSELAGE STRUCTURE: WELDED STEEL  
 TUBING. WINGS & TAIL MEMBERS:  
 SPRUCE & PLYWOOD. LANDING GEAR IS  
 CESSNA SPRING TYPE.

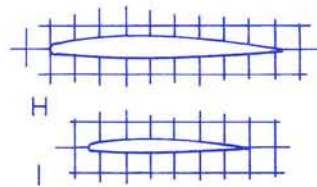


SCALE:  $\frac{1}{4}'' = 1''$



DOTTED LINE SHOWS  
 "SHOSHONIC" STABILIZER

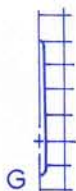
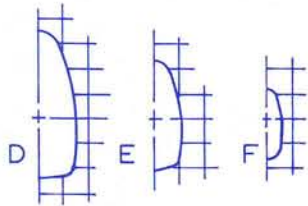
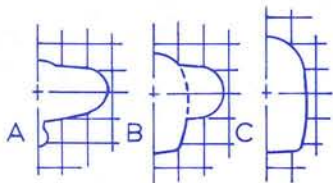
$\frac{1}{8}''$  SQUARES



TYPICAL AIRFOIL SECTIONS

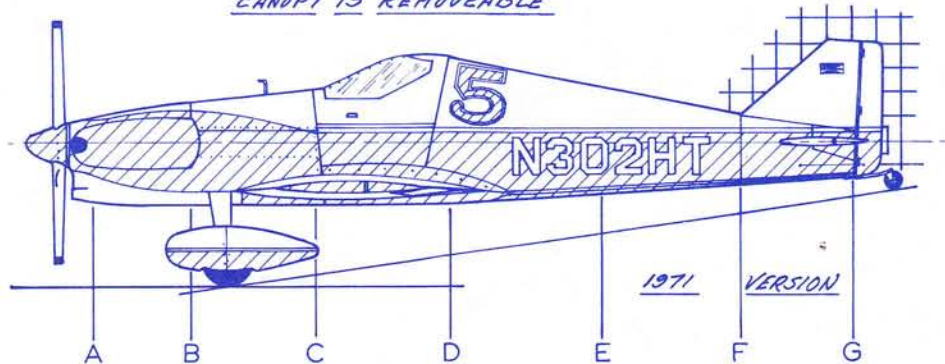
SPAN -  $15' 7\frac{1}{2}''$   
 LENGTH -  $17' 1''$   
 TOP SPEED - 200+MPH.

CANOPY IS REMOVEABLE

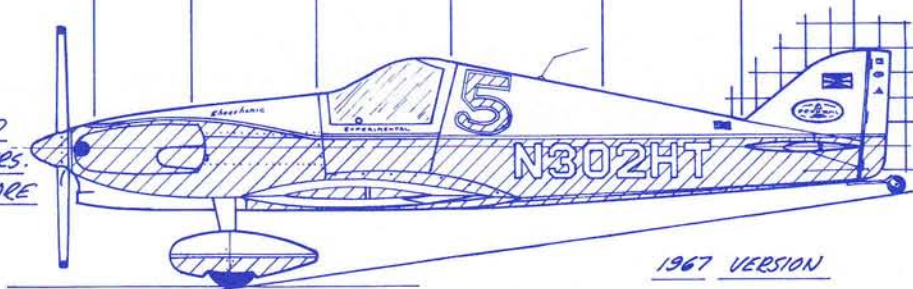


COLOR SCHEME:

ALL WHITE WITH RED  
 TRIM & RACING NUMBERS.  
 LICENSE NUMERALS ARE  
 WHITE.



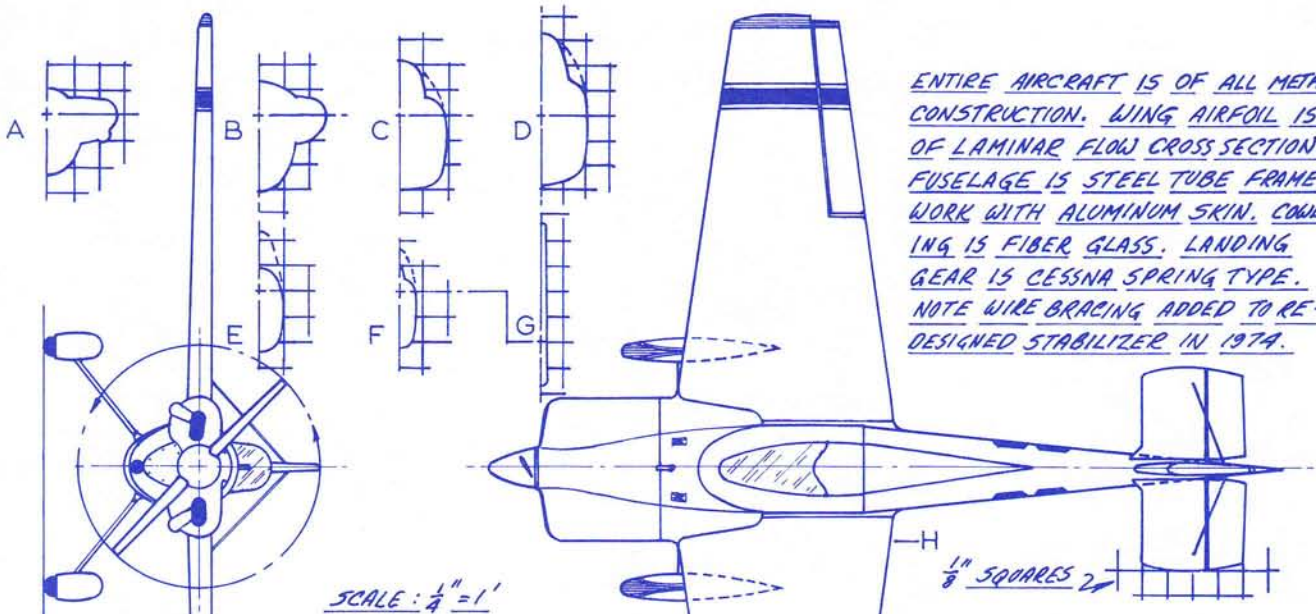
1971 VERSION



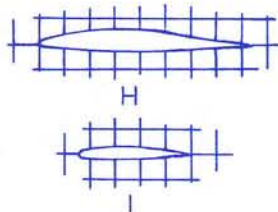
1967 VERSION

CRAFT WAS RACED BY SAL LANESE AT RENO IN 1969, FLORIDA AND WILSON IN 1970,  
 FLORIDA IN '71 AND EVANSVILLE, IND. IN '74. THE TERRILLS RACED AT CLEVELAND IN LATE '60'S

ENTIRE AIRCRAFT IS OF ALL METAL CONSTRUCTION. WING AIRFOIL IS OF LAMINAR FLOW CROSS SECTION. FUSELAGE IS STEEL TUBE FRAMEWORK WITH ALUMINUM SKIN. COOLING IS FIBER GLASS. LANDING GEAR IS CESSNA SPRING TYPE. NOTE WIRE BRACING ADDED TO RE-DESIGNED STABILIZER IN 1974.



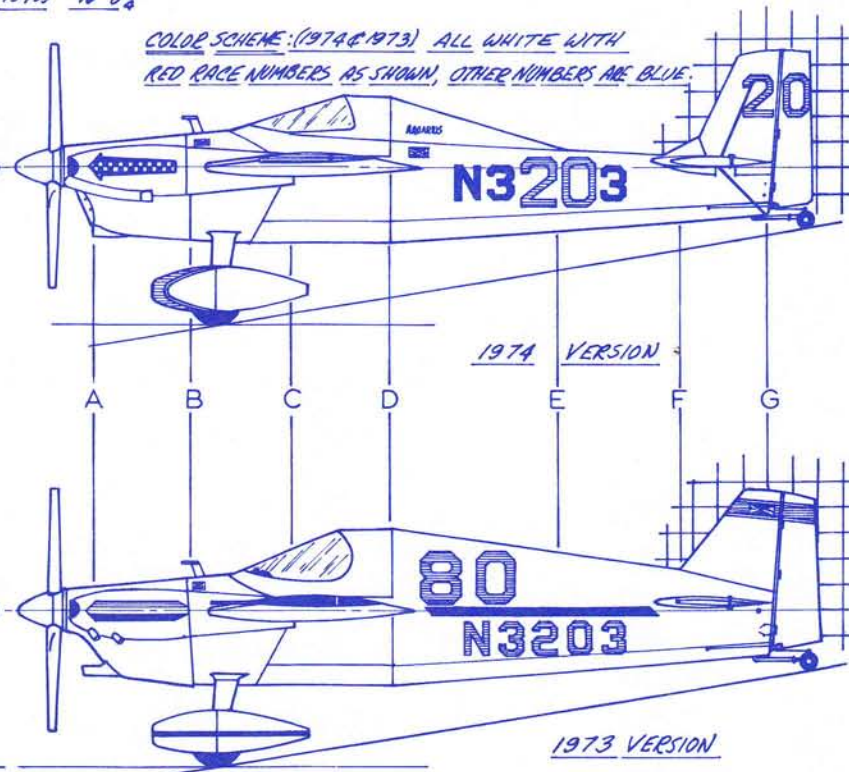
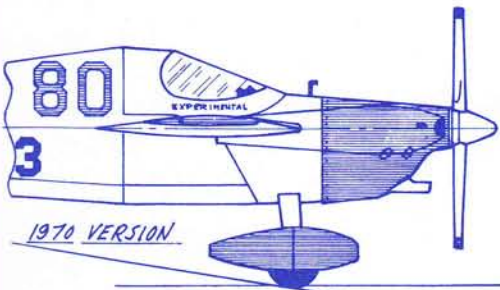
SPAN (1974) - 19'  
SPAN (1970) - 19' 6"  
LENGTH (1974) - 16' 6"  
LENGTH (1970) - 16' 8 1/2"



1970 VERSION PLAN VIEW AT RIGHT IS NOT TO SCALE.

COLOR SCHEME: (1974 & 1973) ALL WHITE WITH RED RACE NUMBERS AS SHOWN, OTHER NUMBERS ARE BLUE.

COLOR SCHEME: (1970) ALL ALUMINUM-RED TRIM & RACE NUMBERS; LICENSE NUMBER WAS BLACK; SPINNER WAS WHITE.



1973 VERSION

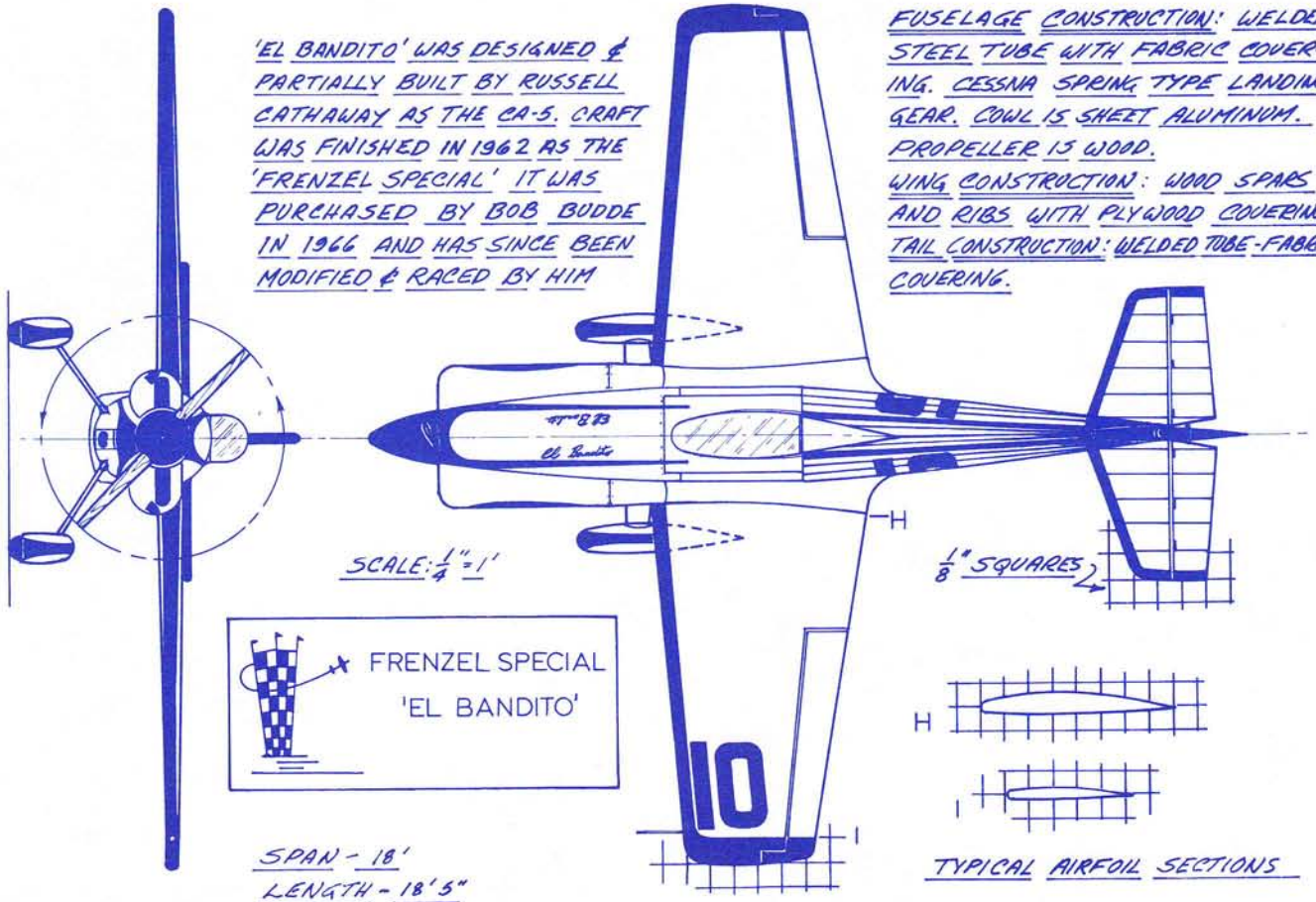
'AQUARIUS' IS AN ORIGINAL DESIGN BY, AND BUILT BY, MARION BAKER IN 1970. CRAFT HAS RACED AT RENO MOST YEARS SINCE BEING BUILT. IN 1975 BAKER QUALIFIED AT RENO AT 233.261 M.P.H.

CH

'EL BANDITO' WAS DESIGNED & PARTIALLY BUILT BY RUSSELL CATHAWAY AS THE CA-5. CRAFT WAS FINISHED IN 1962 AS THE 'FRENZEL SPECIAL' IT WAS PURCHASED BY BOB BUDE IN 1966 AND HAS SINCE BEEN MODIFIED & RACED BY HIM

FUSELAGE CONSTRUCTION: WELDED STEEL TUBE WITH FABRIC COVERING. CESSNA SPRING TYPE LANDING GEAR. COUL IS SHEET ALUMINUM. PROPELLER IS WOOD.

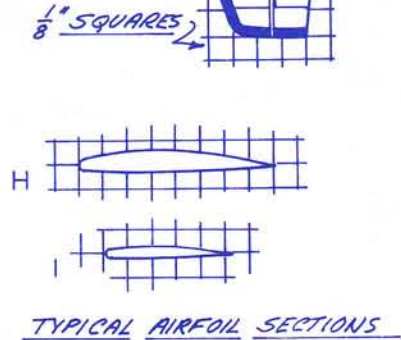
WING CONSTRUCTION: WOOD SPARS AND RIBS WITH PLYWOOD COVERING. TAIL CONSTRUCTION: WELDED TUBE-FABRIC COVERING.



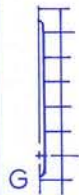
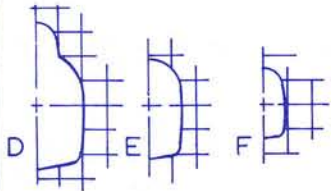
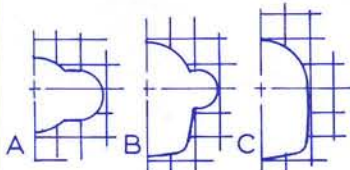
SCALE:  $\frac{1}{4}'' = 1'$



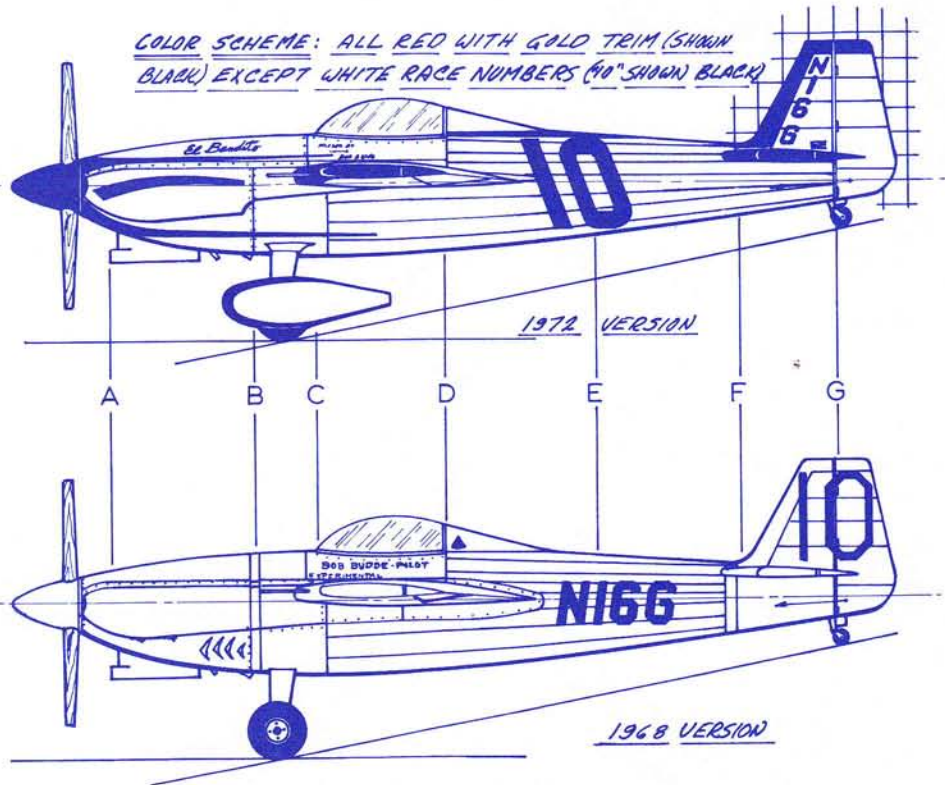
SPAN - 18'  
LENGTH - 18' 5"



COLOR SCHEME: ALL RED WITH GOLD TRIM (SHOWN BLACK) EXCEPT WHITE RACE NUMBERS ('10' SHOWN BLACK)

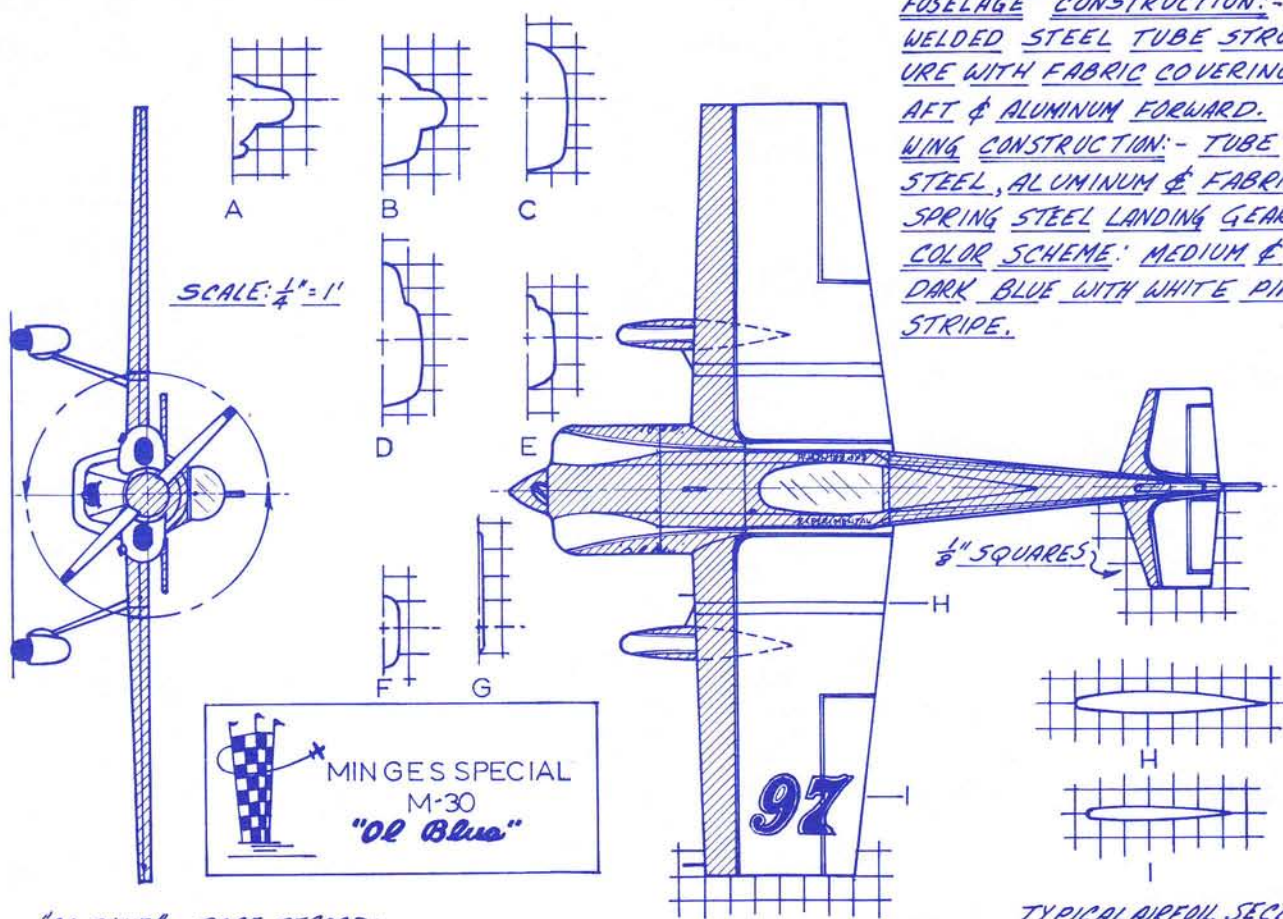


COLOR SCHEME:  
ALL WHITE WITH RED RACE AND LICENSE NUMERALS.



'EL BANDITO' HAS BEEN RACED BY BUDE EVERY YEAR SINCE 1968. HIGH POINT WAS REND 1971 WHEN CRAFT PLACED 7TH IN THE FORMULA 1 CHAMPIONSHIP RACE AT 193 M.P.H.. 'EL BANDITO' IS VERY SLEEK BUT SOMEWHAT ON THE HEAVY SIDE WHICH PREVENTS IT FROM BEING AMONST FRONT RUNNERS.

FUSELAGE CONSTRUCTION:-  
WELDED STEEL TUBE STRUCTURE WITH FABRIC COVERING  
AFT & ALUMINUM FORWARD.  
WING CONSTRUCTION:- TUBE  
STEEL, ALUMINUM & FABRIC.  
SPRING STEEL LANDING GEAR.  
COLOR SCHEME: MEDIUM &  
DARK BLUE WITH WHITE PIN  
STRIPE.



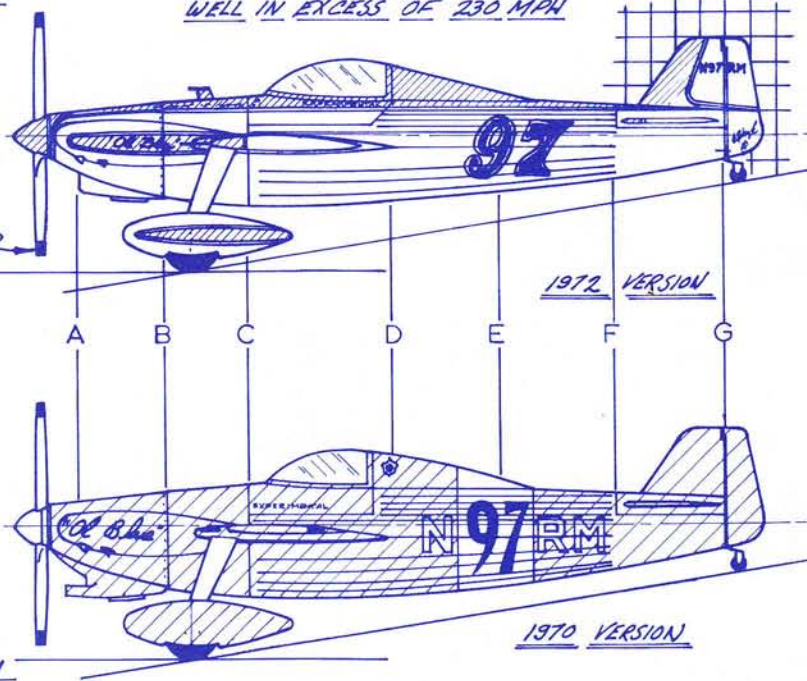
TYPICAL AIRFOIL SECTIONS

"OL BLUE" RACE RECORD:

- 1970 FLA. NATIONALS - 9TH PLACE 201.37 MPH
- 1970 WILSON N.C. - 5TH PLACE 196.9 MPH
- 1970 RENO - 4TH PLACE 206.53 MPH
- 1971 WILSON N.C. - 2ND PLACE 214.6 MPH
- 1972 WILSON N.C. - 5TH PLACE 195.65 MPH

TOP SPEED OF 'OL BLUE' IS  
 WELL IN EXCESS OF 230 MPH

PLANE WAS MODIFIED IN 1972 TO THIS  
 VERSION - DRAWINGS ARE PROVISIONAL.



SPAN - 17' 6"  
 LENGTH - 15' 6"

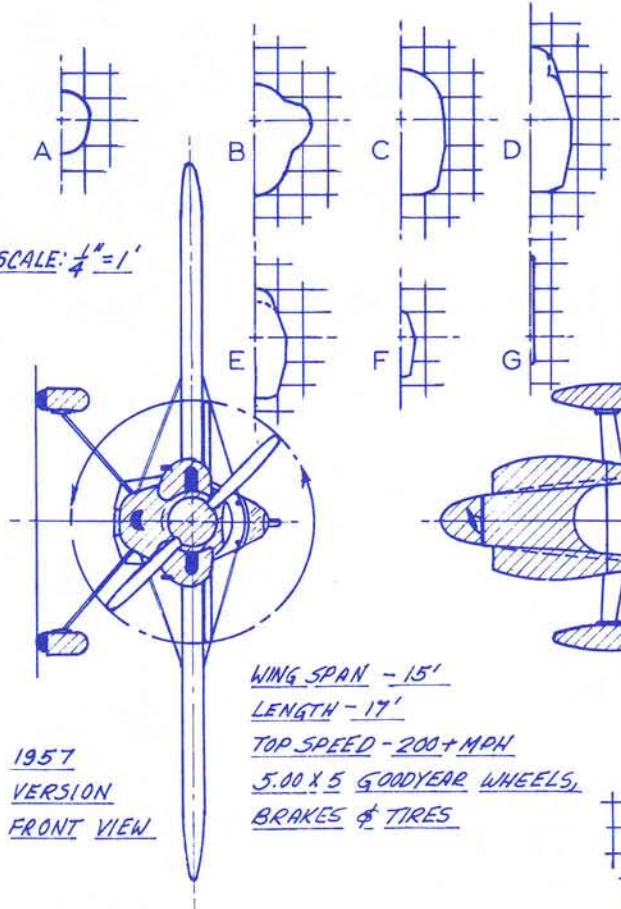
COLOR SCHEME 1970:  
 DARK BLUE - WHITE TRIM

DESIGNED, BUILT & FLOWN BY RICHARD MINGES. RACED DURING 1970 IN  
 FLORIDA, WILSON AND RENO. AIRCRAFT LATER SOLD TO AND MODIFIED  
 BY THURMOND ROCK '72, MINGES ALSO FLIES AT-6 CLASS RACERS.

CM



SCALE:  $\frac{1}{4}'' = 1'$



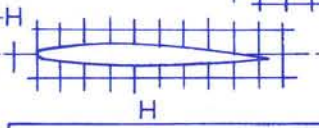
1957  
VERSION  
FRONT VIEW

WING SPAN - 15'  
LENGTH - 17'  
TOP SPEED - 200+ MPH  
5.00 X 5 GOODYEAR WHEELS,  
BRAKES & TIRES

FUSELAGE CONSTRUCTION: FUSELAGE  
FRAMEWORK BUILT OF WELDED S.A.E.  
4130 STEEL TUBING. AREA FORWARD  
OF COCKPIT IS ALUMINUM SHEET COVER-  
ING. TURTLEDECK ON BOTH '53 & '57  
VERSIONS IS PLYWOOD. BALANCE OF  
FUSELAGE IS FABRIC COVERED.  
TAIL CONSTRUCTION: FABRIC COVERED  
WELDED STEEL TUBING.  
WING CONSTRUCTION: SPRUCE SPARS  
AND RIBS - PLYWOOD COVERING

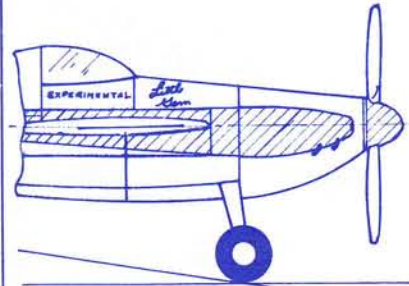
WITTMAN TYPE SPRING  
STEEL LANDING GEAR.

$\frac{1}{8}''$  SQUARES

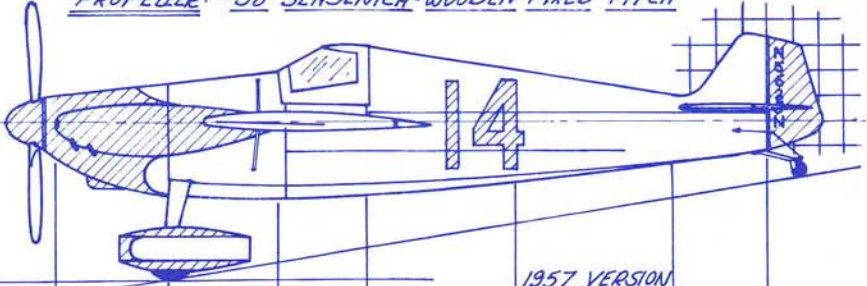


'49 VERSION SHOWN BELOW WAS BADLY  
DAMAGED IN 1951 CRASH.

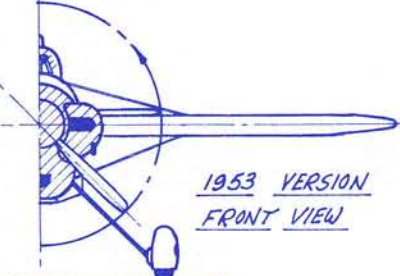
POWERPLANT: CONTINENTAL C-85-BJ - 85HP - 4 CYLINDER ENGINE  
PROPELLER: - 58" SENSENICH - WOODEN - FIXED PITCH



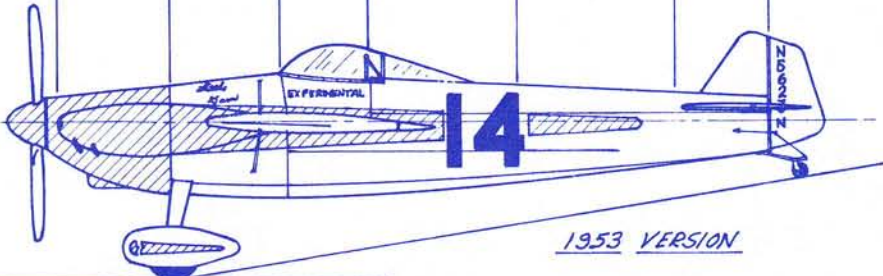
1949 VERSION - GRAY WITH  
RED TRIM - BLACK NUMERALS



1957 VERSION



1953 VERSION  
FRONT VIEW



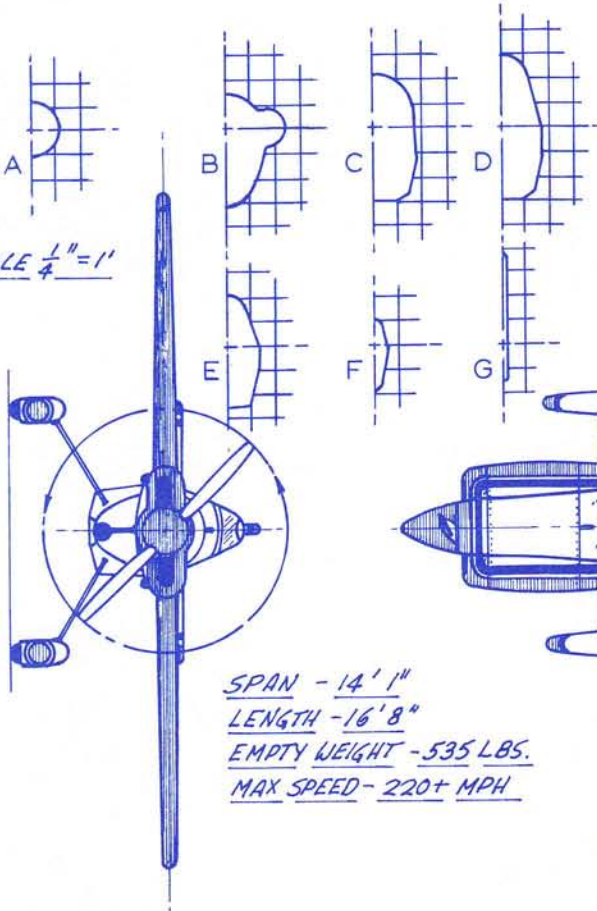
1953 VERSION

COLOR SCHEME 1953: - ALL GREY WITH RED TRIM - BLACK NUMERALS - 1957: - ALL GREY WITH RED TRIM & NUMERALS.  
DESIGNED, BUILT & FLOWN BY JIM MILLER. 1951 VERSION WON 3RD IN 1950 CONTINENTAL MOTORS RACE (158.3 MPH)  
4TH IN 1950 REBAT TROPHY RACE (169.55 MPH). 1957 VERSION WON 1ST AT DANVILLE, N.Y. IN 1954 (181.06 MPH)  
AND 6TH PLACE IN 1957 FT. WAYNE, IND RACE. (175.88 MPH). SEE NEXT PAGE FOR MORE ON THIS AIRCRAFT. *CM*

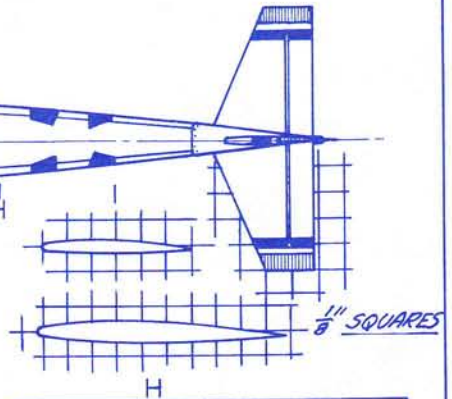
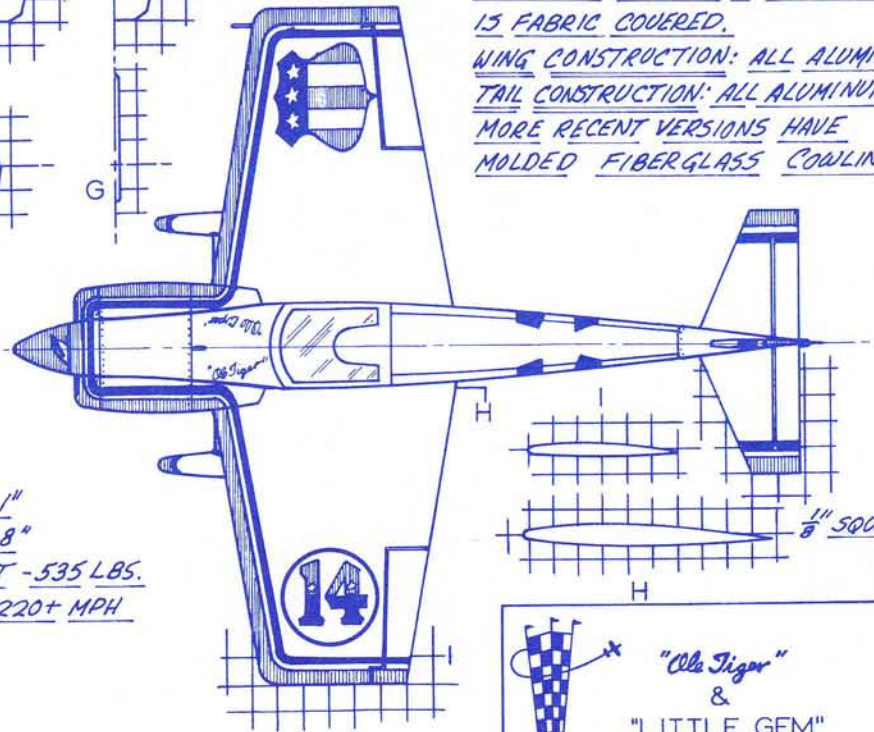
FUSELAGE CONSTRUCTION: FRAME - WORK IS WELDED STEEL TUBING. TURTLE DECK IS PLYWOOD. AREA FORWARD OF COCKPIT IS SHEET ALUMINUM. BALANCE OF FUSELAGE IS FABRIC COVERED.

WING CONSTRUCTION: ALL ALUMINUM  
TAIL CONSTRUCTION: ALL ALUMINUM. MORE RECENT VERSIONS HAVE MOLDED FIBERGLASS COWLING

SCALE  $\frac{1}{4}'' = 1'$

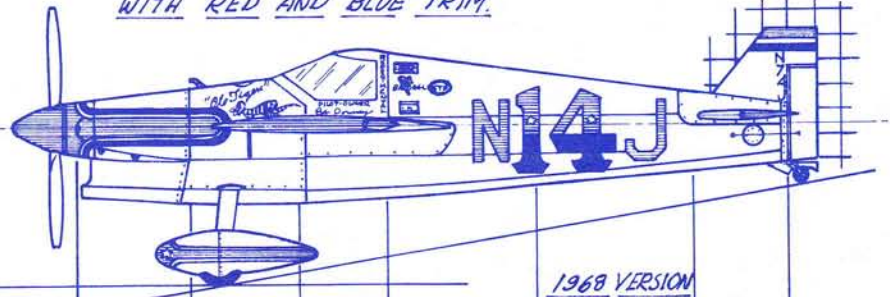
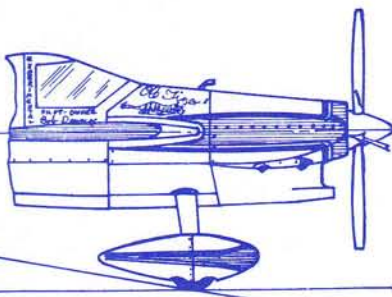


SPAN - 14' 1"  
 LENGTH - 16' 8"  
 EMPTY WEIGHT - 535 LBS.  
 MAX SPEED - 220+ MPH



1972 VERSION SHOWN BELOW HAD ANNULAR AIR INTAKE BEHIND SPINNER

COLOR SCHEME: (1965 TO PRESENT) ALL WHITE WITH RED AND BLUE TRIM.

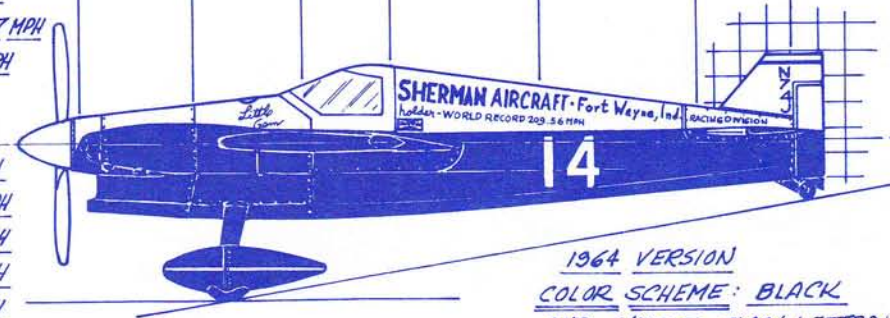


1968 VERSION

"OLE TIGER" RACE RECORD

- LAS VEGAS '65 - 5TH PL. 195.2 MPH
- ST PETERSBURG '66 4TH PL 190.27 MPH
- LANCASTER, CA. '66 1ST PL. 189.48 MPH
- FREDRICK, MD. '66 2ND PL 192.8 MPH
- RENO '66 3RD PL 189.009 MPH
- FT. WORTH '67 2ND PL 200.41 MPH
- CLEVELAND '67 2ND PL 202.77 MPH
- RENO '67 2ND PL 201.192 MPH
- RENO '68 3RD PL 211.869 MPH
- RENO '69 5TH PL 208.09 MPH

FOR CONTINUED RECORD SEE TABLE AT FRONT OF BOOK



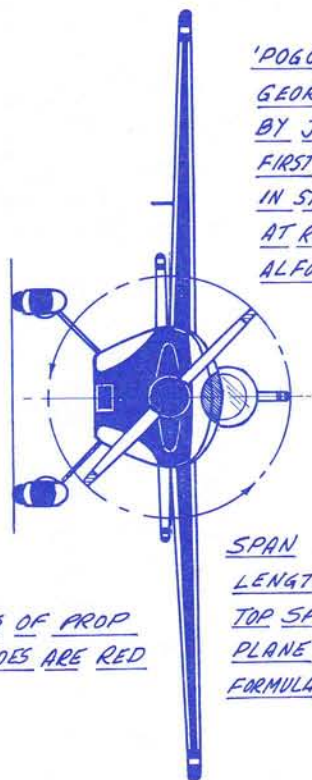
1964 VERSION  
COLOR SCHEME: BLACK AND WHITE, BLACK LETTERING

1964 VERSION WAS PILOTTED BY BOB PORTER AT RENO '64 AND WON FIRST PLACE IN FORMULA 1. PLANE WAS BOUGHT BY PILOT-OWNER BOB DOWNEY AND RENAMED "OLE TIGER" IN 1965

SCALE:  $\frac{1}{4}'' = 1'$

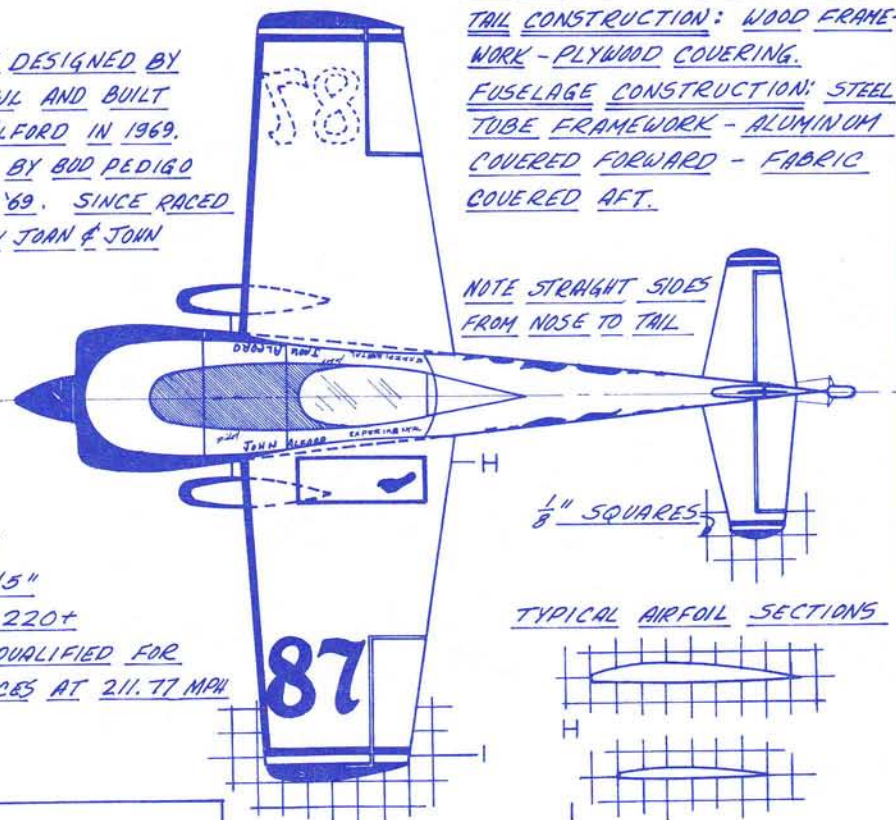
'POGO' WAS DESIGNED BY  
GEORGE OWL AND BUILT  
BY JOHN ALFORD IN 1969.  
FIRST RACED BY BOB PEDIGO  
IN ST. LOUIS '69. SINCE RACED  
AT RENO BY JOAN & JOHN  
ALFORD.

WING CONSTRUCTION: WOOD SPARS  
AND RIBS - PLYWOOD COVERING.  
TAIL CONSTRUCTION: WOOD FRAME-  
WORK - PLYWOOD COVERING.  
FUSELAGE CONSTRUCTION: STEEL  
TUBE FRAMEWORK - ALUMINUM  
COVERED FORWARD - FABRIC  
COVERED AFT.



TIPS OF PROP  
BLADES ARE RED

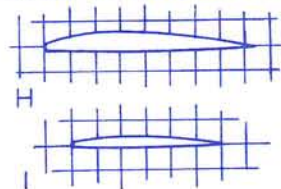
SPAN - 16'  
LENGTH - 17'5"  
TOP SPEED - 220+  
PLANE HAS QUALIFIED FOR  
FORMULA I RACES AT 211.77 MPH



NOTE STRAIGHT SIDES  
FROM NOSE TO TAIL

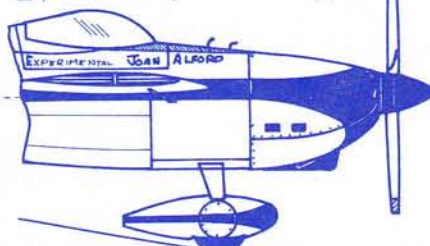
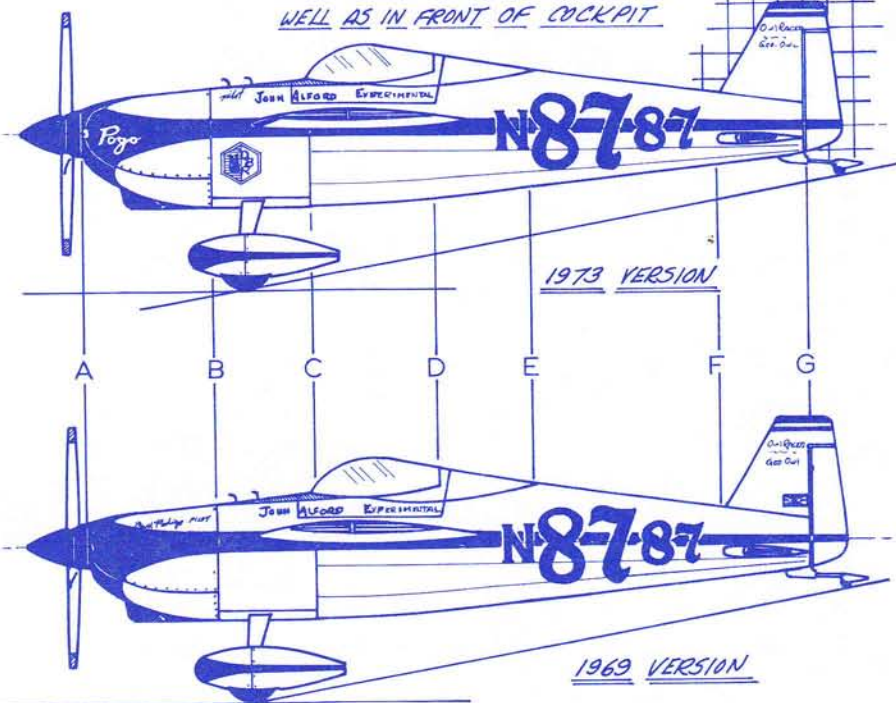
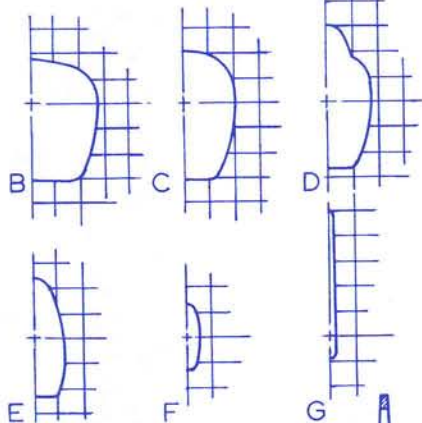
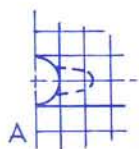
$\frac{1}{8}''$  SQUARES

TYPICAL AIRFOIL SECTIONS



"POGO"  
OWL OR-65-2

COLOR SCHEME: ENTIRE AIRCRAFT IS  
WHITE - TRIM IS METALIC OLIVE GREEN  
NAME LETTERING IS BLACK - AS  
WELL AS IN FRONT OF COCKPIT



FLOWN BY JOAN ALFORD, PLANE HAS PLACED "IN THE MONEY" AT SEVERAL NATIONAL RACING EVENTS.

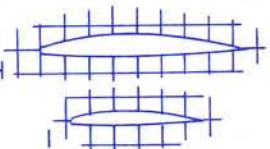
THE COLORFUL 'FANG' WAS DESIGNED BY GEORGE OWL IN 1970 AND BUILT BY BILL WARWICK IN 1971.

FUSELAGE CONSTRUCTION: STEEL TUBE FRAMEWORK WITH FABRIC COVERING. FIBER GLASS ENGINE COWL. WING CONSTRUCTION: WOOD RIBS AND SPARS WITH PLYWOOD COVERING. TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING. CESSNA SPRING TYPE LANDING GEAR.

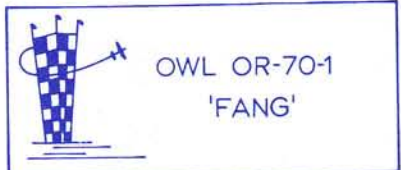
SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 20'  
LENGTH - 16' 4"  
TOP SPEED - 240+ M.P.H.

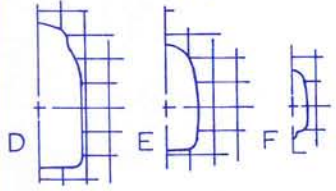
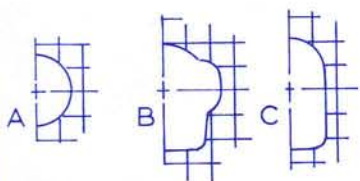
$\frac{1}{8}''$  SQUARES



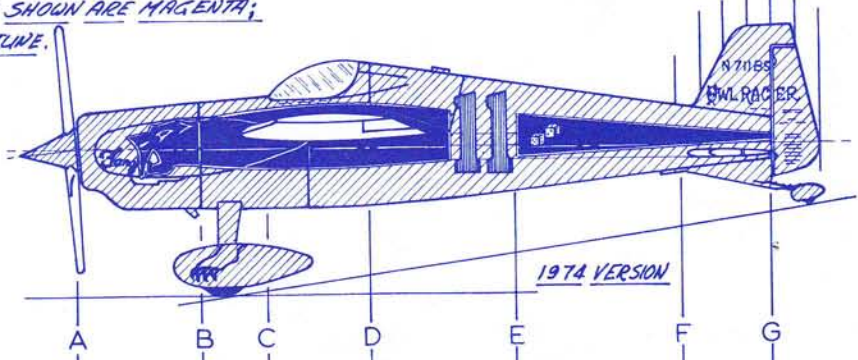
TYPICAL AIRFOIL SECTIONS



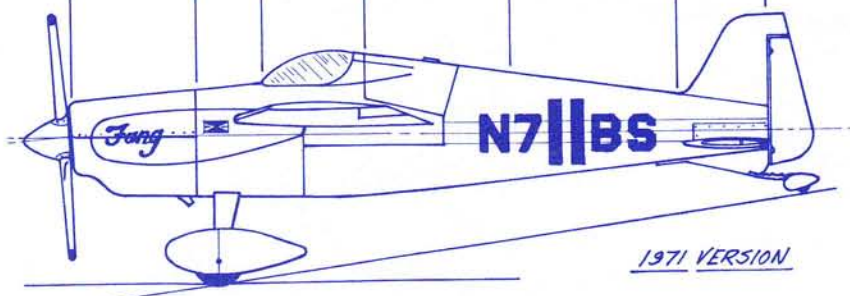
COLOR SCHEME: (1974) FUSELAGE, FIN & RUDDER ARE ROYAL PURPLE; WING OUTER AREA, STAB. & ELEVATOR ARE LILAC; BLACK AREAS SHOWN ARE MAGENTA; '11' ARE YELLOW WITH WHITE OUTLINE.



COLOR SCHEME: (1971)  
ALL SILVER - BLACK  
LICENSE & MARKINGS



1974 VERSION



1971 VERSION

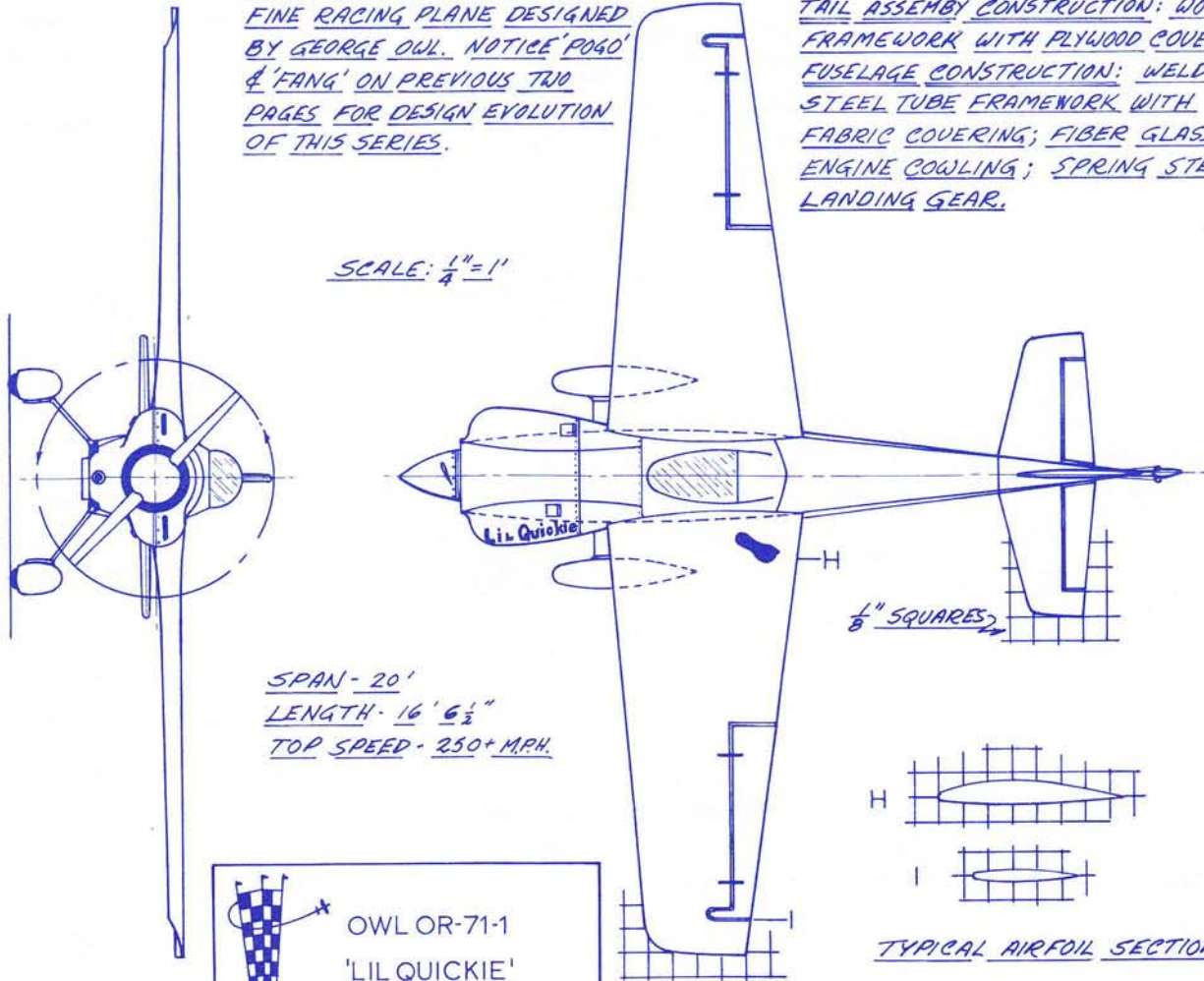
FLOWN BY PILOT OWNER JIM STEVENSON 'FANG' PLACED 5TH AT 205.94 IN 1972; 7TH IN 1974 AT 219.18 MPH RENO CHAMPIONSHIP RACES. CRAFT WAS NOT ENTERED IN 1975 RENO EVENT.

CH

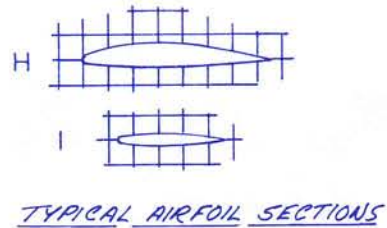
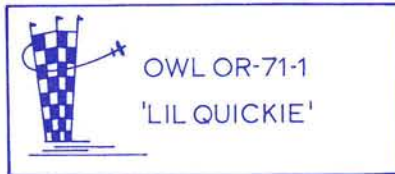
'LIL QUICKIE' IS STILL ANOTHER FINE RACING PLANE DESIGNED BY GEORGE OWL. NOTICE 'POGO' & 'FANG' ON PREVIOUS TWO PAGES FOR DESIGN EVOLUTION OF THIS SERIES.

WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING.  
 TAIL ASSEMBLY CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING.  
 FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK WITH FABRIC COVERING; FIBER GLASS ENGINE COWLING; SPRING STEEL LANDING GEAR.

SCALE:  $\frac{1}{4}'' = 1'$



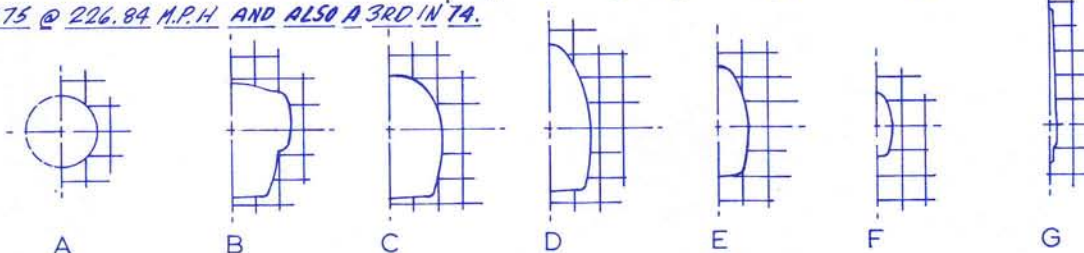
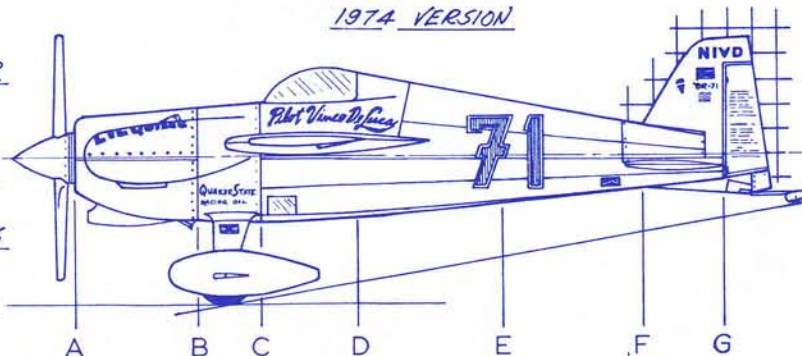
SPAN - 20'  
 LENGTH - 16' 6 1/2"  
 TOP SPEED - 250+ MPH.

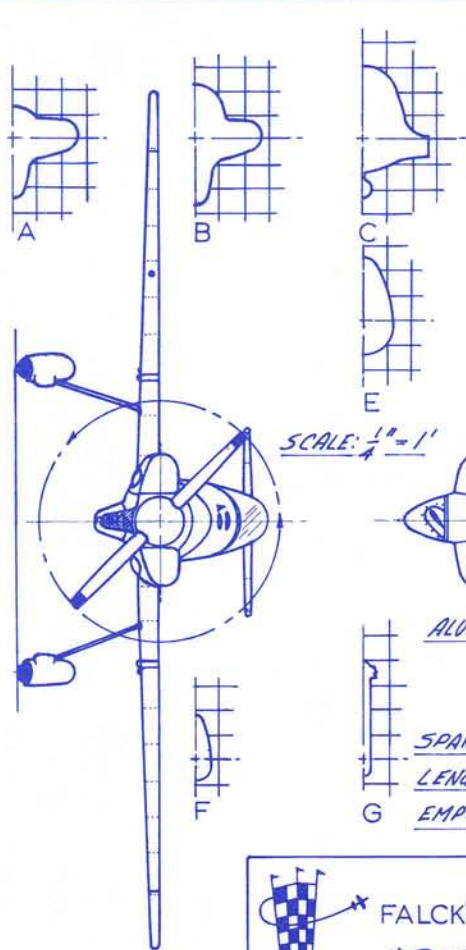


COLOR SCHEME: ALL YELLOW  
 'LIL QUICKIE', PILOTS NAME & LICENSE NUMBER ARE BLACK. RACE NUMBER IS BLUE EDGED IN RED.

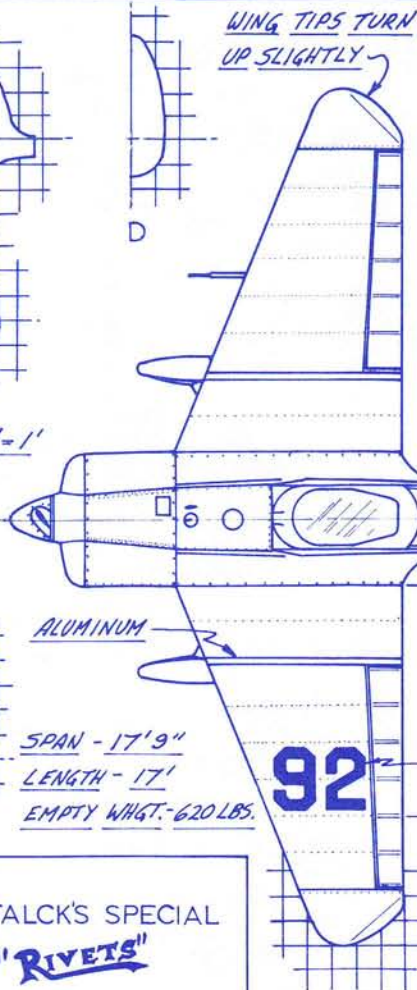
BUILT AND RACED BY VINCE DELUCA, 'LIL QUICKIE' HAS AN EXCELLENT RACE RECORD AT RENO SINCE BEING BUILT IN 1972. IT HAS BEEN IN THE CHAMPIONSHIP FORMULA ONE RACE EVERY YEAR, TAKING 2ND PLACE IN 1975 @ 226.84 M.P.H AND ALSO A 3RD IN '74.

1974 VERSION



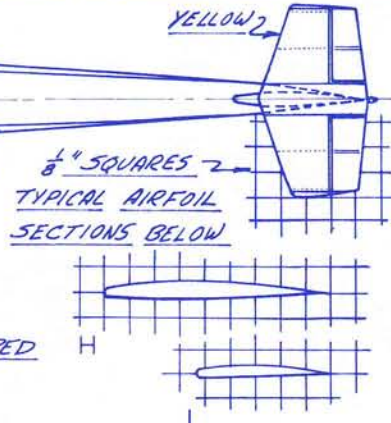


SCALE:  $\frac{1}{4}'' = 1'$

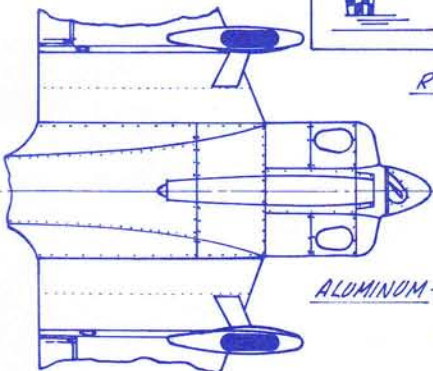


FUSELAGE CONSTRUCTION: WELDED STEEL TUBE FRAMEWORK. ALUMINUM COWL & TURTLEDECK. LOWER AFT FUSELAGE FABRIC COVERED  
WING CONSTRUCTION: ALL ALUMINUM EXCEPT FABRIC COVERED AILERONS  
TAIL CONSTRUCTION: ALL ALUMINUM EXCEPT FABRIC COVERED RUDDER AND ELEVATORS  
POWERPLANT: CONTINENTAL C-85-B MODIFIED TO O-200 - APPROX 120 HP

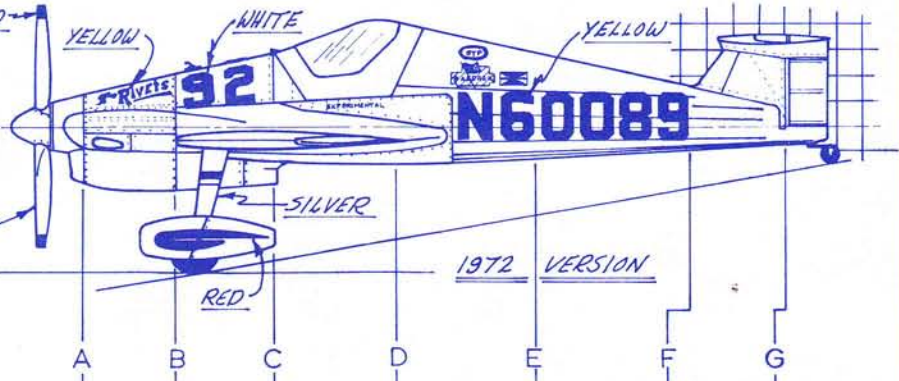
ALUMINUM  
 SPAN - 17'9"  
 LENGTH - 17'  
 EMPTY WGT - 620 LBS.



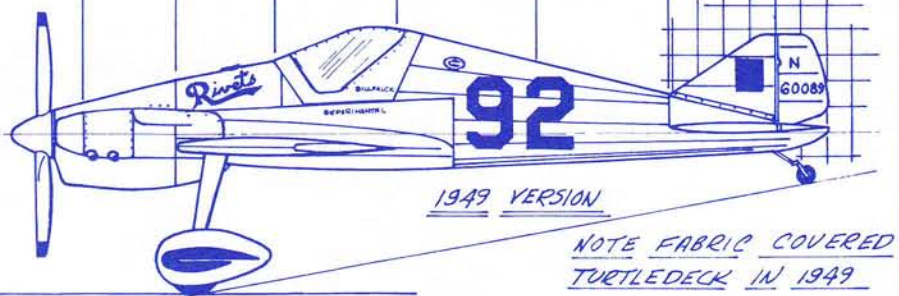
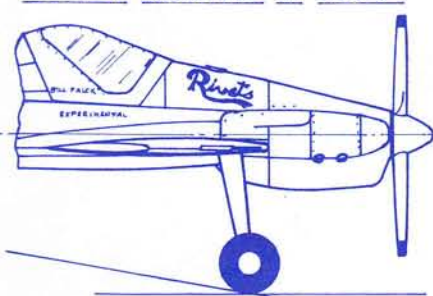
COLOR SCHEME: RED FUSELAGE WITH YELLOW WINGS EXCEPT AS NOTED  
 1949 COLOR SCHEME WAS RED FUSELAGE WITH NATURAL ALUMINUM WINGS - EXCEPT AS NOTED



BOTTOM VIEW (SHOWN ABOVE) SHOWS AUGMENTOR EXHAUST SYSTEM INSTALLED IN 1953



1972 VERSION

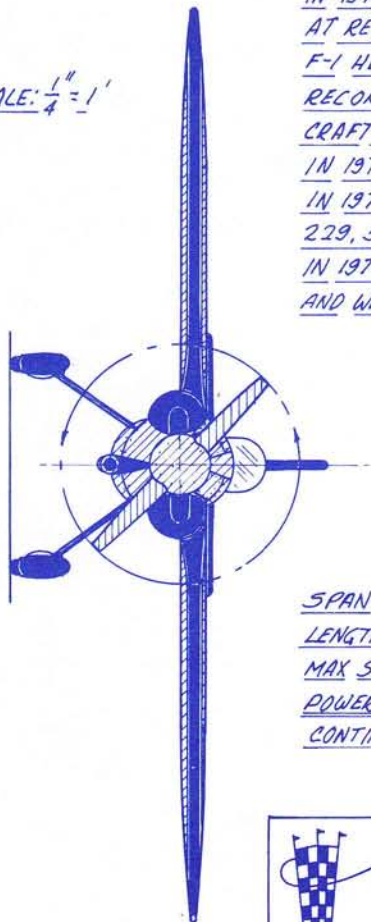


1949 VERSION

NOTE FABRIC COVERED TURTLEDECK IN 1949

DESIGNED, BUILT, DEVELOPED AND RACED BY BILL FALCK "RIVETS" HAS WON OR PLACED IN OVER 20 FORMULA 1 RACES SINCE 1948. (SEE CHART IN FRONT OF BOOK FOR DETAILS.) WITH CURRENT MODIFICATIONS CAN NOW TOP 250 MPH STRAIGHT & LEVEL ALTHOUGH LANDING SPEED IS ONLY 80 MPH.

SCALE:  $\frac{1}{4}'' = 1'$



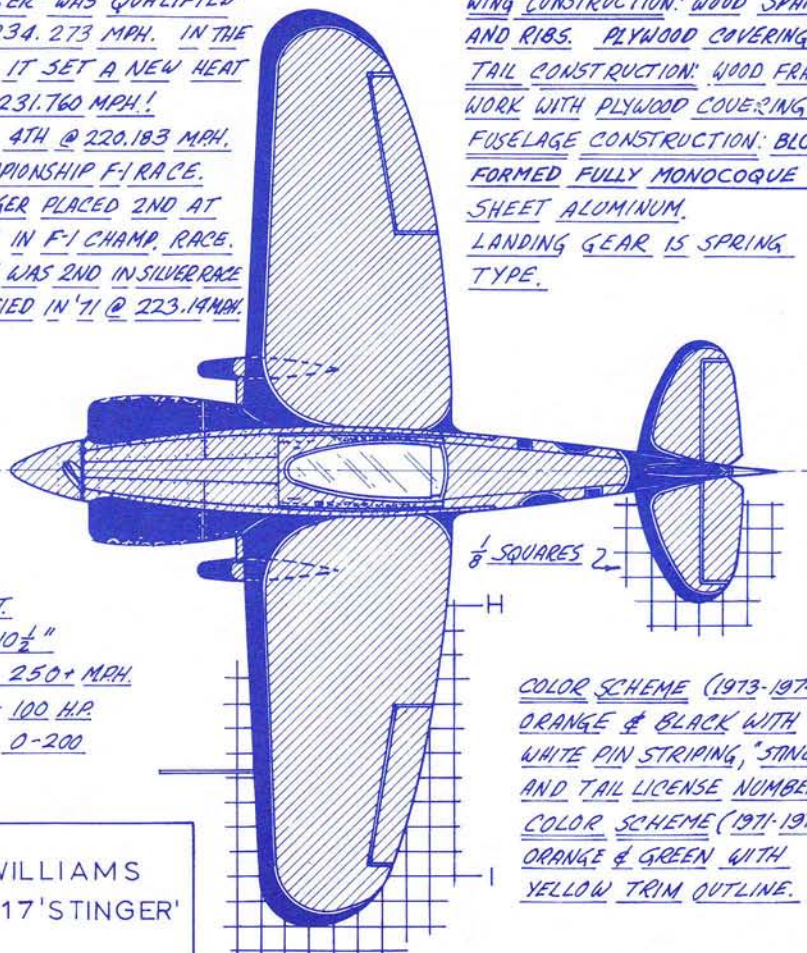
IN 1974 "STINGER" WAS QUALIFIED AT RENO AT 234.273 MPH. IN THE F-1 HEAT 1-B IT SET A NEW HEAT RECORD OF 231.760 MPH! CRAFT PLACED 4TH @ 220.183 MPH. IN 1974 CHAMPIONSHIP F-1 RACE. IN 1973 'STINGER' PLACED 2ND AT 229,543 MPH. IN F-1 CHAMP. RACE. IN 1972 PLANE WAS 2ND IN SILVER RACE AND WAS QUALIFIED IN '71 @ 223.14 MPH.

WING CONSTRUCTION: WOOD SPARS AND RIBS. PLYWOOD COVERING. TAIL CONSTRUCTION: WOOD FRAMEWORK WITH PLYWOOD COVERING. FUSELAGE CONSTRUCTION: BLOCK FORMED FULLY MONOCOQUE SHEET ALUMINUM. LANDING GEAR IS SPRING TYPE.

SPAN - 19 FT.  
LENGTH - 15' 10 1/2"  
MAX SPEED - 250+ MPH.  
POWER PLANT: - 100 H.P.  
CONTINENTAL O-200

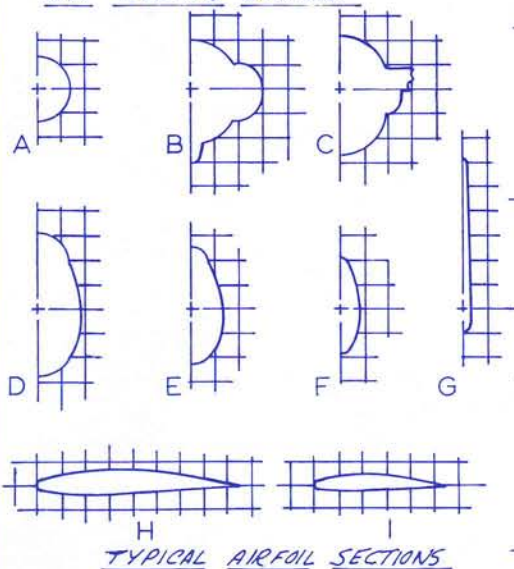


WILLIAMS  
W-17 'STINGER'

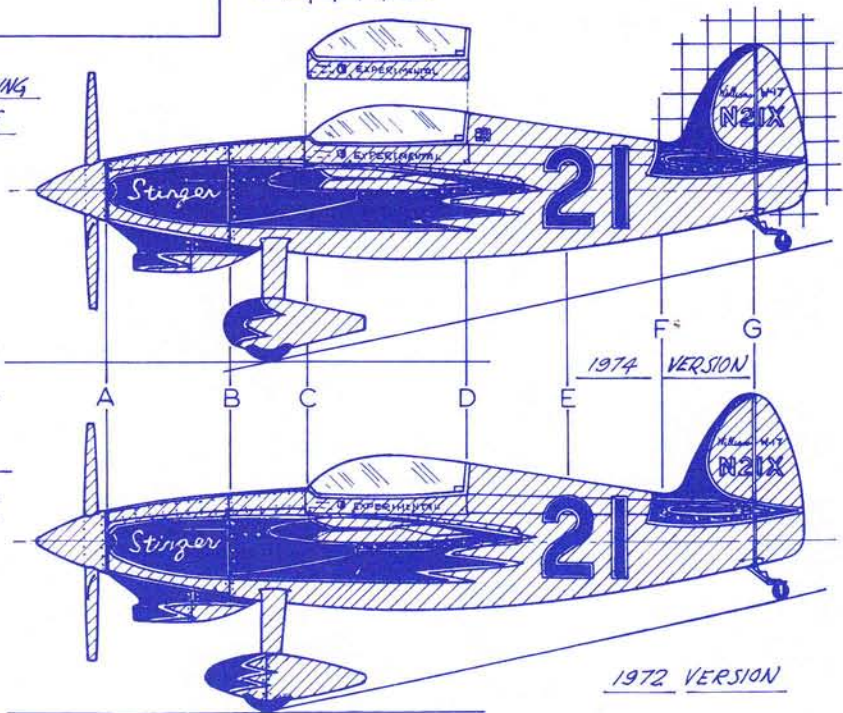


COLOR SCHEME (1973-1974): ORANGE & BLACK WITH WHITE PIN STRIPING, "STINGER" AND TAIL LICENSE NUMBER. COLOR SCHEME (1971-1972) ORANGE & GREEN WITH YELLOW TRIM OUTLINE.

AIRCRAFT WAS BADLY DAMAGED DURING TAXI TESTS AT MOJAVE AFTER THE 1974 RACING SEASON.



TYPICAL AIRFOIL SECTIONS



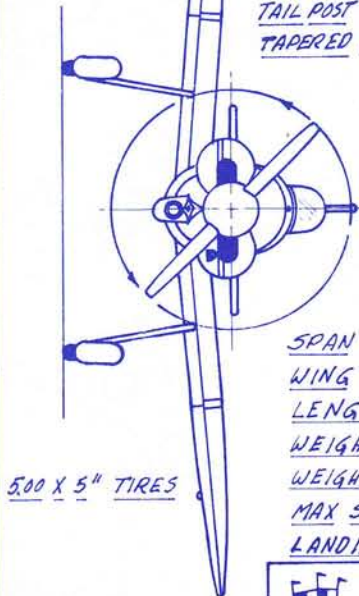
AIRCRAFT WAS DESIGNED BY ART WILLIAMS OF "SUNDANCER" FAME. IT WAS BUILT BY WILLIAMS, JOHN PAUL JONES, DAVID JONES, JOHN ALBRIEGT, CARL AST AND CARL GILMORE. A NEW ENGINE AND NEW WHEEL PANTS WERE ADDED IN 1973. STINGER'S RACING CAREER HAS BEEN ENTIRELY IN THE EXPERIENCED PILOTING HANDS OF JOHN PAUL JONES.

WING CONSTRUCTION:  $5\frac{1}{4}$ " BOX SPAR TAPERED AT TIP. RIBS ARE  $\frac{1}{4}$ " PLYWOOD WITH CAP STRIPS TO PROVIDE GLUING SURFACE. SKIN IS  $\frac{1}{16}$ " BIRCH PLYWOOD

FUSELAGE CONSTRUCTION: SEMI-MONOCOQUE WITH SIDE LONGERONS OF  $\frac{7}{8}$ " BOX SPARS 8" WIDE FROM TAIL POST TO INSTRUMENT PANEL TAPERED TO  $5\frac{1}{2}$ " AT FIREWALL.

FUSE. CONST. (CONT.) COVERED WITH  $\frac{1}{16}$ " BIRCH PLYWOOD IN STRESSED AREAS. NON-STRESSED AREAS COVERED WITH  $\frac{1}{16}$ " MAHOGANY PLYWOOD. COWLING IS FORMED ALUMINUM. FIBERGLASS USED FOR FUEL TANK AND TAILWHEEL SPRING. LANDING GEAR STRUTS ARE FIR AND FIBERGLASS. TAIL ASSY.: ALL WOOD FRAME, PLY. COVERED

SCALE:  $\frac{1}{4}$ " = 1'



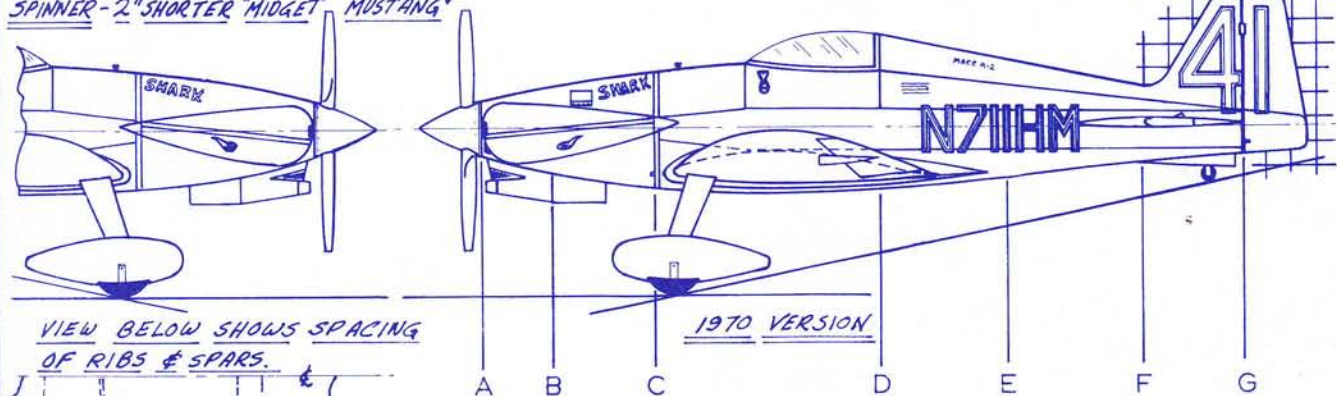
5.00 X 5" TIRES

SPAN - 16'  
WING AREA - 70 FT.<sup>2</sup>  
LENGTH - 18'6"  
WEIGHT EMPTY - 540 LBS.  
WEIGHT - GROSS - 780 LBS.  
MAX SPEED - 245 MPH.  
LANDING SPEED - 65-70 MPH.

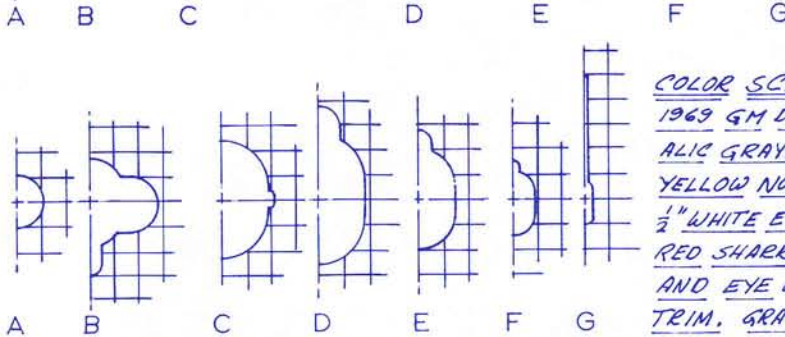
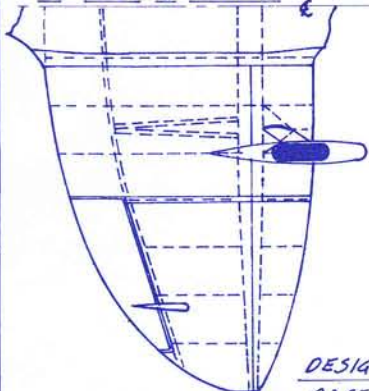


CANOPY - REVERSED ALFORD "OWL"  
SPINNER - 2" SHORTER "MIDGET MUSTANG"

POWERPLANT: CONTINENTAL  
O-200 4 CYLINDER OPPOSED  
ENGINE. 59" X 66" PITCH PROP



VIEW BELOW SHOWS SPACING OF RIBS & SPARS.



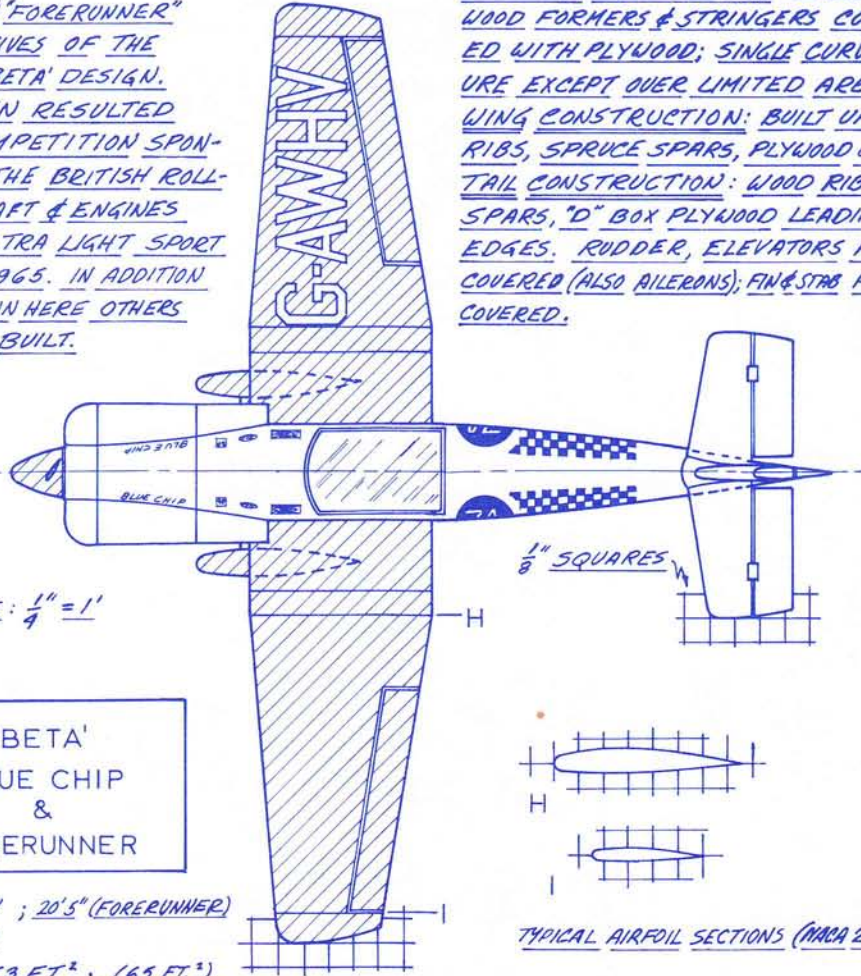
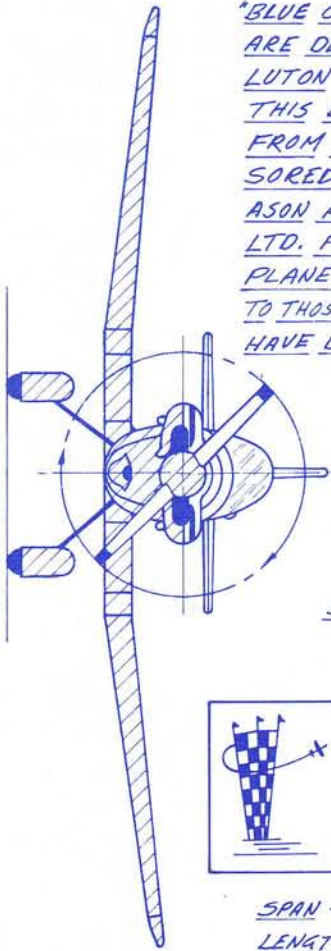
COLOR SCHEME:  
1969 GM DARK METALLIC GRAY. PALE YELLOW NUMBERS WITH  $\frac{1}{2}$ " WHITE EDGE. RED SHARK MOUTH AND EYE WITH BLACK TRIM. GRAY SEAM TAPE.

DESIGNED, BUILT AND FLOWN BY HARVEY MACE. PLACED SECOND IN CONSOLATION RACE AT 1970 RENO RACES AT 193.896 M.P.H.; 4TH IN '75 RENO SILVER RACE-20.5% CR



"BLUE CHIP" & "FORERUNNER" ARE DERIVATIVES OF THE LUTON GP 'BETA' DESIGN. THIS DESIGN RESULTED FROM A COMPETITION SPONSORED BY THE BRITISH ROLLASON AIRCRAFT & ENGINES LTD. FOR ULTRA LIGHT SPORT PLANES IN 1965. IN ADDITION TO THOSE SHOWN HERE OTHERS HAVE BEEN BUILT.

FUSELAGE CONSTRUCTION: BUILT UP WOOD FORMERS & STRINGERS COVERED WITH PLYWOOD; SINGLE CURVATURE EXCEPT OVER LIMITED AREAS. WING CONSTRUCTION: BUILT UP WOOD RIBS, SPRUCE SPARS, PLYWOOD COVER. TAIL CONSTRUCTION: WOOD RIBS & SPARS, "D" BOX PLYWOOD LEADING EDGES. RUDDER, ELEVATORS FABRIC COVERED (ALSO AILERONS); FIN & STAB PLYWOOD COVERED.

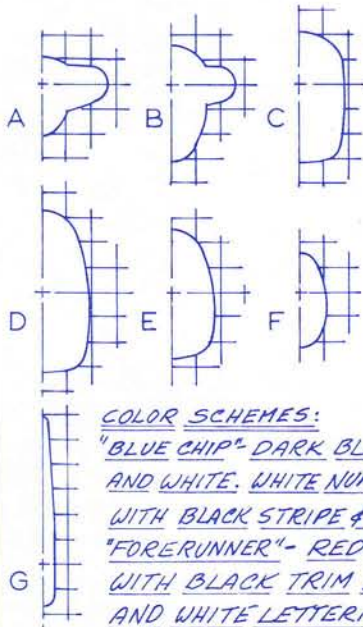
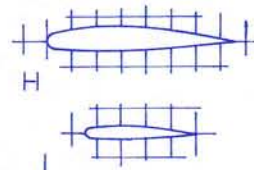


SCALE:  $\frac{1}{4}'' = 1'$

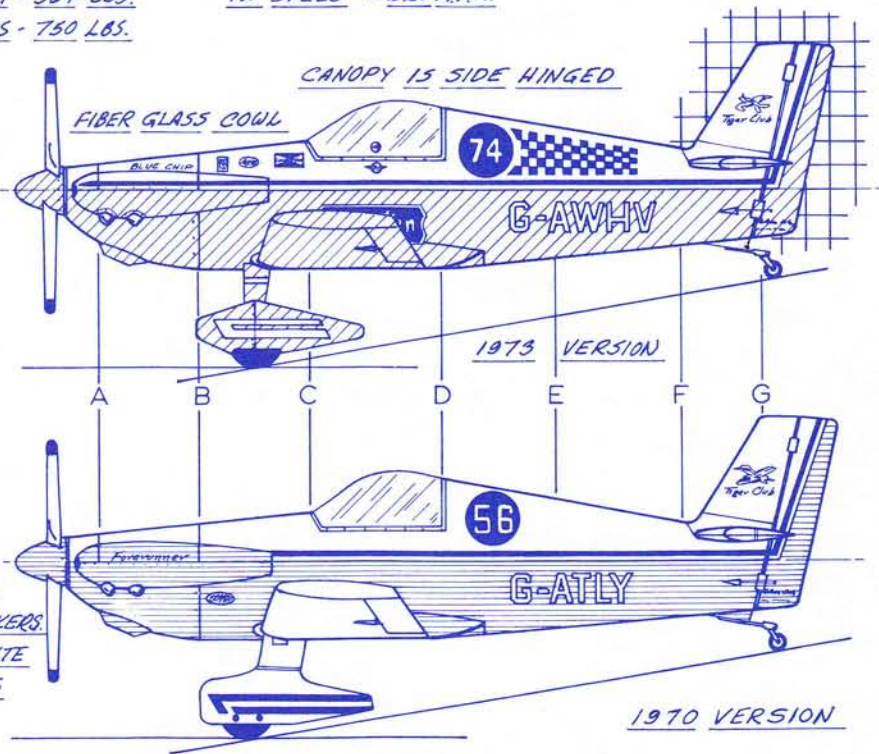


SPAN - 19' 3" ; 20' 5" (FORERUNNER)  
 LENGTH - 17'  
 WING AREA  $\approx$  63 FT<sup>2</sup> ; (65 FT<sup>2</sup>)  
 WEIGHT EMPTY - 564 LBS. TOP SPEED  $\approx$  220 MPH.  
 WEIGHT-GROSS - 750 LBS.

TYPICAL AIRFOIL SECTIONS (NACA 29012)



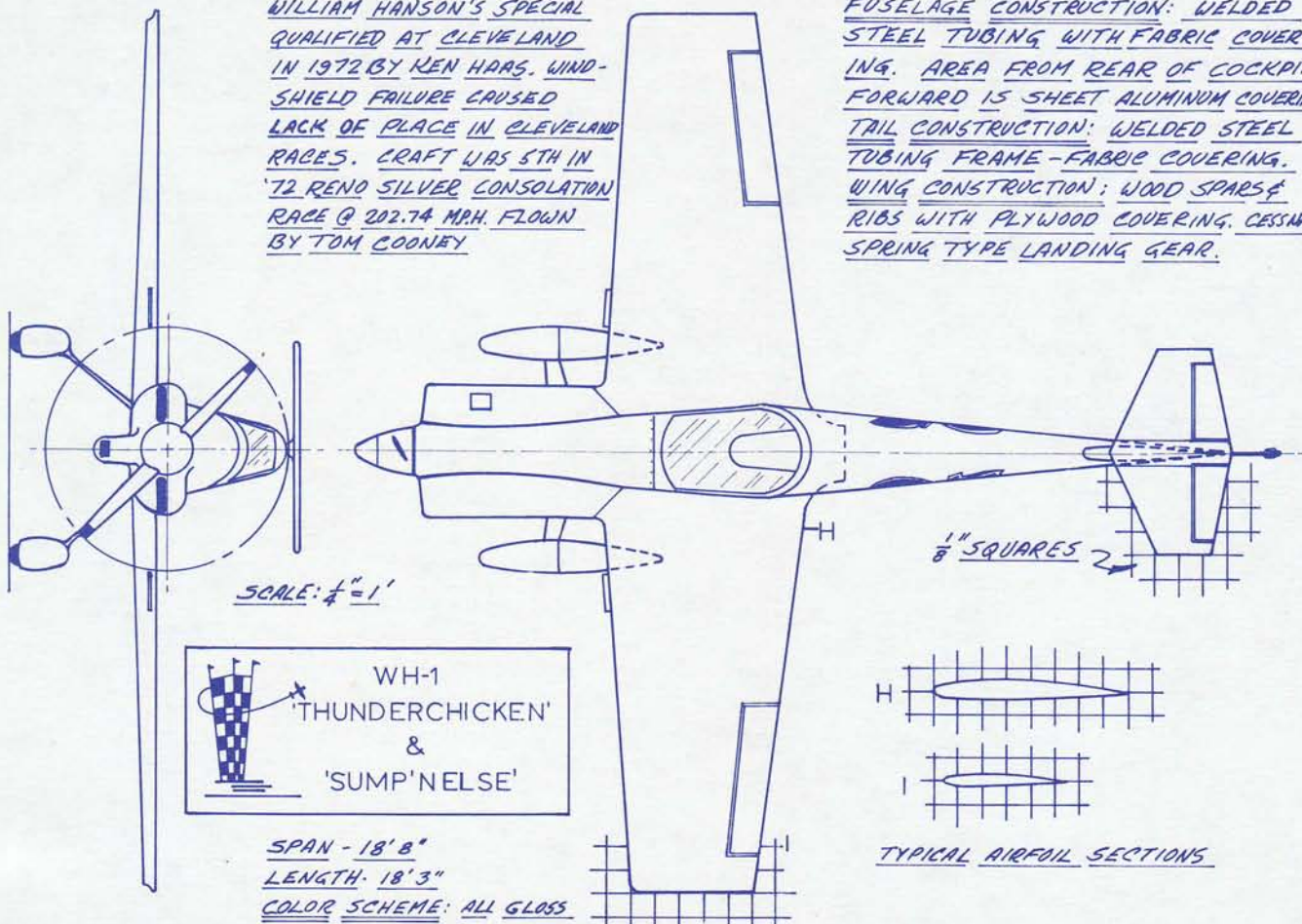
COLOR SCHEMES:  
 "BLUE CHIP" - DARK BLUE & WHITE. WHITE NUMERAL WITH BLACK STRIPE & CHECKERS.  
 "FORERUNNER" - RED & WHITE WITH BLACK TRIM LINES AND WHITE LETTERING.



AIRCRAFT ARE FLOWN IN STRICTLY BRITISH RACES SUCH AS HEINEREN TROPHY, MACKENZIE HILL TROPHY, ETC.

WILLIAM HANSON'S SPECIAL QUALIFIED AT CLEVELAND IN 1972 BY KEN HARS. WINDSHIELD FAILURE CAUSED LACK OF PLACE IN CLEVELAND RACES. CRAFT WAS 5TH IN '72 RENO SILVER CONSOLATION RACE @ 202.74 MPH. FLOWN BY TOM COONEY

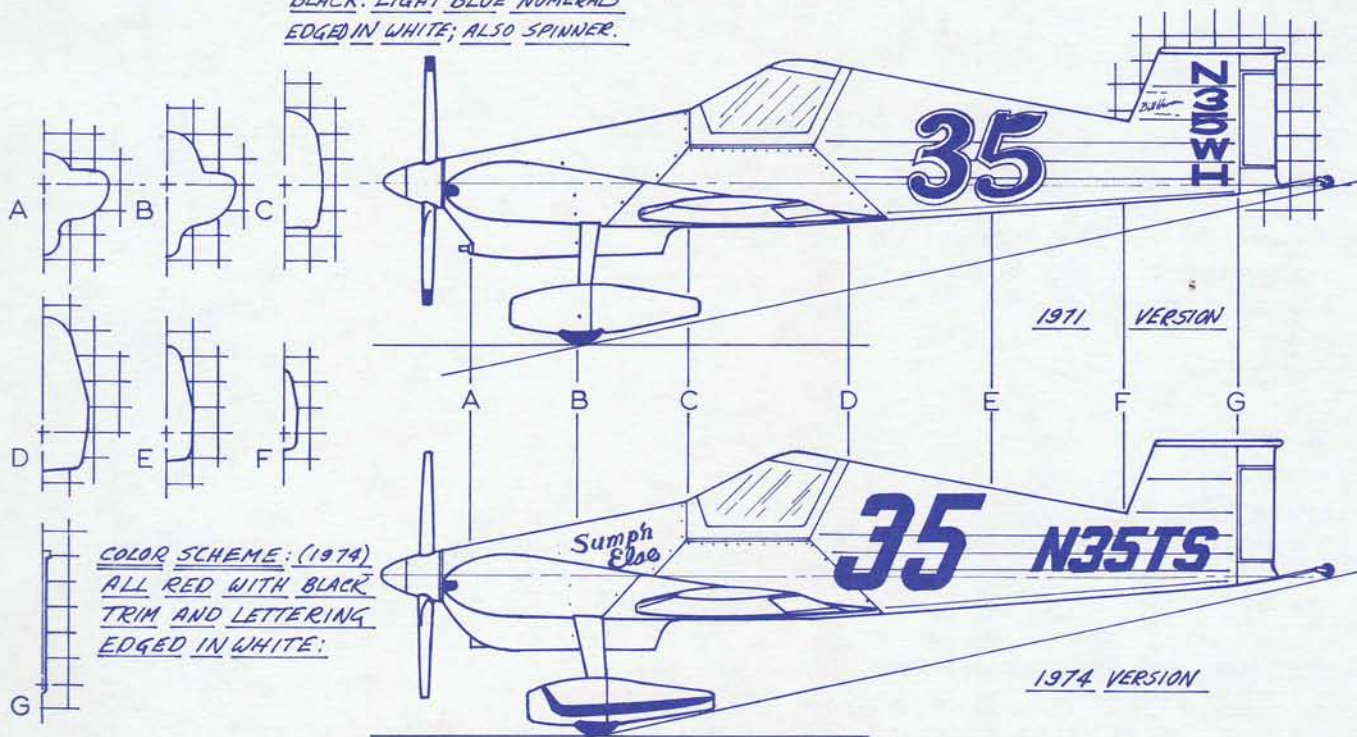
FUSELAGE CONSTRUCTION: WELDED STEEL TUBING WITH FABRIC COVERING. AREA FROM REAR OF COCKPIT FORWARD IS SHEET ALUMINUM COVERING. TAIL CONSTRUCTION: WELDED STEEL TUBING FRAME - FABRIC COVERING. WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING. CESSNA SPRING TYPE LANDING GEAR.



WH-1  
'THUNDERCHICKEN'  
&  
'SUMP'NELSE'

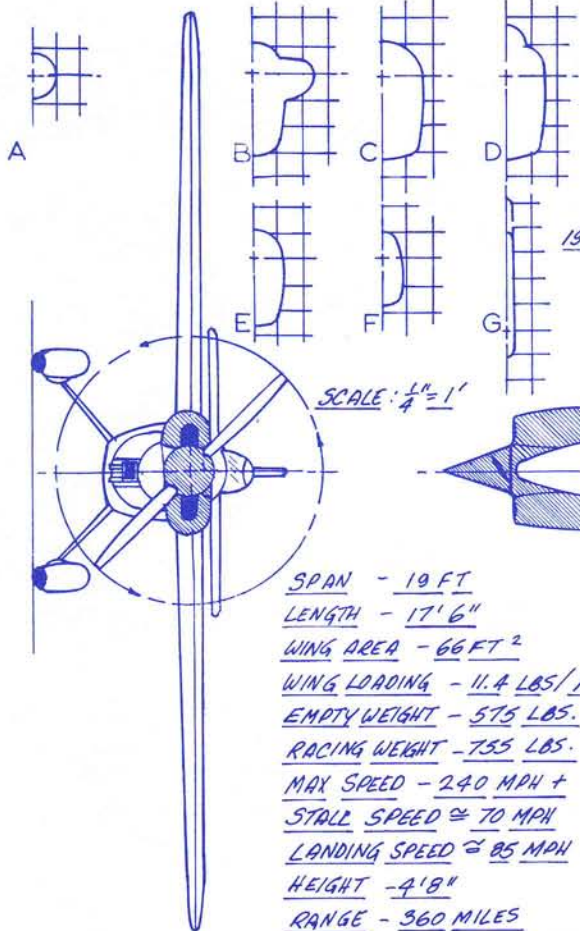
SPAN - 18' 8"  
LENGTH - 18' 3"  
COLOR SCHEME: ALL GLOSS BLACK. LIGHT BLUE NUMERALS EDGED IN WHITE; ALSO SPINNER.

TYPICAL AIRFOIL SECTIONS



COLOR SCHEME: (1974)  
ALL RED WITH BLACK TRIM AND LETTERING EDGED IN WHITE:

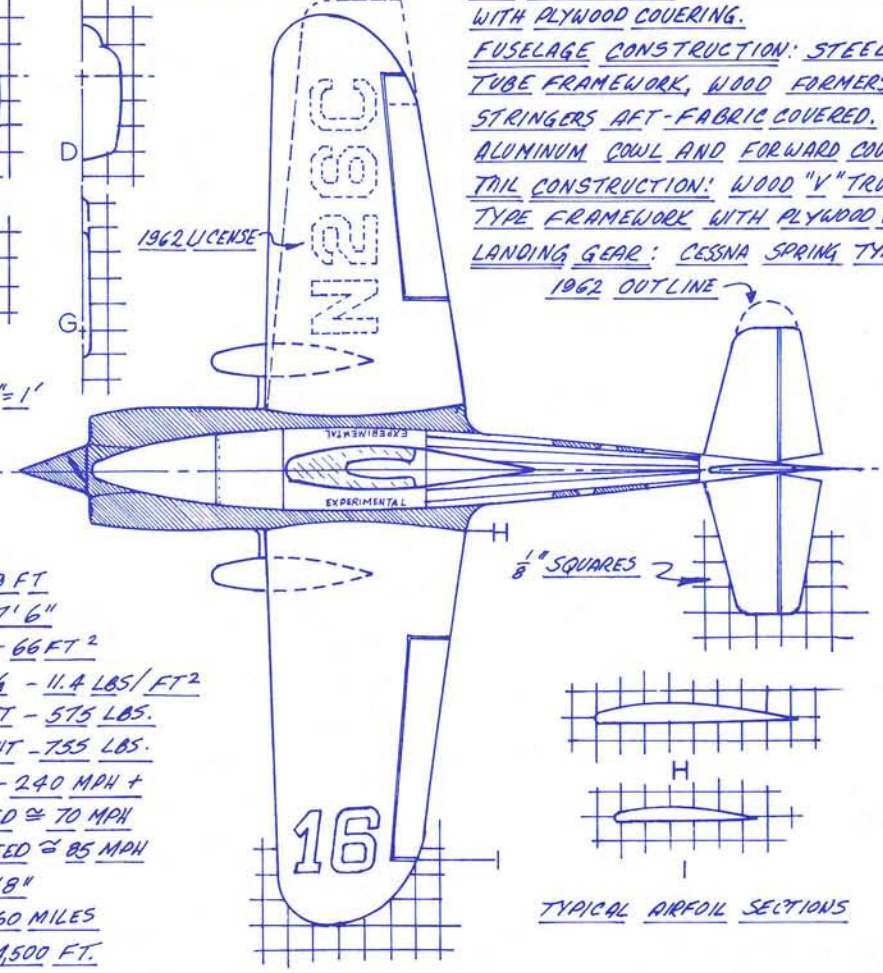
WHILE NAMED "THUNDERCHICKEN" @ RENO IN '72; WAS RENAMED (AN RE-PAINTED) FOR RENO '74 BUT DID NOT QUALIFY. FLOWN BY THOMAS SUMMERS IN '75 RENO SILVER CONSOLATION RACE TO 3RD PLACE AT 204.69 MPH CH



SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 19 FT  
 LENGTH - 17' 6"  
 WING AREA - 66 FT<sup>2</sup>  
 WING LOADING - 11.4 LBS/FT<sup>2</sup>  
 EMPTY WEIGHT - 575 LBS.  
 RACING WEIGHT - 755 LBS.  
 MAX SPEED - 240 MPH +  
 STALL SPEED  $\approx$  70 MPH  
 LANDING SPEED  $\approx$  85 MPH  
 HEIGHT - 4' 8"  
 RANGE - 360 MILES  
 CEILING - 24,500 FT.

1973 WING OUTLINE



WING CONSTRUCTION: WOOD SPARS AND RIBS WITH PLYWOOD COVERING.  
FUSELAGE CONSTRUCTION: STEEL TUBE FRAMEWORK, WOOD FORMERS & STRINGERS AFT-FABRIC COVERING.  
ALUMINUM COOL AND FORWARD COVERING  
TAIL CONSTRUCTION: WOOD "V" TRUSS TYPE FRAMEWORK WITH PLYWOOD COVER.  
LANDING GEAR: CESSNA SPRING TYPE

1962 OUTLINE



'SHOESTRING'

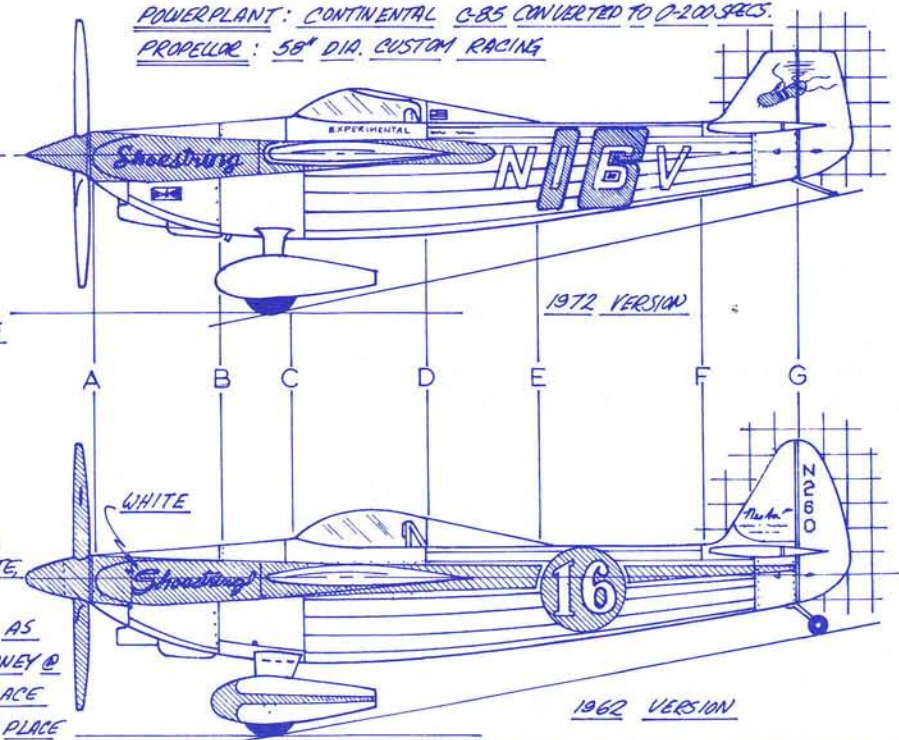
COLOR SCHEME: LIGHT BLUE/GRAY OVERALL WITH CORAL PINK TRIM. NUMERALS ARE WHITE-FUSELAGE NUMBERS ARE OUTLINED IN PINK WITH BLACK TRIM. "SHOESTRING" IS BLACK.

COLOR SCHEME (1967 VERSION): ALL CHARTREUSE WITH RED TRIM.

"SHOESTRING" WAS DESIGNED BY ROD KREIMENDAH AND BUILT BY CARL & VINCENT AST, LATER MODIFIED TO PRESENT CONFIGURATION BY RAY COTE, KEN STOCKBARGER & CLARK HUSTON.

THE RACE RECORD OF SHOESTRING IS AS FOLLOWS: 1949-7TH PLACE WITH DOWNEY @ CLEVELAND -171.4 MPH; 1950-3RD PLACE WITH DOWNEY, MIAMI-181.3 MPH; 1951-1ST PLACE WITH JONES, DETROIT, 197.2 MPH; 1956 4TH PLACE WITH COLE, NIAGARA FALLS 191.4 MPH; 1957 5TH PLACE WITH OHM, FT. WAYNE, 187.1 MPH; 1958 4TH PLACE WITH TYGERT, FULTON, 189.3 MPH; 1967 3RD PLACE WITH COTE, RENO, 200.6 MPH; 1968 THRU 1975; RAY COTE WON FORMULA ONE AT RENO WITH SPEEDS UP TO 227.5 MPH. -"SHOESTRING" IS AN ALL-TIME GREAT!

POWERPLANT: CONTINENTAL C-85 CONVERTED TO O-200 SECS.  
PROPELLOR: 58" DIA. CUSTOM RACING



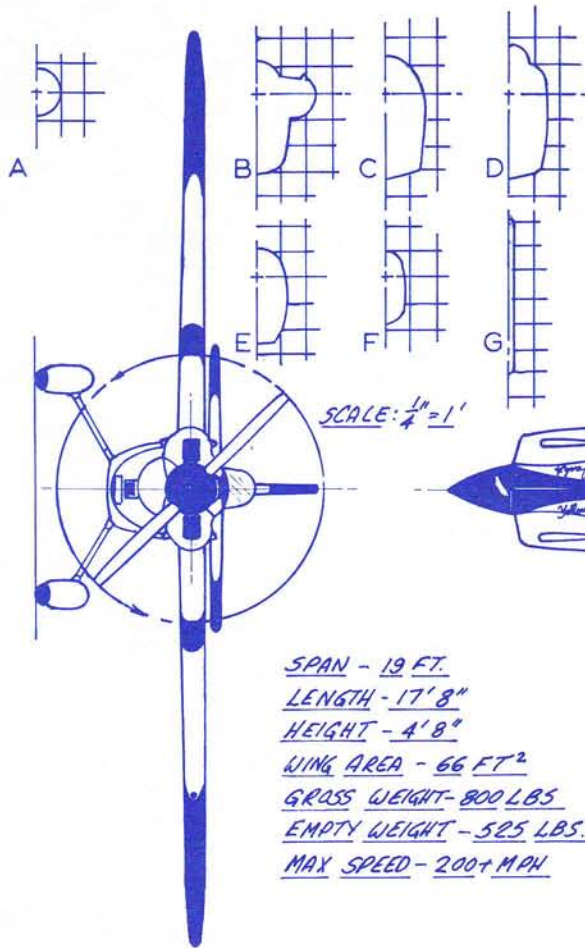
WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING.

FUSELAGE CONSTRUCTION: STEEL TUBE FRAMEWORK, WOOD FORMERS AND STRINGERS-FABRIC COVERED AFT.

COWL & FAIRINGS ARE FIBER GLASS.

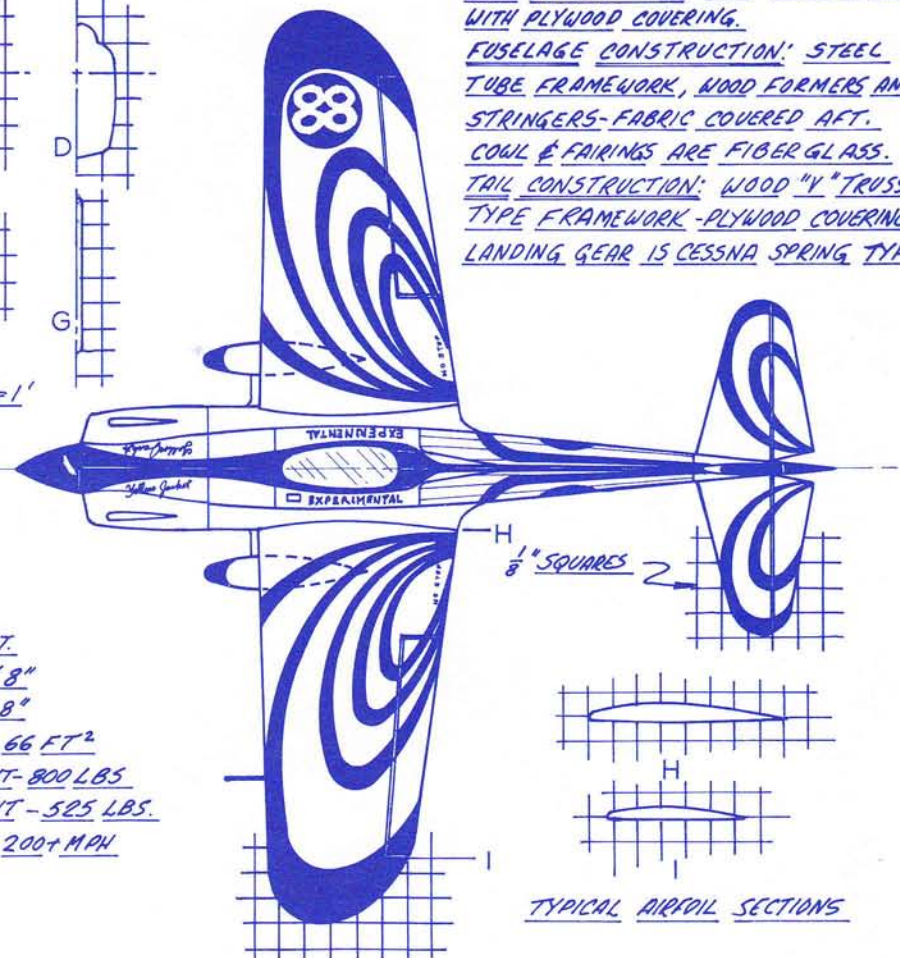
TAIL CONSTRUCTION: WOOD "Y" TRUSS TYPE FRAMEWORK-PLYWOOD COVERING

LANDING GEAR IS CESSNA SPRING TYPE

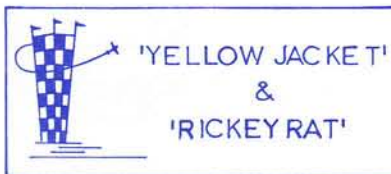


SCALE:  $\frac{1}{4}'' = 1'$

SPAN - 19 FT.  
 LENGTH - 17' 8"  
 HEIGHT - 4' 8"  
 WING AREA - 66 FT<sup>2</sup>  
 GROSS WEIGHT - 800 LBS  
 EMPTY WEIGHT - 525 LBS.  
 MAX SPEED - 200+ MPH



TYPICAL AIRFOIL SECTIONS



'YELLOW JACKET'  
 &  
 'RICKEY RAT'

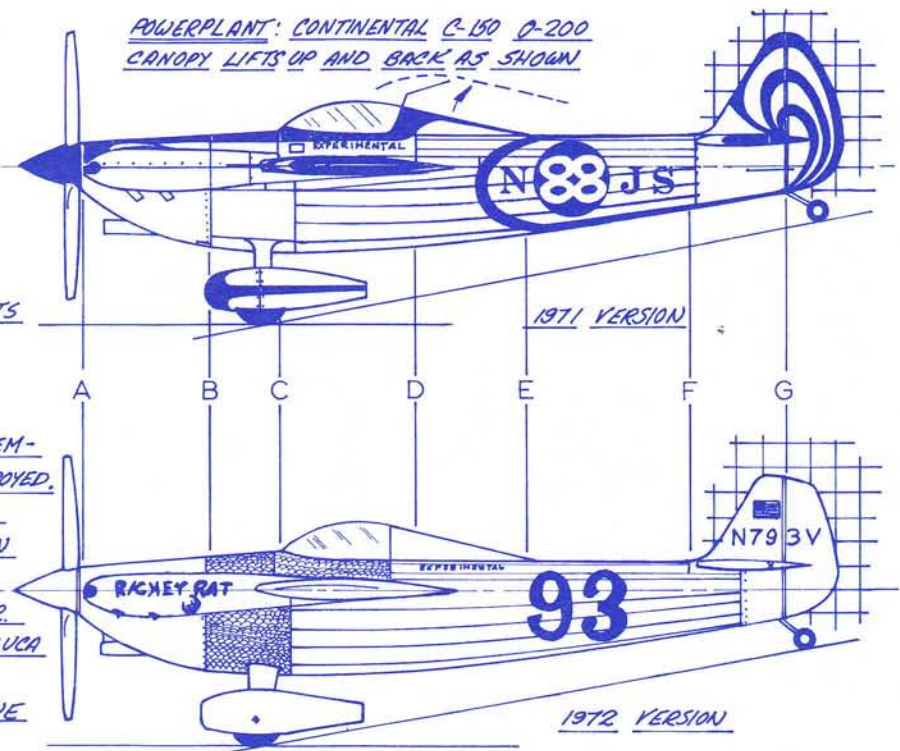
"YELLOW JACKET" WAS BUILT BY JIM STRODE FROM PLANS BY LANDIS KETNER. KETNER PREPARED THE PLANS FROM ACTUAL MEASUREMENTS TAKEN FROM "SHOESTRING" WHILE IT WAS OWNED BY JOHN ANDERSON. THIS WAS DONE AS THE ORIGINAL DRAWINGS & DATA DONE BY ROD KRIEM-ENDAHL IN 1949 WERE LOST OR DESTROYED.

COLOR SCHEME: ALL GLOSS YELLOW WITH ALL BLACK MARKINGS. GREEN TINTED CANOPY. CRAFT RACED IN '72 AT WILSON BY HUGH ALEXANDER.

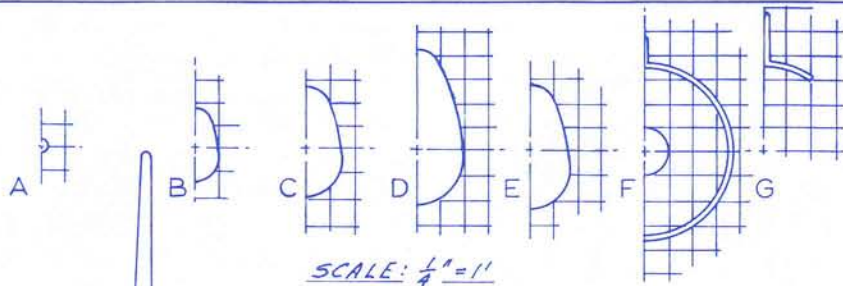
"RICKEY RAT" OWNED BY VINCENT DELUCA HAS RACED AT RENO

COLOR SCHEME: SILVER AND BLUE

POWERPLANT: CONTINENTAL C-150 Q-200  
CANOPY LIFTS UP AND BACK AS SHOWN



OTHER K-10 "SHOESTRINGS" BUILT FROM THE KETNER PLANS INCLUDE MUNROE LYETH JR'S "NO BIG THING" AND JUDY WAGNER'S SOLUTION.

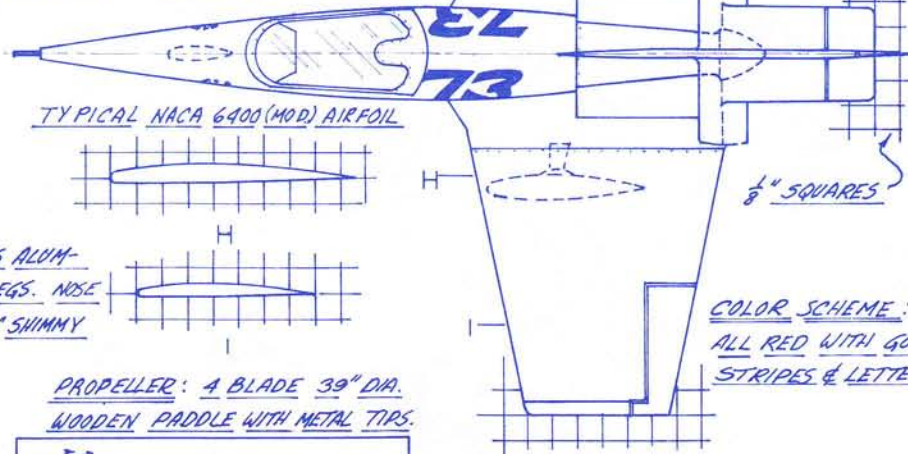
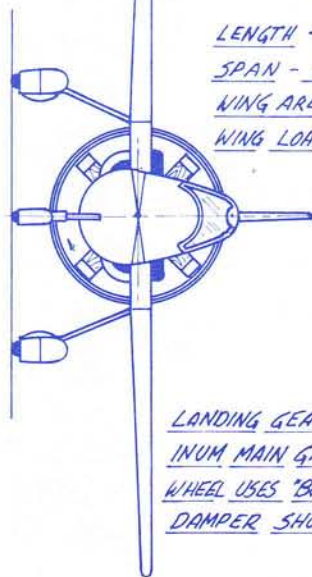


SCALE:  $\frac{1}{4}'' = 1'$

LENGTH - 19' (18' $\frac{7}{8}$ ) RENO '74 GROSS WEIGHT - 1000 LBS.  
 SPAN - 15' EMPTY WEIGHT - 600 LBS.  
 WING AREA - 66 FT<sup>2</sup> MAX SPEED - 235 MPH.  
 WING LOADING - 15 LB./FT<sup>2</sup> STALL SPEED - 74 MPH.

WING CONSTRUCTION: WELDED STEEL TUBE CENTER SECTION; ALUMINUM RIBS AND I-BEAM SPARS ON OUTER SECTIONS; MOLDED FIBERGLASS SKIN ON BOTH.

FUSELAGE CONST.: WELDED STEEL TUBE FRAME WITH MOLDED FIBERGLASS COVERING



TYPICAL NACA 6400 (MOD) AIRFOIL

LANDING GEAR HAS ALUMINUM MAIN GEAR LEGS. NOSE WHEEL USES "BONANZIA" SHIMMY DAMPER SHOCK.

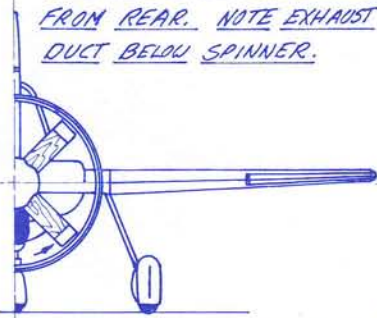
PROPELLER: 4 BLADE 39" DIA. WOODEN PADDLE WITH METAL TIPS.

COLOR SCHEME: ALL RED WITH GOLD STRIPES & LETTERING.

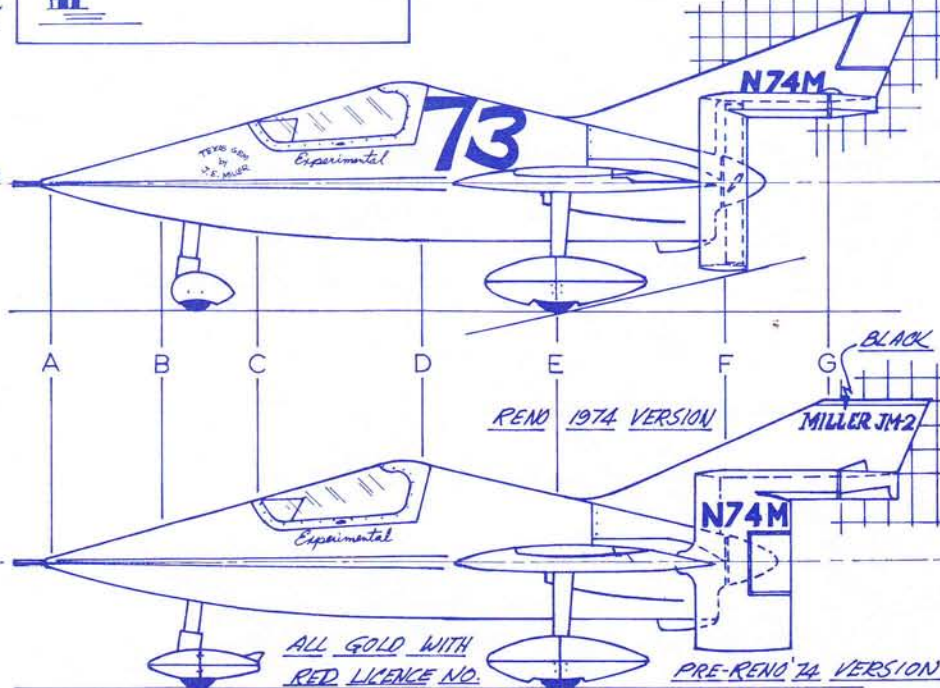
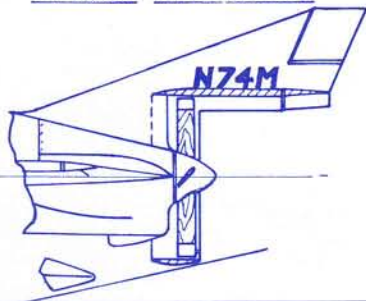
POWERPLANT: CONTINENTAL 100H.P. O-200B.



VIEW BELOW SHOWS AIRCRAFT FROM REAR. NOTE EXHAUST DUCT BELOW SPINNER.



VIEW BELOW SHOWS PROP. & SPINNER ARRANGEMENT.



ALL GOLD WITH RED LICENCE NO.

PRE-RENO '74 VERSION

"TEXAS GEM", A VERY RADICAL DEPARTURE IN DESIGN FROM THE USUAL FORMULA ONE RACER, WAS DESIGNED, BUILT, AND FLOWN IN THE 1974 RENO F-1 QUALIFYING TIME TRIALS BY JIM MILLER. (DESIGNER OF "LITTLE GEM", NOW "OLE TIGER"). DUE TO HIGH PROP RPM PROBLEMS CRAFT QUALIFIED AT ONLY 181.8 MPH.

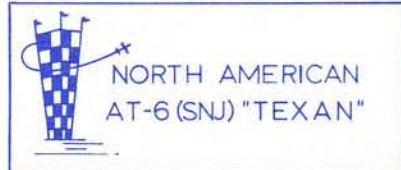
WING CONSTRUCTION: ALUMINUM SPARS AND RIBS WITH FLUSH RIVETED STRESSED SKIN. AILERONS ARE FABRIC COVERED.  
FUSELAGE CONSTRUCTION: ALL ALUMINUM WITH FLUSH RIVETED STRESSED SKIN.  
TAIL CONSTRUCTION: ALL ALUMINUM EXCEPT FABRIC COVERED RUDDER & ELEVATOR

COLOR SCHEME: ALL BRONZE WITH WHITE TRIM (SHOWN BLACK).

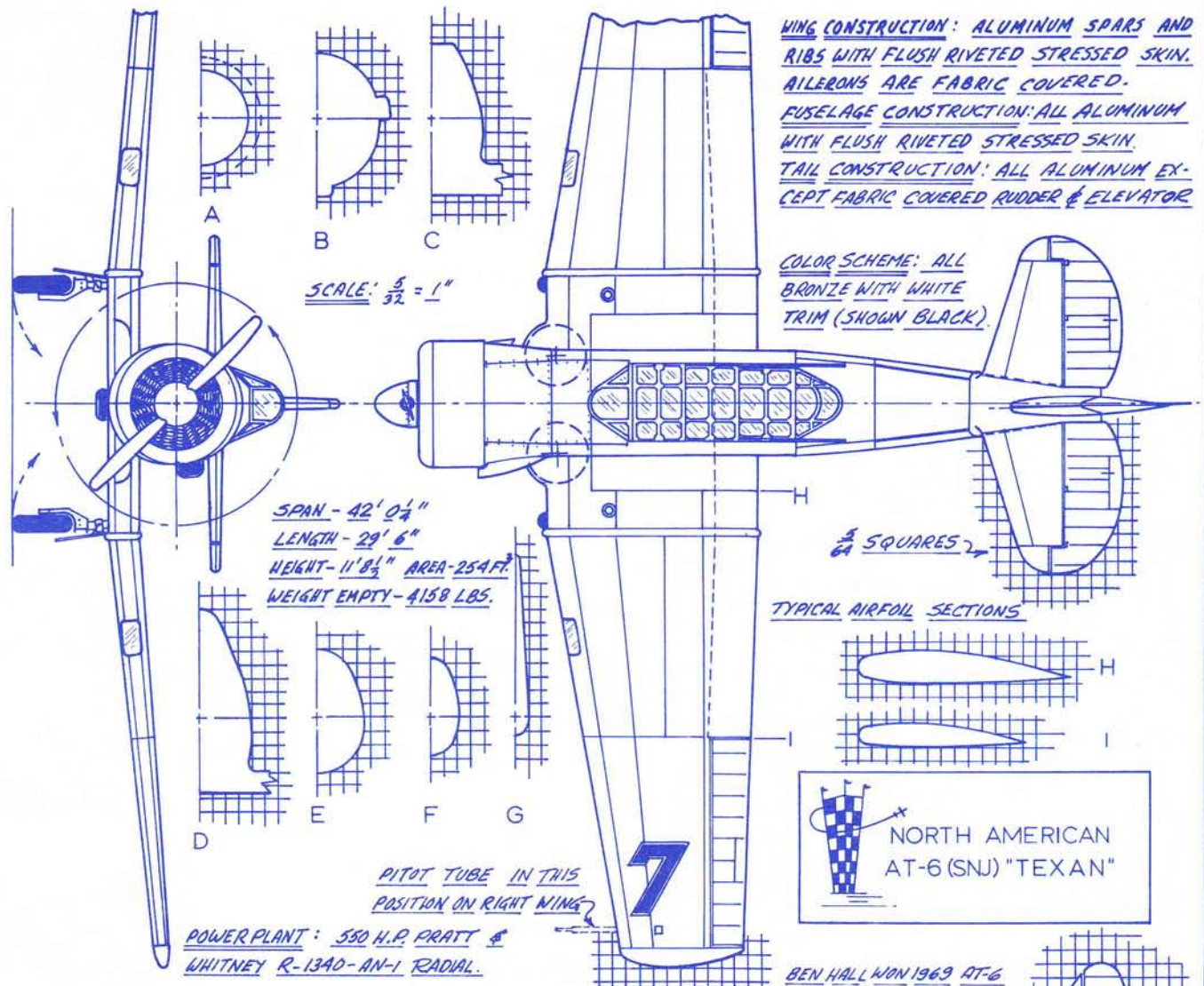
SCALE:  $\frac{5}{32} = 1"$

SPAN - 42' 0 1/4"  
 LENGTH - 29' 6"  
 HEIGHT - 11' 8 1/2"  
 AREA - 254 FT.<sup>2</sup>  
 WEIGHT EMPTY - 4158 LBS.

TYPICAL AIRFOIL SECTIONS

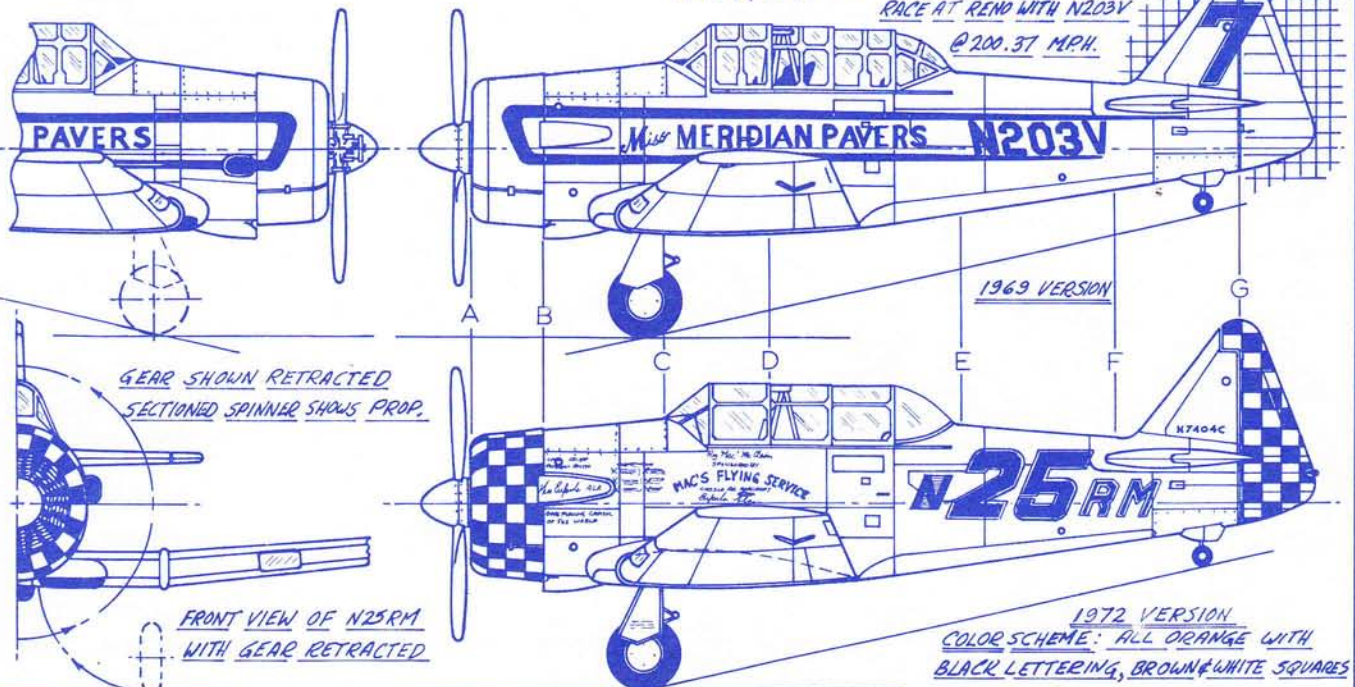


BEN HALL WON 1969 AT-6 RACE AT RENO WITH N203V @ 200.37 MPH.



POWER PLANT: 550 H.P. PRATT & WHITNEY R-1340-AN-1 RADIAL.

PITOT TUBE IN THIS POSITION ON RIGHT WING



GEAR SHOWN RETRACTED SECTIONED SPINNER SHOWS PROP.

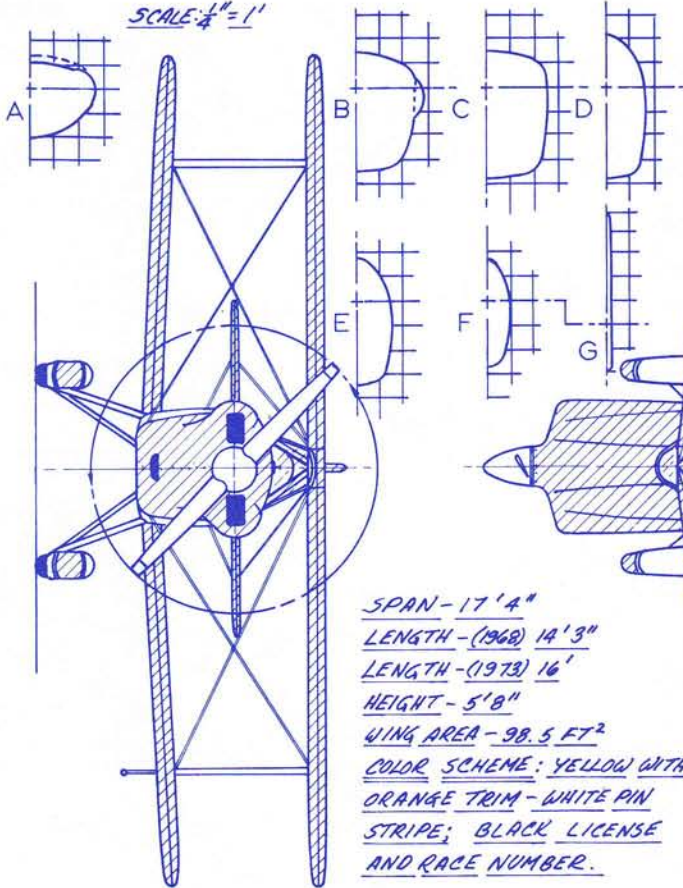
FRONT VIEW OF N25RM WITH GEAR RETRACTED

1972 VERSION  
 COLOR SCHEME: ALL ORANGE WITH BLACK LETTERING, BROWN & WHITE SQUARES

THE ABOVE AT-6C FLOWN BY ROY E. McCLAIN WAS THE 1972 RENO CHAMPIONSHIP WINNER AT 201.587 MPH.

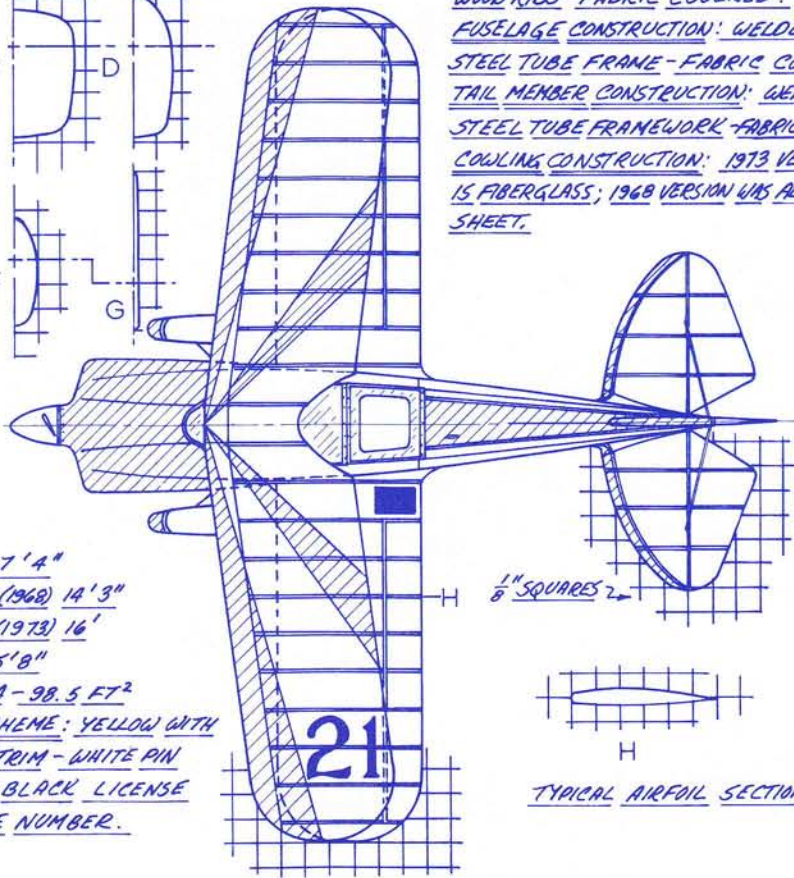
CA

SCALE:  $\frac{1}{4}'' = 1'$



SPAN - 17' 4"  
 LENGTH - (1968) 14' 3"  
 LENGTH - (1973) 16'  
 HEIGHT - 5' 8"  
 WING AREA - 98.5 FT<sup>2</sup>  
 COLOR SCHEME: YELLOW WITH  
 ORANGE TRIM - WHITE PIN  
 STRIPE; BLACK LICENSE  
 AND RACE NUMBER.

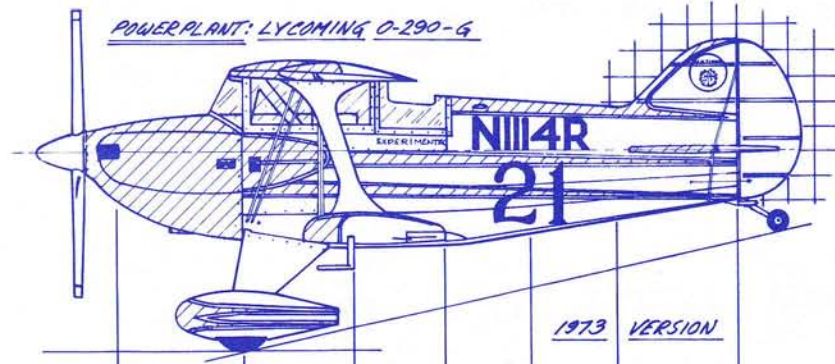
WING CONSTRUCTION: SPRUCE SPARS,  
 WOOD RIBS - FABRIC COVERED.  
 FUSELAGE CONSTRUCTION: WELDED  
 STEEL TUBE FRAME - FABRIC COVERED.  
 TAIL MEMBER CONSTRUCTION: WELDED  
 STEEL TUBE FRAMEWORK - FABRIC COVER.  
 COWLING CONSTRUCTION: 1973 VERSION  
 IS FIBERGLASS; 1968 VERSION WAS ALUMINUM  
 SHEET.



TYPICAL AIRFOIL SECTION



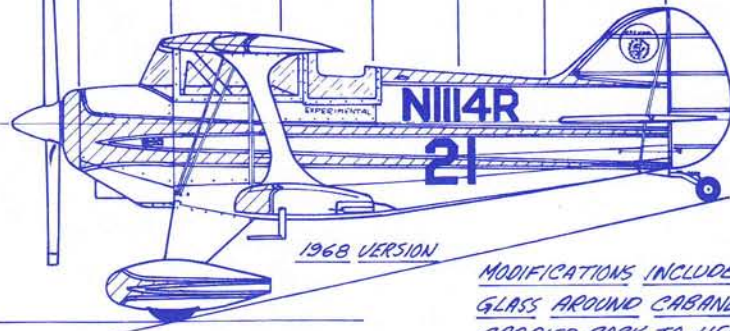
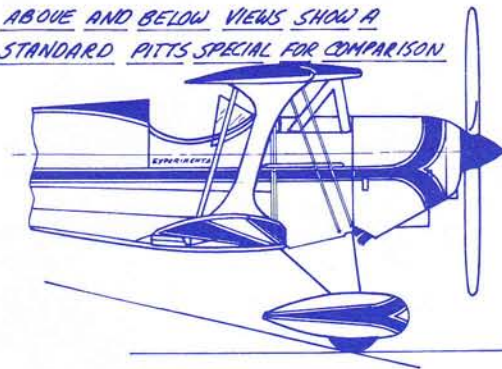
POWER PLANT: LYCOMING O-290-G



1973 VERSION

NOT TO SCALE

ABOVE AND BELOW VIEWS SHOW A  
 STANDARD PITTS SPECIAL FOR COMPARISON

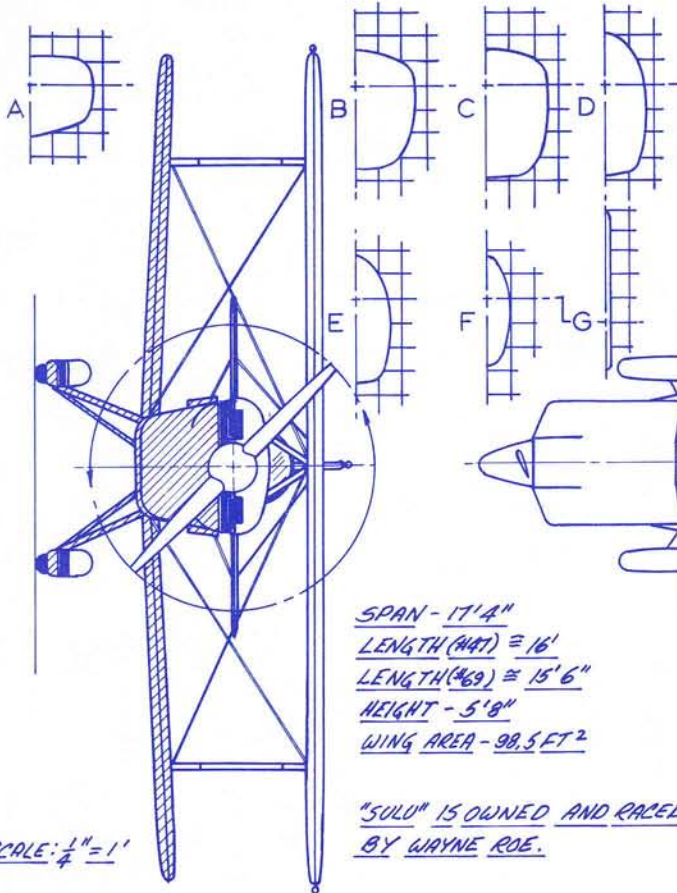


1968 VERSION

MODIFICATIONS INCLUDE PLEXI-  
 GLASS AROUND CABANE STRUTS  
 CARRIED BACK TO HEADREST

#21 IS OWNED AND RACED BY L.J. "SKEETER" ROYALL. CRAFT HAS BEEN RACED SINCE HE BUILT IT IN 1968  
 WITH FIRST RACE AT FREDERICK MD. (68). HE WON FINAL EVENT AT FT. LAUDERDALE IN 1969. AIRCRAFT  
 PILOTTED BY DAVID GARBER WON 1973 MIAMI SPORT BIPLANE FINALS AT 173.08 M.P.H.

CH



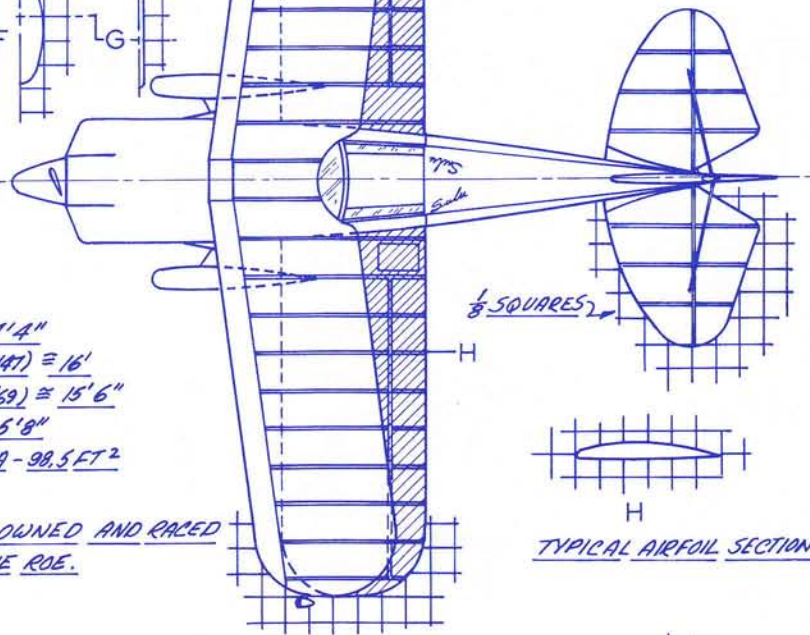
SPAN - 17'4"  
 LENGTH (#47)  $\approx$  16'  
 LENGTH (#69)  $\approx$  15'6"  
 HEIGHT - 5'8"  
 WING AREA - 98.5 FT<sup>2</sup>

"SULU" IS OWNED AND RACED  
 BY WAYNE ROE.

SCALE:  $\frac{1}{4}'' = 1'$

AIRCRAFT CONSTRUCTION:  
 SAME AS PITTS SPECIAL #21 SHOWN  
 ON OPPOSITE PAGE.

COLOR SCHEME:  
 AIRCRAFT IS RED AND WHITE WITH  
 BLACK STRIPES. RACE NUMBER AND  
 'SULU' IS RED. LOWER WING IS RED.

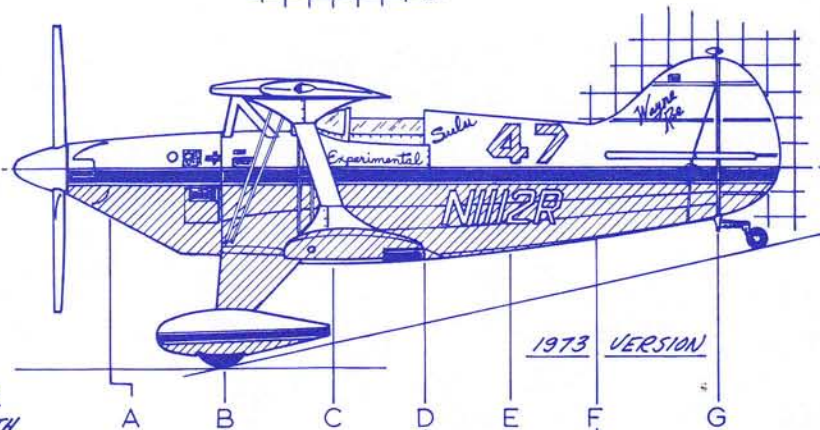
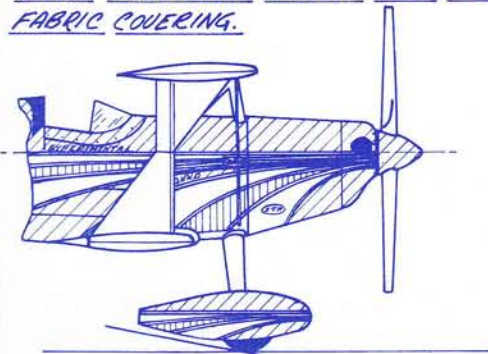


$\frac{1}{8}$  SQUARES

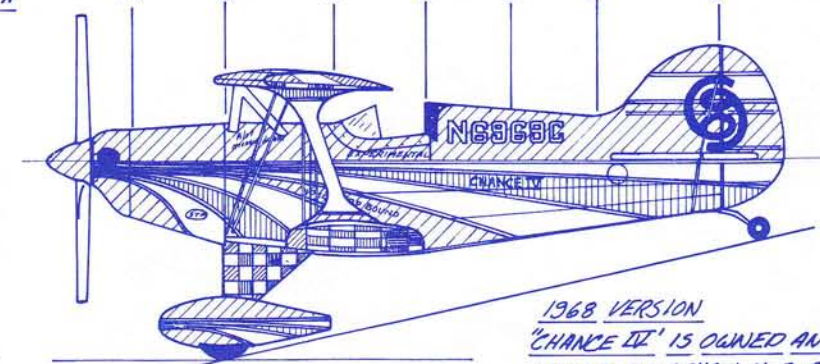
H  
 TYPICAL AIRFOIL SECTION



1971 VERSION OF #69 SHOWN BELOW  
 FEATURES STRAIGHT LAMINAR FLOW  
 WINGS BUILT UP OF PLASTIC FOAM &  
 WOOD SPARS - COVERED WITH FIBERGLASS.  
 TUBING INTERPLANE STRUTS SHOWN WITH  
 FABRIC COVERING.



1973 VERSION



1968 VERSION  
 "CHANCE IV" IS OWNED AND  
 RACED BY MICHAEL H. DUPONT.

COLOR SCHEME ON #69 IS RED, WHITE AND NAVY BLUE. CHECKERBOARD IS ON UNDERSIDE OF WINGS WITH  
 SUNBURST STRIPING ON UPPER SURFACES - LIKEWISE FOR STABILIZER. (1968 VERSION). THESE TWO PAGES  
 ARE REPRESENTATIVE OF THE SEVERAL OTHER RACING PITTS SPECIALS.



FUSELAGE CONSTRUCTION: WELDED STEEL TUBING; FABRIC COVERED  
AFT. - ALUMINUM COUPLING & AROUND COCKPIT.

WING CONSTRUCTION: WOOD SPARS & RIBS - FABRIC COVERED

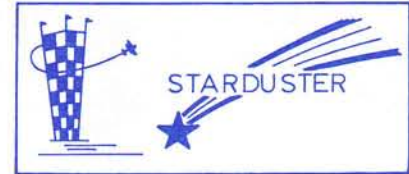
TAIL CONSTRUCTION: WELDED STEEL - FABRIC COVERED

SCALE:  $\frac{1}{4}'' = 1'$

ENGINE: 125 H.P.  
 LYCOMING O-290-64

$\frac{1}{8}''$  SQUARES

1ST RACED RENO '66 BY GORDEN NAUTA



TYP. STARDUSTER SA-100A SPECS:

SPAN-19' LENGTH-16'-6"

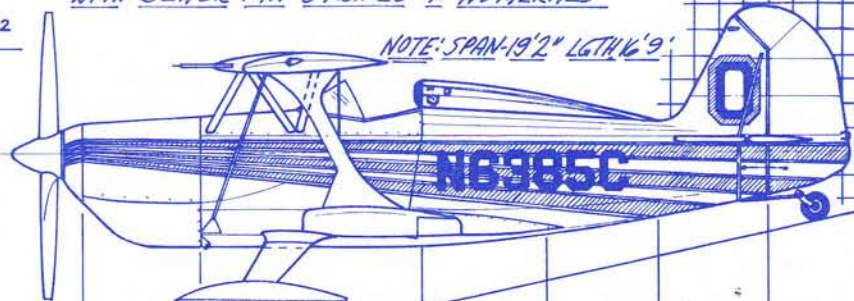
HGT.-6'6" WING AREA 110 FT<sup>2</sup>

GROSS WHT.-1080 LBS.

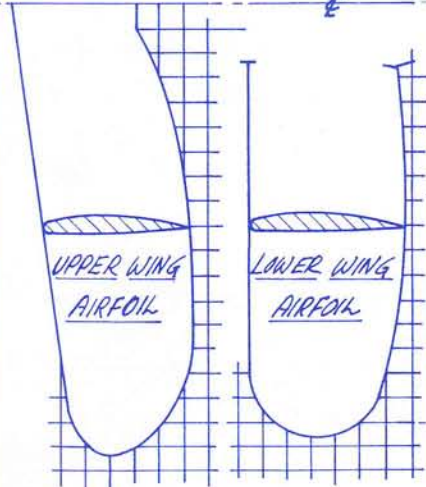
EMPTY WHT.-700 LBS.

COLOR SCHEME: RED-ORANGE - GOLD TRIM  
WITH BLACK PIN STRIPES & NUMERALS

NOTE: SPAN-19'2" LGTH-16'9"

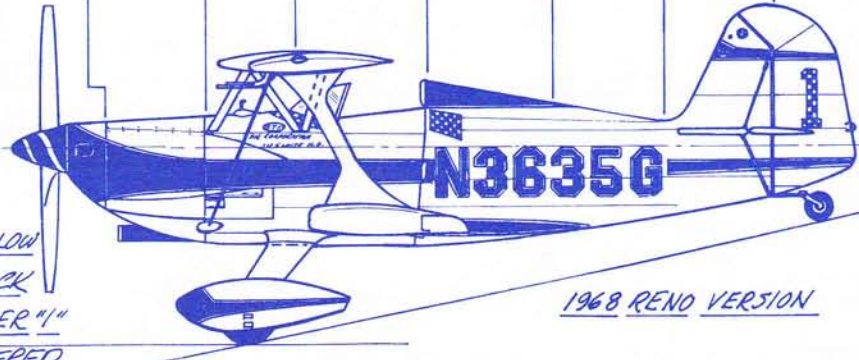


1971 VERSION



UPPER WING AIRFOIL

LOWER WING AIRFOIL



1968 RENO VERSION

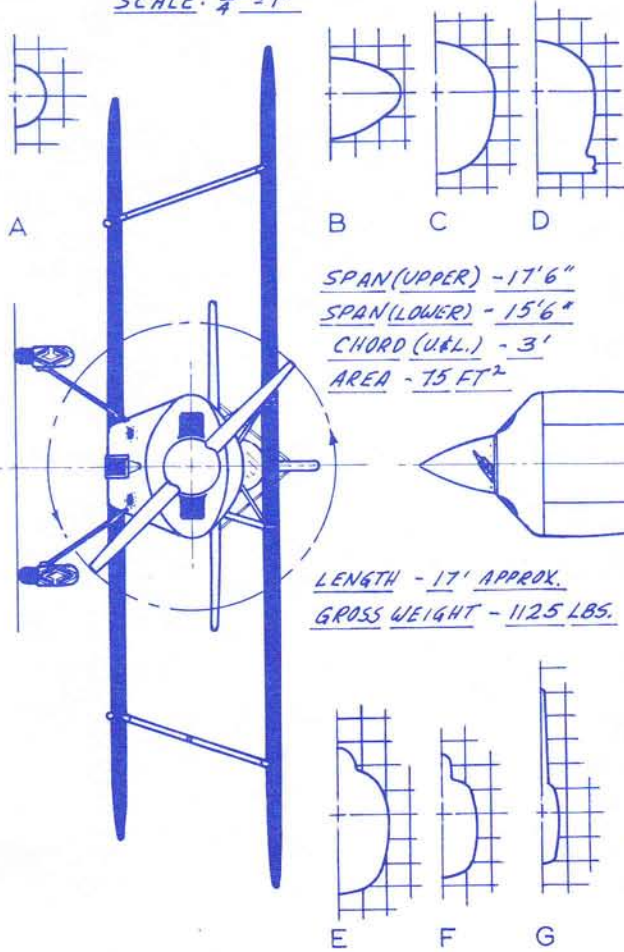
COLOR SCHEME: BASE COLOR YELLOW  
STRIPING & NUMERALS ARE BLACK  
WITH SILVER TRIM. FLAG, NUMBER "1"  
& AROUND COCKPIT - BLK & WHT. CHECKERED

FLOWN BY DR. SIDNEY G. WHITE @ 160.29 MPH IN 1968 FOR QUALIFYING 2ND AT CLEVELAND

GR

SCALE:  $\frac{1}{4}'' = 1'$

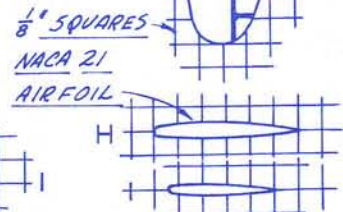
FUSELAGE CONSTRUCTION: STEEL TUBING FRAMEWORK WITH WOOD FORMERS AND STRINGERS.  
ALUMINUM COWL FORWARD WITH FABRIC COVERING AFT.  
WING CONSTRUCTION: FABRIC COVERED WOOD FRAMEWORK  
TAIL ASSEMBLY CONSTRUCTION: WOOD & PLYWOOD - FABRIC COVERED.



SPAN (UPPER) - 17' 6"  
 SPAN (LOWER) - 15' 6"  
 CHORD (U&L) - 3'  
 AREA - 75 FT<sup>2</sup>

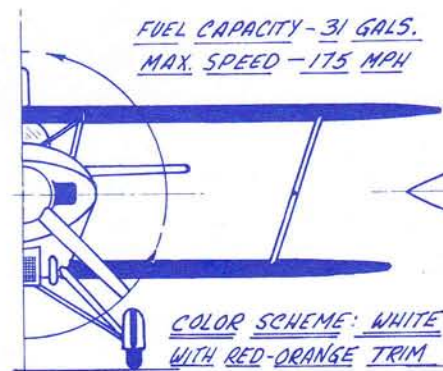
LENGTH - 17' APPROX.  
 GROSS WEIGHT - 1125 LBS.

TAIL BRACE WIRES ADDED '71



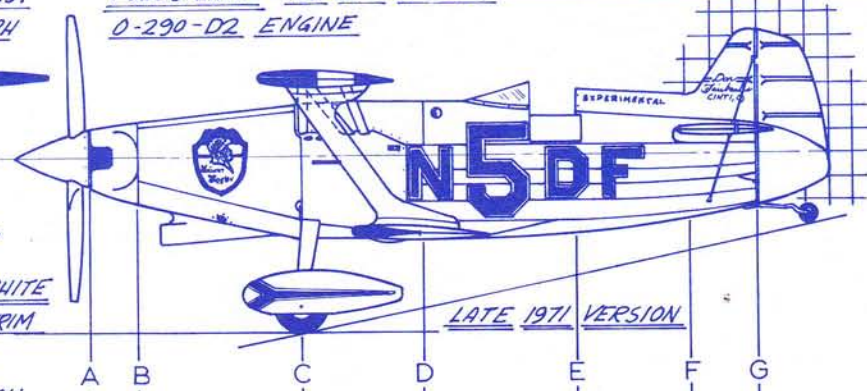
FUEL CAPACITY - 31 GAL.  
 MAX. SPEED - 175 MPH

POWERPLANT: 135 H.P. LYCOMING  
 O-290-D2 ENGINE



COLOR SCHEME: WHITE WITH RED-ORANGE TRIM AND NUMERALS.

1970 VERSION ABOVE & BELOW



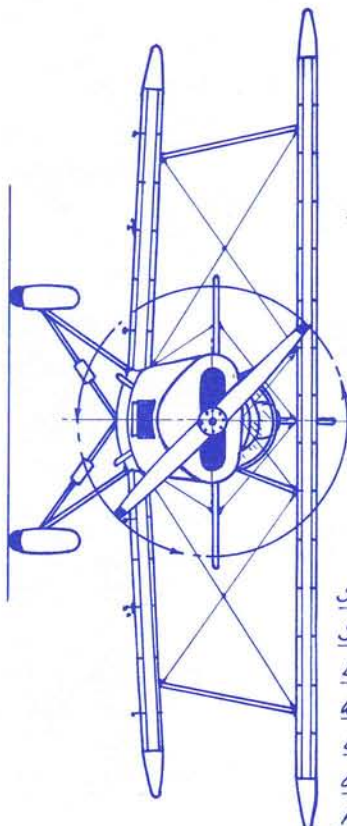
LATE 1971 VERSION



EARLY 1971 VERSION

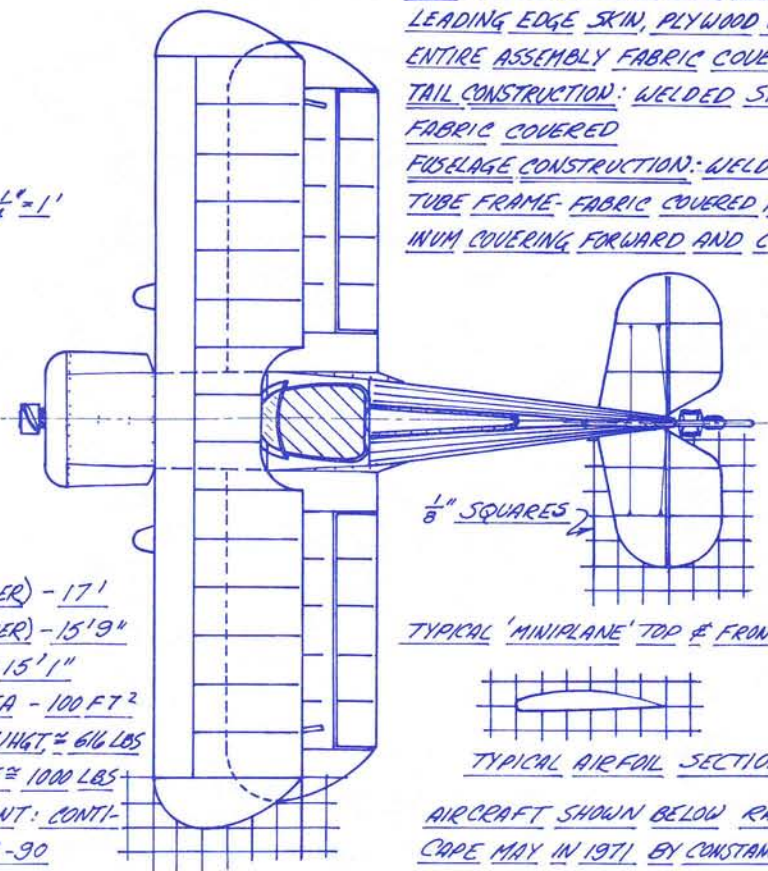
'KNIGHT TWISTER' BUILT AND DESIGN MODIFIED BY DON FAIRBANKS. HE FLEW AIRCRAFT TO 3RD PLACE AT CAPE MAY, N.J. '71 RACE AND WON SILVER CONSOLATION RACE @ 160.48 MPH AT RENO '71

CH



SCALE:  $\frac{1}{4}'' = 1'$

SPAN (UPPER) - 17'  
 SPAN (LOWER) - 15'9"  
 LENGTH - 15'1"  
 WING AREA - 100 FT<sup>2</sup>  
 EMPTY WGT.  $\approx$  616 LBS  
 GROSS WGT.  $\approx$  1000 LBS  
 POWERPLANT: CONTINENTAL C-90



$\frac{1}{8}''$  SQUARES

TYPICAL 'MINIPLANE' TOP & FRONT VIEWS



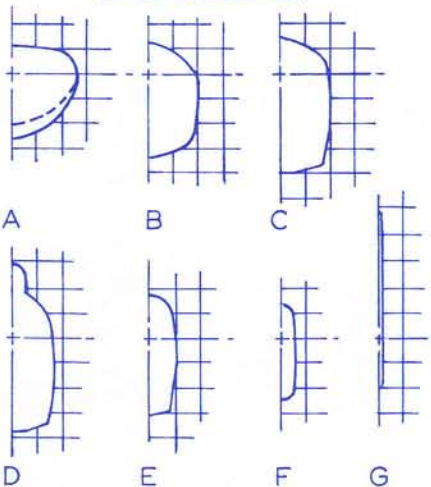
TYPICAL AIRFOIL SECTION

AIRCRAFT SHOWN BELOW RACED AT CAPE MAY IN 1971 BY CONSTANCE MARSH

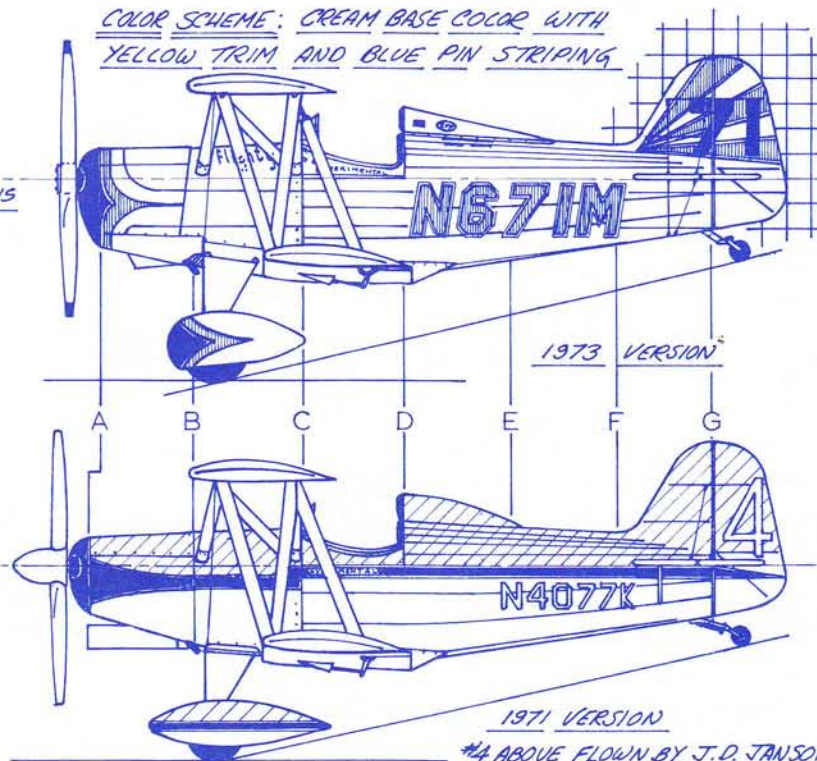


SMITH DSA-1  
'MINIPLANE'

TYPICAL FUSELAGE CROSS-SECTIONS SHOWN BELOW



COLOR SCHEME: CREAM BASE COLOR WITH YELLOW TRIM AND BLUE PIN STRIPING



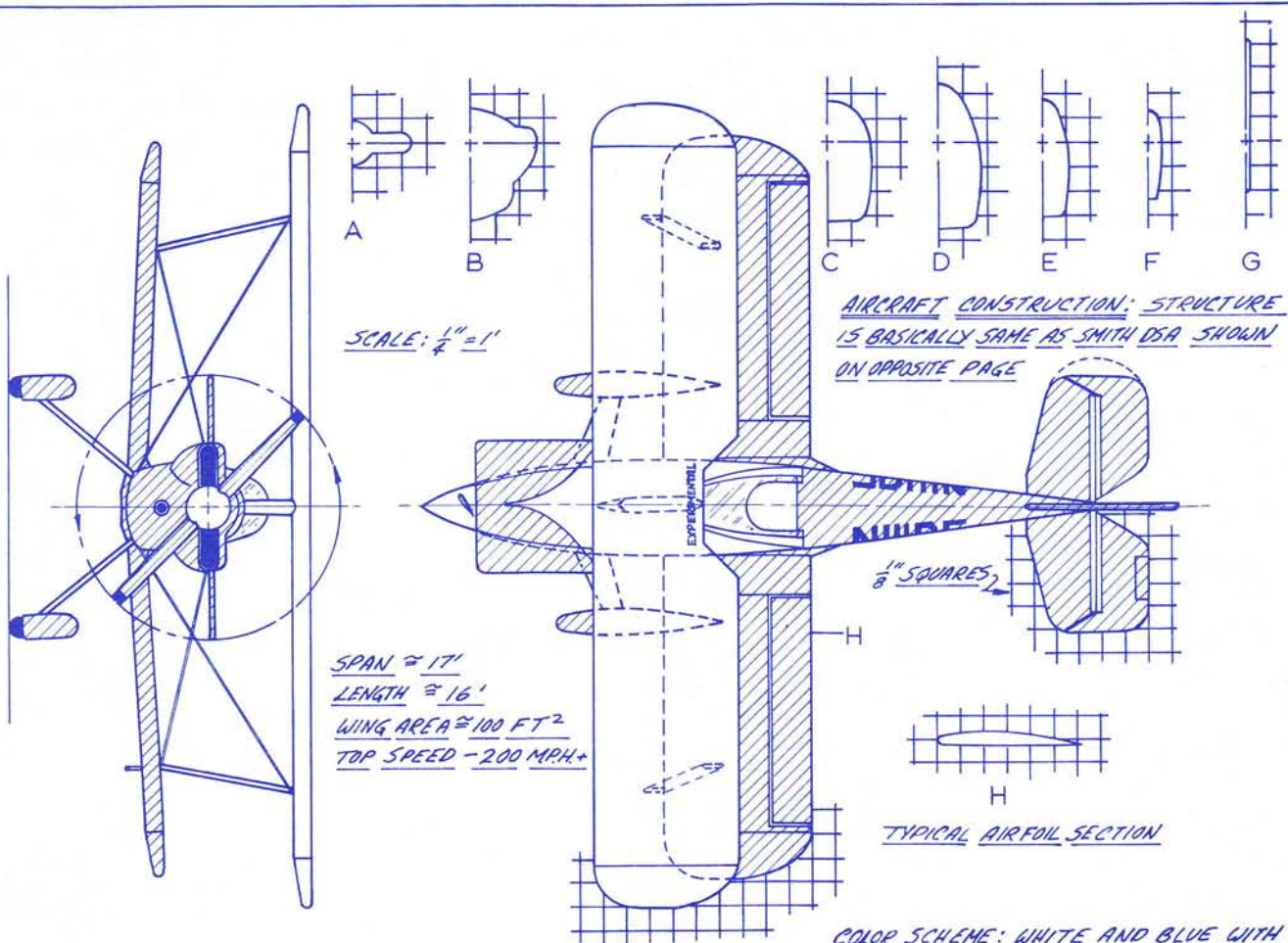
1973 VERSION

1971 VERSION

\*A ABOVE FLOWN BY J.D. JANSON

THE SMITH DSA-1 (DORNER SMALL AIRPLANE) WAS DESIGNED, BUILT AND FLOWN BY FRANKS DURING 1957-58. IT IS AN OUTSTANDING EXAMPLE OF HOME BUILT AIRCRAFT AND PLANS ARE STILL AVAILABLE.

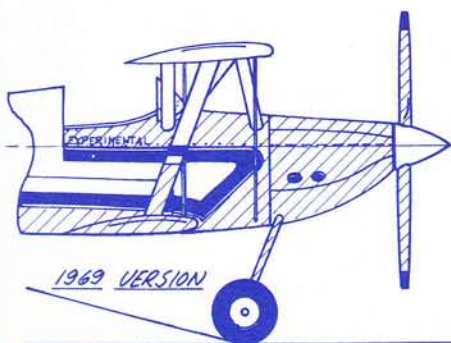
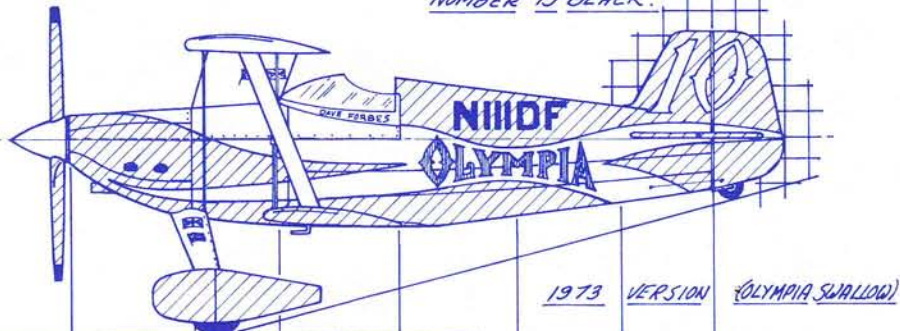
COLOR SCHEME: RED & MAROON WITH BLACK & GOLD STRIPES. LENGTH - 16' FLOWN AT CAPE MAY ANDRENO. *CM*



NOTE: IN 1974 "OLYMPIA" AND LICENSE NUMBER REMOVED FROM SIDES.

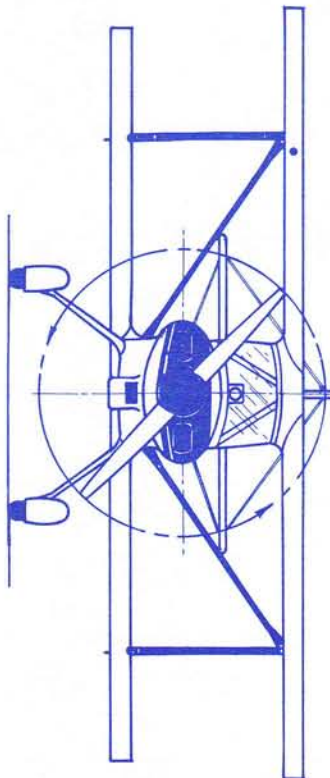
COLOR SCHEME: WHITE AND BLUE WITH "OLYMPIA" GOLD WITH BLACK OUTLINE. #10 IS WHITE WITH BLACK OUTLINE. LICENSE NUMBER IS BLACK.

AIRCRAFT WAS BUILT BY DAVE FORBES IN 1966 AND FIRST RACED IN 1967 AT RENO. MODIFICATIONS INCLUDE LANDING GEAR, COWLING, BUBBLE WINDSHIELD, NEW WINGS AND CLIPPED TAIL SURFACES.



COLOR SCHEME (PRE-1973): RED AND WHITE WITH BLACK TRIM AND RACE NUMBER. LICENSE WAS RED. FORBES HAS PLACED 3RD IN EVERY RENO CHAMPIONSHIP BIPLANE RACE SINCE 1969 EXCEPT FOR 1971. TYPICAL SPEED HAS AVERAGED OVER 100 MPH THE PAST FEW YEARS DURING THESE RACES.

SCALE  $\frac{1}{4}'' = 1'$

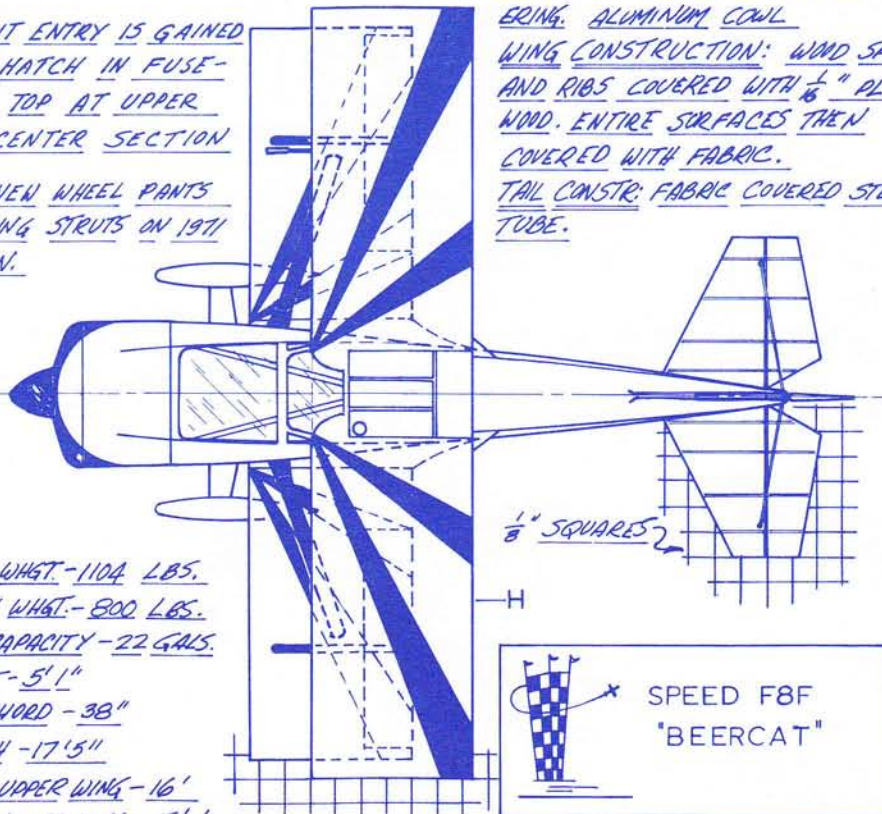


COCKPIT ENTRY IS GAINED THRU HATCH IN FUSELAGE TOP AT UPPER WING CENTER SECTION

NOTE: NEW WHEEL PANTS AND WING STRUTS ON 1971 VERSION.

GROSS WGT. - 1104 LBS.  
EMPTY WGT. - 800 LBS.  
FUEL CAPACITY - 22 GAL.  
HEIGHT - 5' 1"  
WING CHORD - 38"  
LENGTH - 17' 5"  
SPAN - UPPER WING - 16'  
SPAN - LOWER WING - 15 1/2'

FUSELAGE CONSTRUCTION: WELDED STEEL TUBING WITH FABRIC COVERING. ALUMINUM COWL.  
WING CONSTRUCTION: WOOD SPARS AND RIBS COVERED WITH 1/16" PLYWOOD. ENTIRE SURFACES THEN COVERED WITH FABRIC.  
TAIL CONSTR: FABRIC COVERED STEEL TUBE.

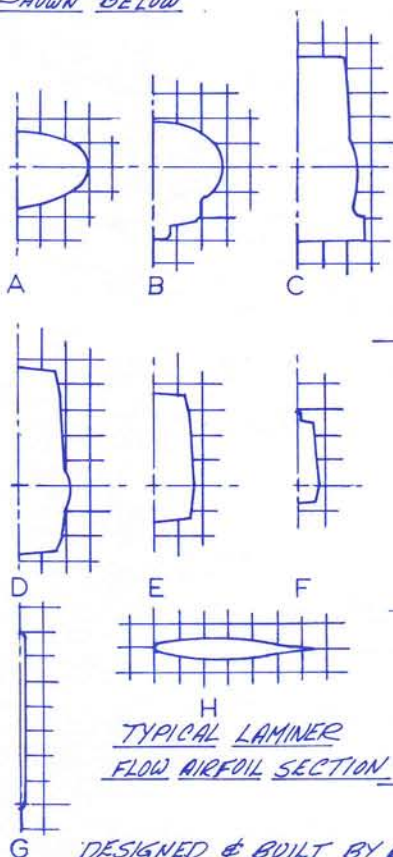


$\frac{1}{8}''$  SQUARES

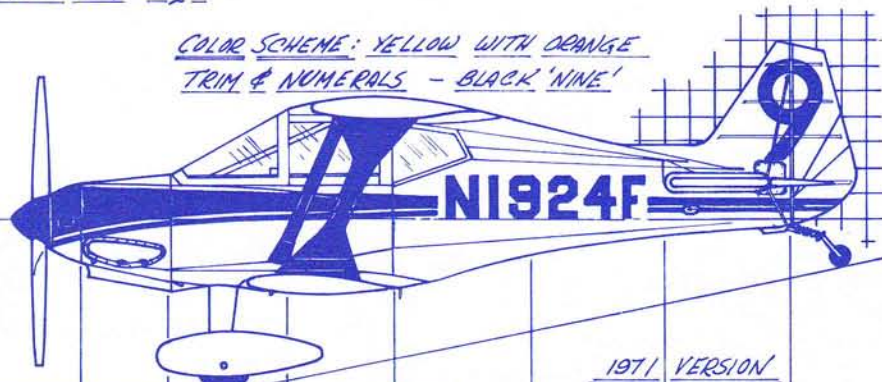


SPEED F8F  
"BEERCAT"

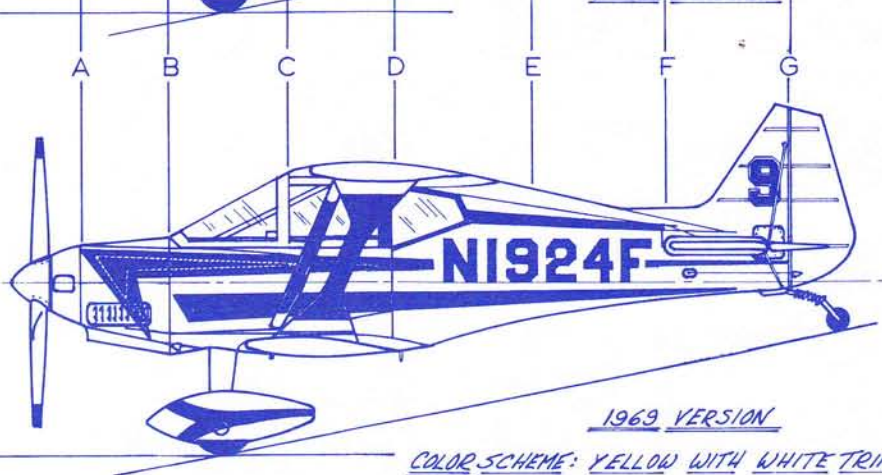
FUSELAGE CROSS-SECTIONS SHOWN BELOW



COLOR SCHEME: YELLOW WITH ORANGE TRIM & NUMERALS - BLACK 'NINE'



1971 VERSION



1969 VERSION

COLOR SCHEME: YELLOW WITH WHITE TRIM

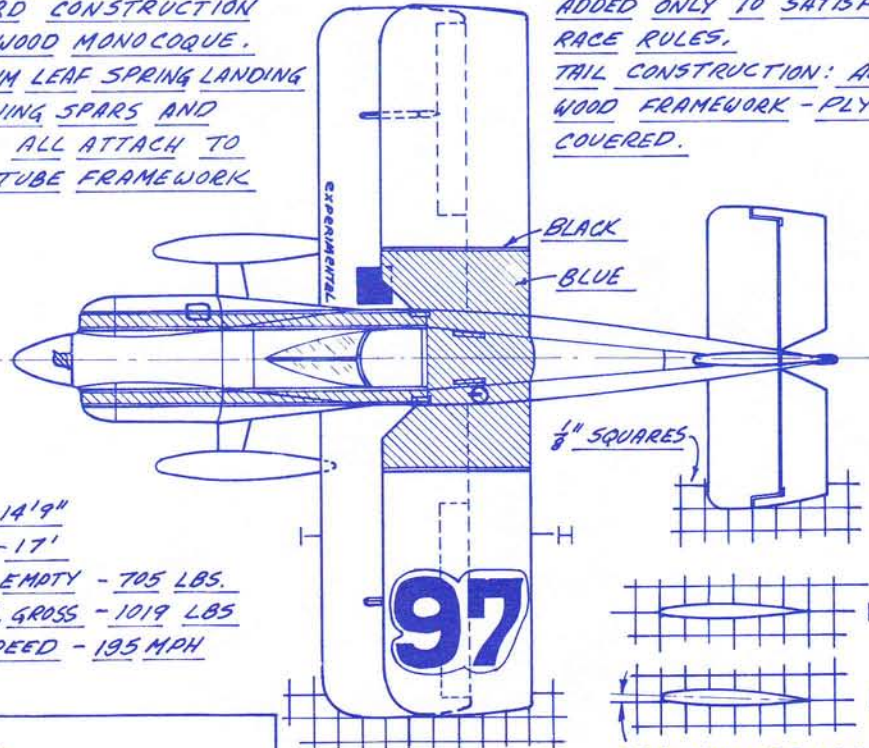
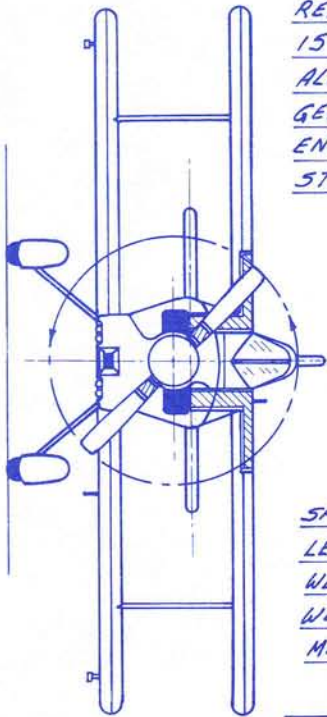
DESIGNED & BUILT BY RONALD JOHNSON AND ROBERT E. SPEED. "BEERCAT" WAS RACED BY SPEED AT RENO '69 - TOOK 3RD IN CONSOLATION BIPLANE RACE.

CH

SCALE:  $\frac{1}{4}'' = 1'$

FUSELAGE CONSTRUCTION:  
STEEL TUBE FRAMEWORK  
FROM FIREWALL TO AFT OF  
COCKPIT. FROM COCKPIT  
REARWARD CONSTRUCTION  
IS ALL WOOD MONOCOQUE.  
ALUMINUM LEAF SPRING LANDING  
GEAR, WING SPARS AND  
ENGINE ALL ATTACH TO  
STEEL TUBE FRAMEWORK

WING CONSTRUCTION: FULLY  
CANTILEVERED, ALL WOOD  
SPARS AND WOOD RIBS. SKIN  
IS PLYWOOD. STRUTS ARE  
ADDED ONLY TO SATISFY  
RACE RULES.  
TAIL CONSTRUCTION: ALL  
WOOD FRAMEWORK - PLYWOOD  
COVERED.



SPAN - 14'9"  
 LENGTH - 17'  
 WEIGHT EMPTY - 705 LBS.  
 WEIGHT, GROSS - 1019 LBS.  
 MAX SPEED - 195 MPH

COLOR SCHEME: ALL  
YELLOW EXCEPT WHERE  
NOTED OTHERWISE



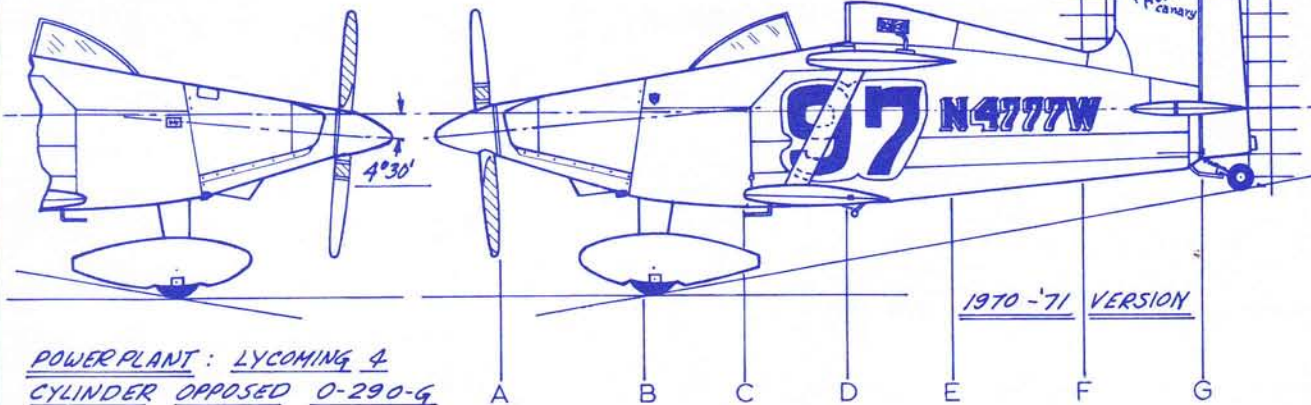
WARWICK W-4  
 'HOT CANARY'

NUMERALS ARE BLACK  
WITH WHITE OUTLINES

1°30' INCIDENCE ON LOWER  
WING. CONSTANT 3' CHORD  
SYMMETRICAL AIRFOIL SECTION

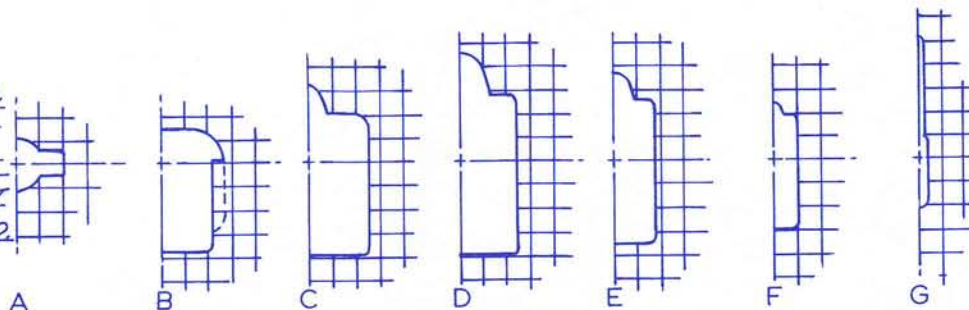
RED  
 'HOT CANARY'

1970-'71 VERSION



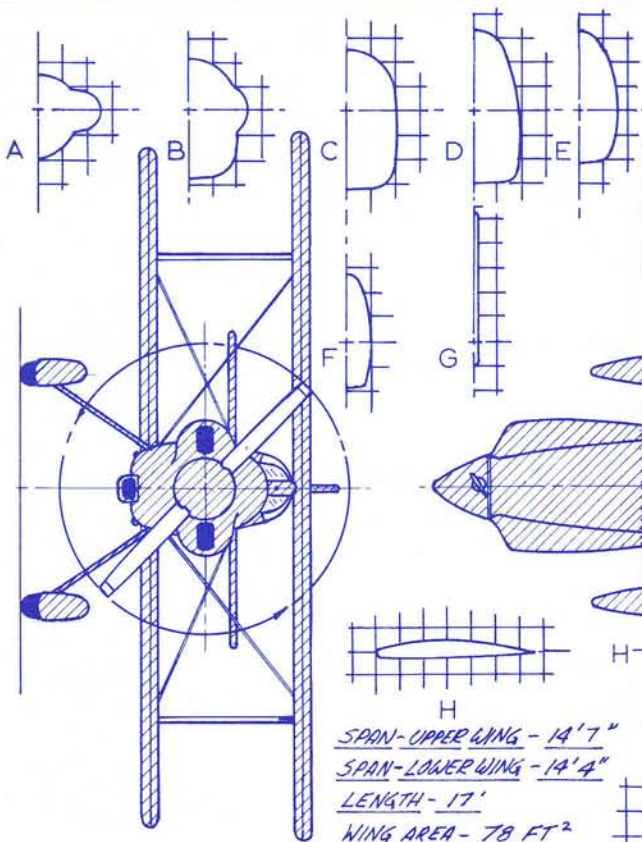
POWERPLANT: LYCOMING 4  
CYLINDER OPPOSED O-290-G  
ENGINE

'CANARY' WON 1970 FLA.  
 SPORT BIPLANE CONSOL-  
 IDATION RACE. IT FINISH-  
 ED 4TH AT TO RENO AT  
 163 MPH AVERAGE SPEED.



"HOT CANARY" WAS DESIGNED, BUILT, FLOWN AND RACED BY BILL WARWICK.

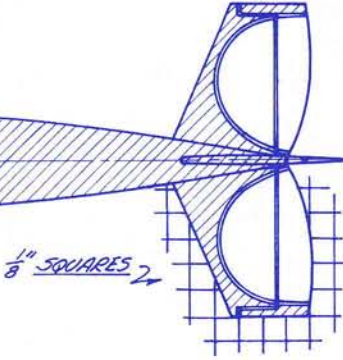
CA



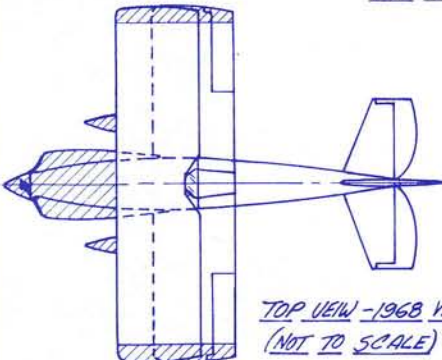
SCALE:  $\frac{1}{4}'' = 1'$

WING CONSTRUCTION: WOOD SPARS & RIBS WITH PLYWOOD COVERING.  
FUSELAGE CONSTRUCTION: WELDED STEEL TUBE WITH PLYWOOD TURTLE DECK AND ALUMINUM COUL - FABRIC COVERED.  
TAIL CONSTRUCTION: WELDED STEEL TUBE - FABRIC COVERED.  
COLOR SCHEME: BLACK & WHITE; "MONGSTER" RED OUTLINED IN YELLOW

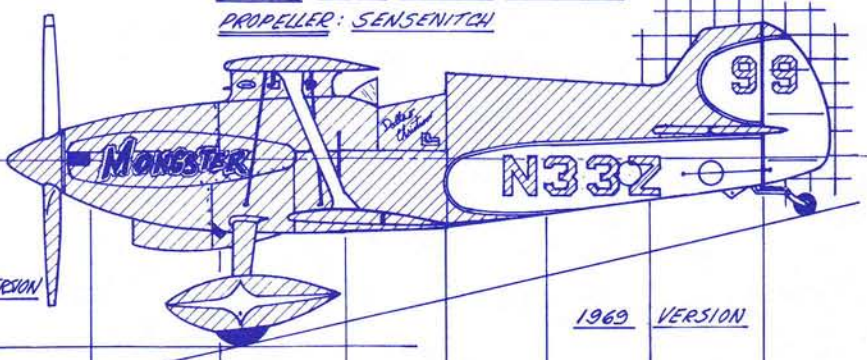
H  
 SPAN-UPPER WING - 14' 7"  
 SPAN-LOWER WING - 14' 4"  
 LENGTH - 17'  
 WING AREA - 78 FT<sup>2</sup>  
 WEIGHT EMPTY - 708 LBS.  
 MAX SPEED - 200+ MPH



ENGINE: 160 H.P. LYCOMING O-290 D2  
PROPELLER: SENSENITCH

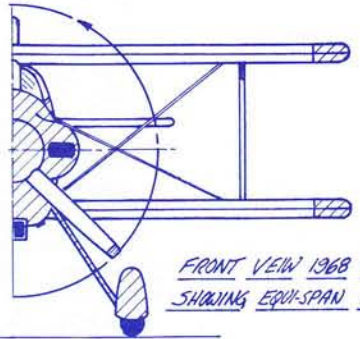


TOP VIEW - 1968 VERSION  
 (NOT TO SCALE)

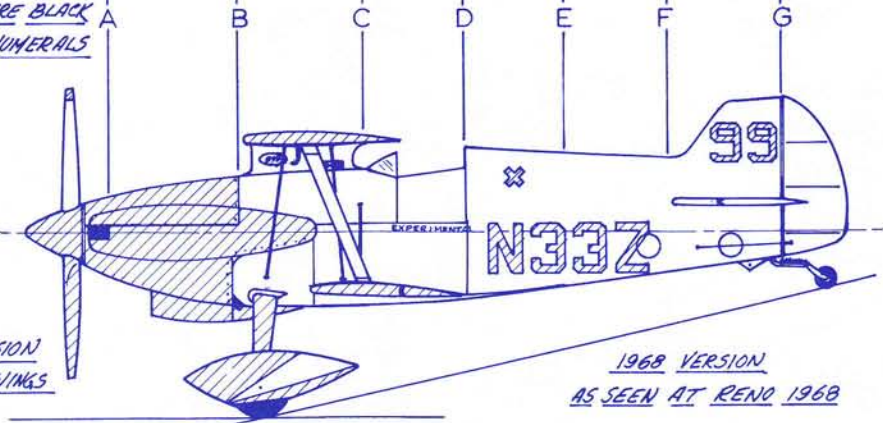


1969 VERSION

COLOR SCHEME (1968): BLACK WITH ALUMINUM FOR MAIN COLOR. WHEEL PAINTS WERE BLACK AND WHITE - BLACK MARKINGS & NUMERALS

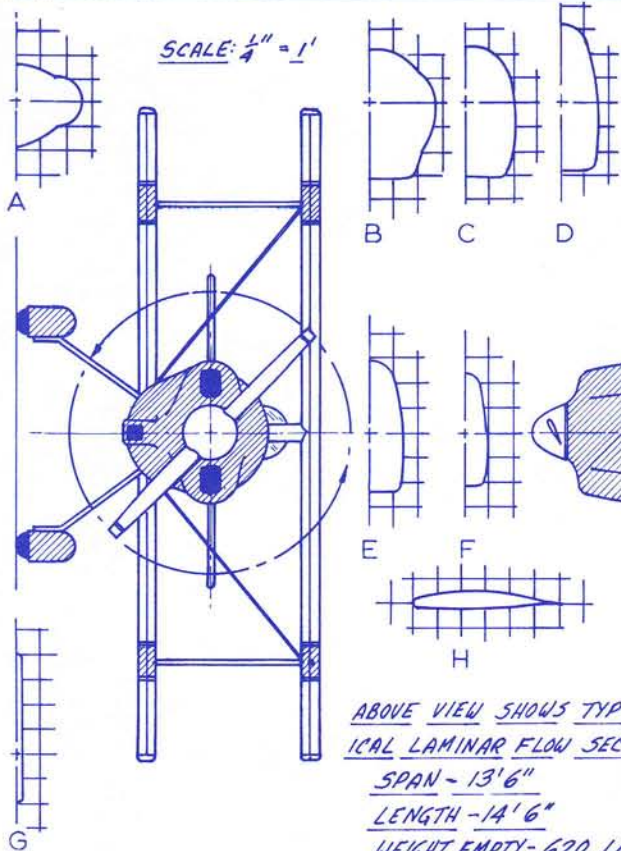


FRONT VIEW 1968 VERSION  
 SHOWING EQUI-SPAN 14' WINGS



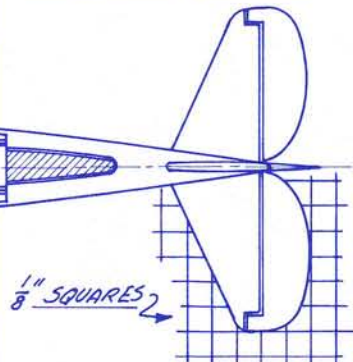
1968 VERSION  
 AS SEEN AT RENO 1968

DALLAS CHRISTIAN MADE MAJOR MODIFICATIONS TO THE BASIC MONG BY REDESIGNING FUSELAGE AND THE SHORT PLYWOOD WINGS PLUS REPLACING MONG CABANE STRUTS WITH SINGLE PYLON. FLOWN BY CHRISTIAN IT WON BIPLANE CHAMPIONSHIP AT RENO IN 1968 AND 1969 @ 175.126 MPH & 178.51 MPH.

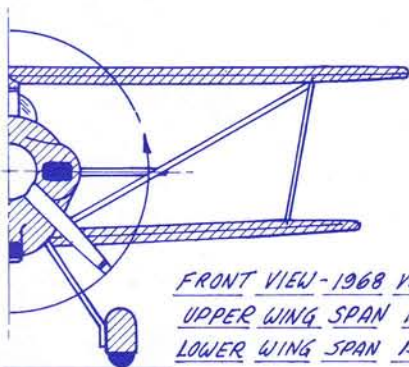


WING CONSTRUCTION: WOOD SPARS & RIBS - PLYWOOD COVERING.  
 FUSELAGE CONSTRUCTION: STEEL TUBE - PLYWOOD & FABRIC COVERING, ALUMINUM COUL.  
 TAIL CONSTRUCTION: STEEL TUBE - FABRIC COVERED.

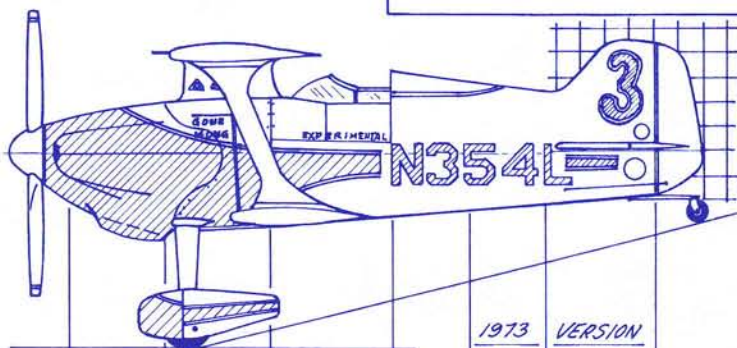
ABOVE VIEW SHOWS TYPICAL LAMINAR FLOW SECTION  
 SPAN - 13' 6"  
 LENGTH - 14' 6"  
 WEIGHT EMPTY - 620 LBS.



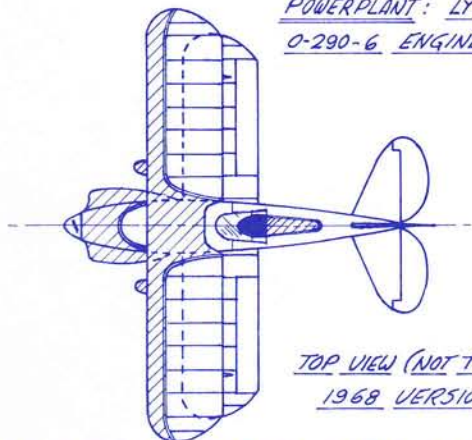
COLOR SCHEME: (ALL YEARS) ALL WHITE WITH RED TRIM AND NUMERALS; ALUMINUM SPINNER



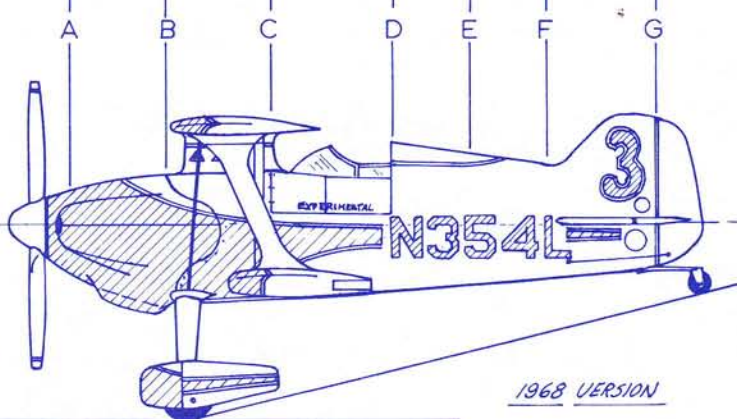
FRONT VIEW - 1968 VERSION  
 UPPER WING SPAN 16' 10"  
 LOWER WING SPAN 15' 6"



POWERPLANT: LYCOMING  
 O-290-6 ENGINE

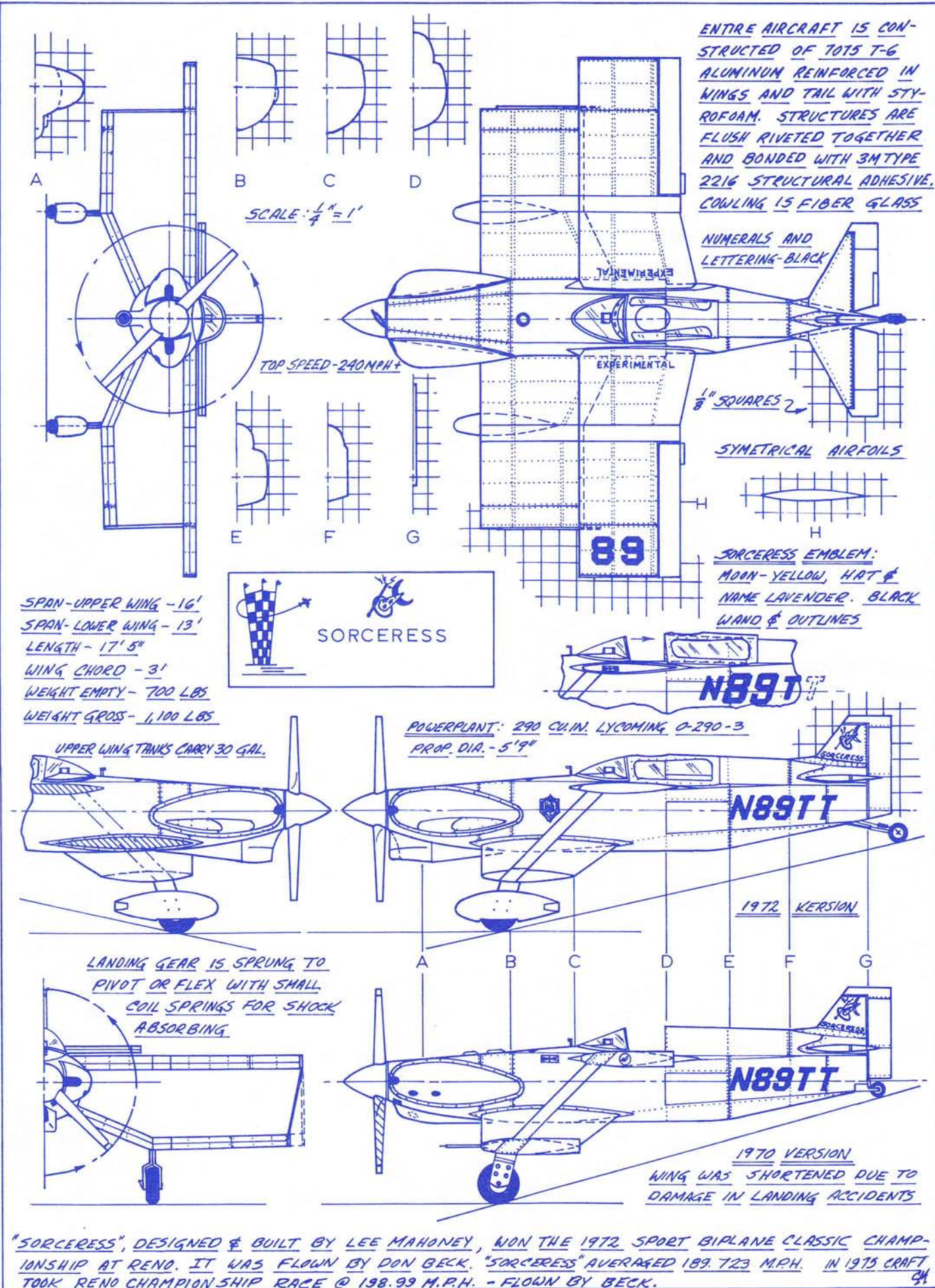


TOP VIEW (NOT TO SCALE)  
 1968 VERSION



BUILT BY BILL BOLAND IN 1959 AS A STANDARD MONG SPORT, AIRCRAFT WAS REWORKED FOR 1968 RACING BY SHORTENING STABILIZER & RUDDER, ADDING BUBBLE TYPE WINDSHIELD, WIDER LANDING GEAR AND SMALLER TAIL WHEEL. SHOWN BY BOLAND AT RENO CHAMPIONSHIPS: 1ST IN 1965-67, 2ND IN 1968, 69, 70

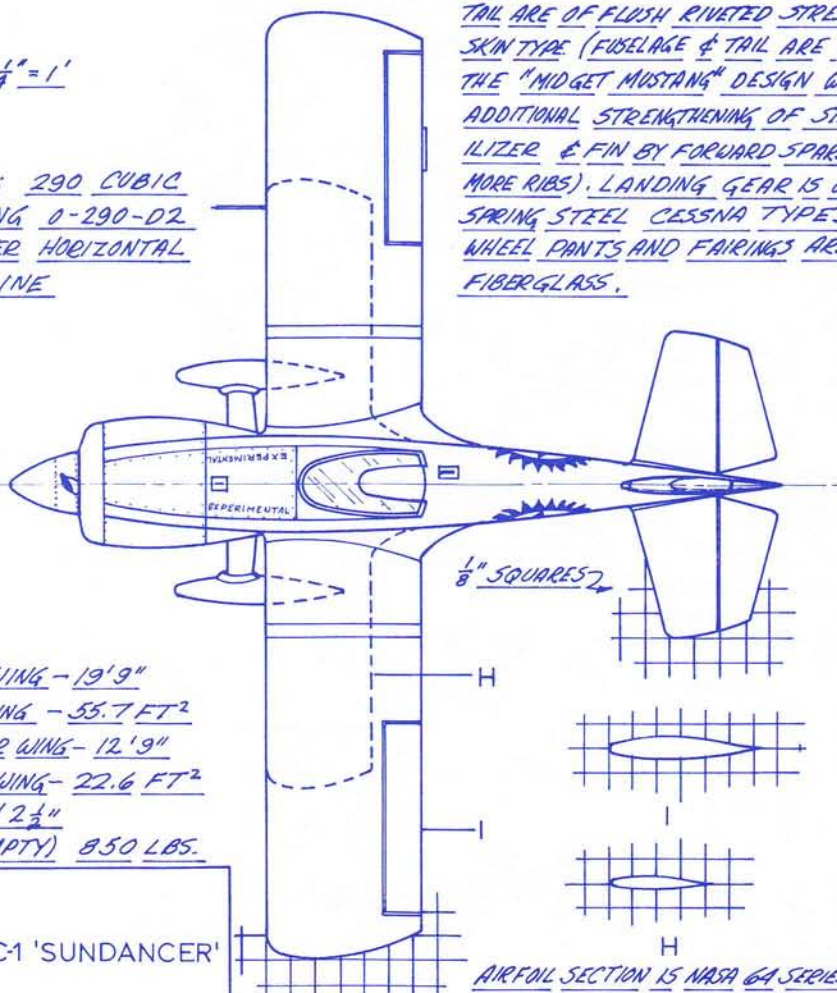
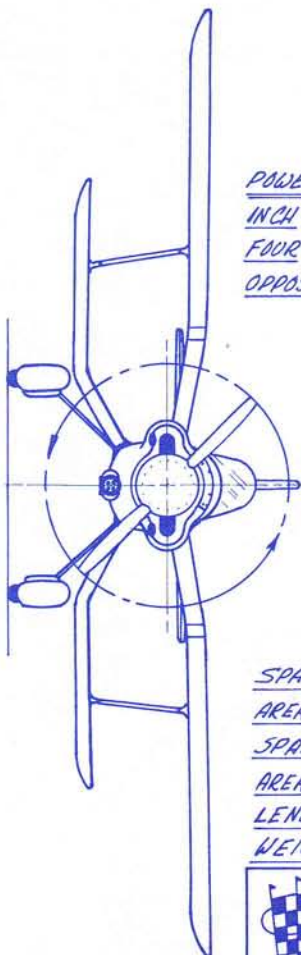




SCALE:  $\frac{1}{4}'' = 1'$

POWERPLANT: 290 CUBIC  
INCH LYCOMING O-290-D2  
FOUR CYLINDER HORIZONTAL  
OPPOSED ENGINE

ENTIRE AIRCRAFT IS ALL ALUMINUM  
CONSTRUCTION. FUSELAGE, WINGS AND  
TAIL ARE OF FLUSH RIVETED STRESSED  
SKIN TYPE (FUSELAGE & TAIL ARE OF  
THE "MIDGET MUSTANG" DESIGN WITH  
ADDITIONAL STRENGTHENING OF STAB-  
ILIZER & FIN BY FORWARD SPARS &  
MORE RIBS). LANDING GEAR IS OF  
SPRING STEEL CESSNA TYPE.  
WHEEL FANTS AND FAIRINGS ARE  
FIBERGLASS.

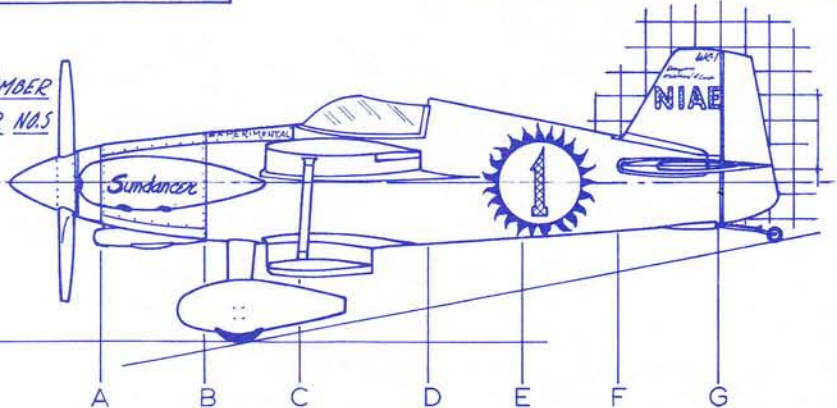


SPAN - TOP WING - 19'9"  
AREA - TOP WING - 55.7 FT<sup>2</sup>  
SPAN - LOWER WING - 12'9"  
AREA - LOWER WING - 22.6 FT<sup>2</sup>  
LENGTH - 16'2 1/2"  
WEIGHT - (EMPTY) 850 LBS.

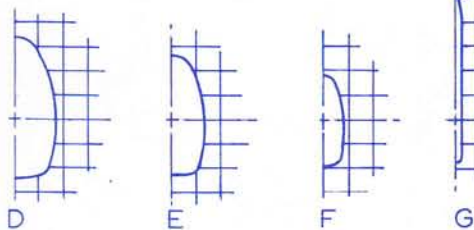
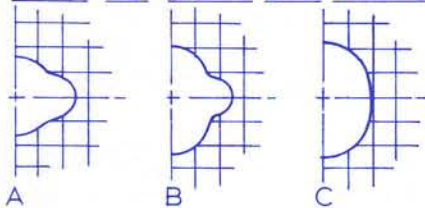


AIRFOIL SECTION IS NASA 64 SERIES  
SYMMETRICAL LAMINAR FLOW DESIGN

COLOR SCHEME: ENTIRE AIRCRAFT  
IS ORANGE. "N" NUMBER & RACE NUMBER  
WHITE WITH RED BORDER. ALL OTHER NOS  
YELLOW WITH BLACK BORDER.  
BLACK 'SUN' AROUND RACE NUMBER.



1973 VERSION



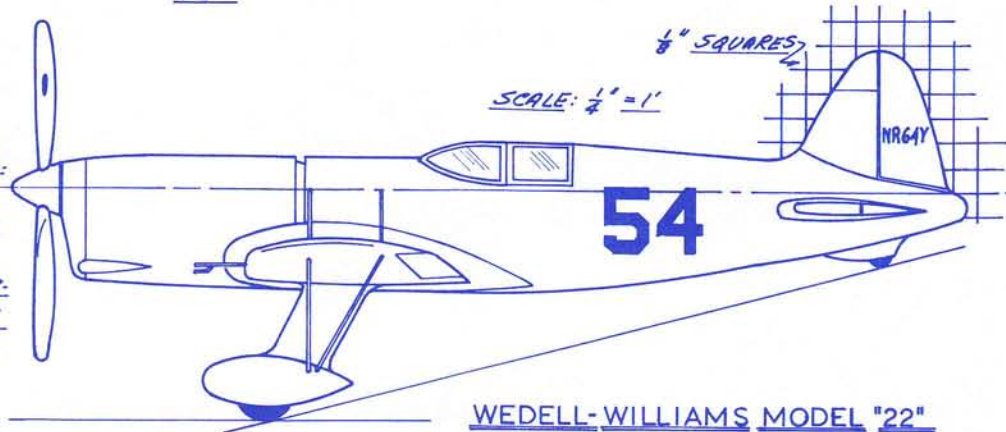
AIRCRAFT WAS DESIGNED BY ART WILLIAMS AND CARL CANEIE  
BOTH HIGHLY SKILLED AERONAUTICAL ENGINEERS. CONSTRUCTION  
WAS STARTED IN 1970 BY RALPH THENHAUS AND COMPLETED  
BY JACK SWAN IN 1973. TEST FLYING WAS DONE BY HERMAN  
'FISH' SALMON OF 1948 COSMIC WIND "MINNOW" FAME. DR. SID  
WHITE, PILOT AND OWNER OF "SUNDANCER", TOOK 1ST PLACE 1973  
AND 1974 RENO SPORT BIPLANE CLASS - 1974 AT 198.1 MPH.

CH



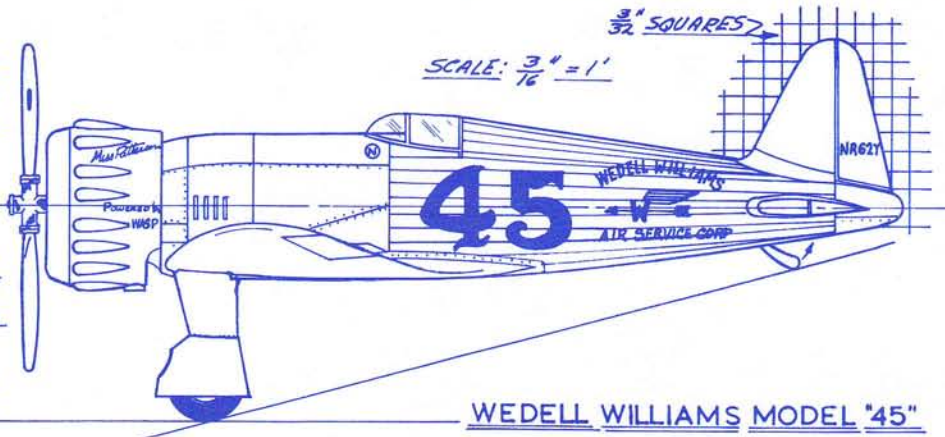
## APPENDIX I

NR64Y WAS SECOND AIRCRAFT IN THE WEDELL-WILLIAMS MODEL "22" SERIES ( $\frac{1}{2}$  SIZE MODEL "44"). THE AFT FUSELAGE WAS BUILT OF PLYWOOD BY THE DELGADO TRADE SCHOOL. THE CRAFT WAS RACED BY WEDELL AT 1933 CHICAGO INTERNATIONAL AIR RACE WITH LITTLE SUCCESS DUE TO ENGINE PROBLEMS. IT WAS POWERED BY A 4 CYLINDER HEMLOCK CAS PIRATE. ENTIRE AIRCRAFT WAS PLYWOOD COVERED. COLOR SCHEME: RED



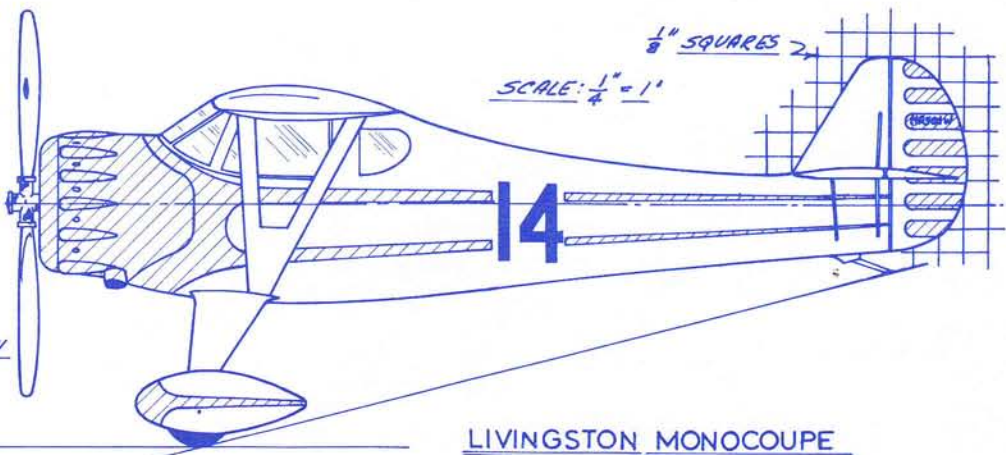
WEDELL-WILLIAMS MODEL "22"

THE LAST OF THE WEDELL-WILLIAMS RACERS WAS THE MODEL "45" POWERED BY A PRATT & WHITNEY WASP SENIOR. AIRCRAFT WAS FITTED WITH FULL CANTILEVER WINGS & INWARD RETRACTING LANDING GEAR. THE DESIGN WAS GIVEN A XP-34 DESIGNATION BY THE ARMY AIR CORP. COLOR SCHEME WAS RED WITH BLACK COUL & GEAR AREA. MAX SPEED WAS 302 MPH FLOWN BY JOHN WORTHEN AT 1934 NATIONALS SHELL SPEED DASHES



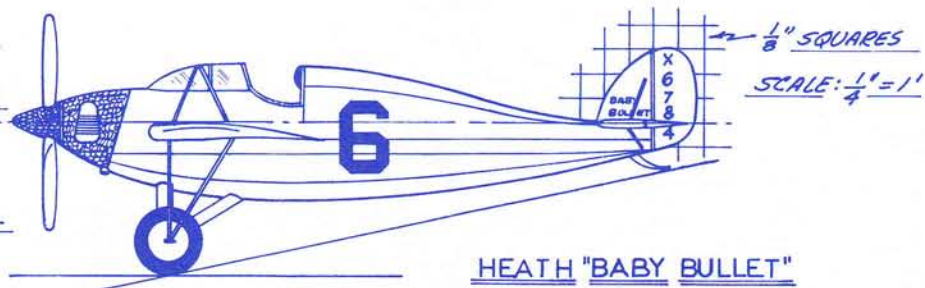
WEDELL WILLIAMS MODEL "45"

JOHN LIVINGSTON MODIFIED A 1930 STOLC MONOCOUE AND BY EARLY 1932 HAD CLIPPED THE WINGS FROM 32 FT TO 22 FT. HE FURTHER MODIFIED THE CRAFT WITH A GREATLY IMPROVED COUL, ROCKER ARM BULBS AND AN ASSORTMENT OF SMALLER WHEEL PANTS. MAX POWERPLANT WAS 145 HP WARNER 7 CYLINDER RADIAL. COLOR SCHEME: BRIGHT YELLOW WITH RED TRIM. MAX SPEED 220 MPH



LIVINGSTON MONOCOUE

DESIGNED & BUILT BY ED HEATH THE WORLDS FIRST MIDGET AIR RACER WAS POWERED BY A 2 CYLINDER OPPOSED 32 HP BRISTOL 'CHERUB'. THE YELLOW PAINTED AIRCRAFT COULD DO 150 MPH. LENGTH- 14'2" SPAN- 18'6" CONSTRUCTION WAS WELDED STEEL TUBING FUSELAGE COVERED WITH FABRIC. WINGS WERE WIRE BRACED ALL WOOD CONSTRUCTION WITH FABRIC COVERING



HEATH "BABY BULLET"

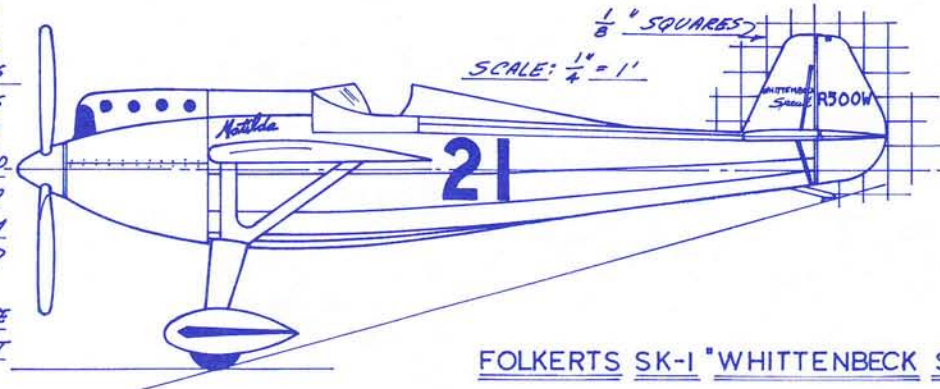
APPENDIX II

THE SPAN & LENGTH OF THIS AIRCRAFT WAS ABOUT 19 FT. COLOR SCHEME WAS LIGHT BLUE. ORIGINALLY DESIGNED WITH A RETRACTABLE GEAR TROUBLESOME MECHANISM PREVENTED ITS USE. THIS DESIGN WAS BY ALDEN BROWN RATHER THAN LAWRENCE BROWN OF B-1 & B-2 FAME. DURING 1933 1000 CU. IN. EVENT THIS MENASCO POWERED RACER TOOK 4TH PLACE AT 139 MPH PILOTED BY LEE SCHOENHAIR.



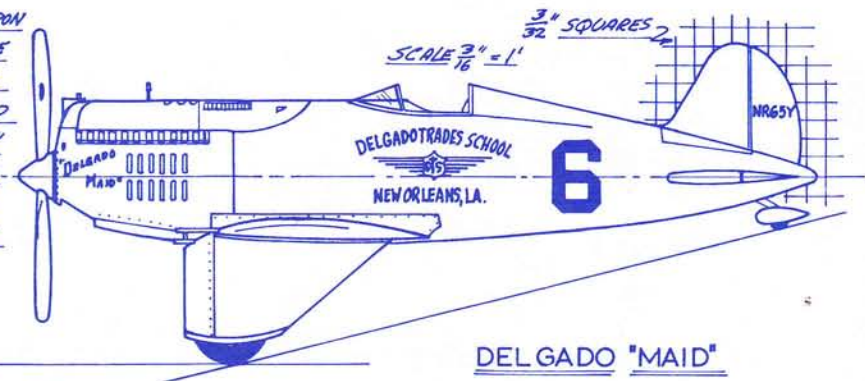
ALDEN BROWN RACER

ORIGINALLY BEGINNING LIFE AS THE FOLKERTS SK-1 MONO-SPECIAL & POWERED BY A 310 CU. IN. CURBIS RATED AT 90HP, THE CRAFT WAS FLOWN AT THE 1930 NATIONAL AIR RACES. BY 1933 WHEEL PANTS AND HEAD REST WERE ADDED AND SPEED WAS UP TO 170 MPH. IN 1935 CLEM WHITTENBECK PURCHASED RACER AND WITH REFINEMENTS SPEED WAS UPPED TO 187 MPH. COLOR SCHEME WAS RED. 1937 WAS LAST YEAR IT APPEARED AT NATIONALS.



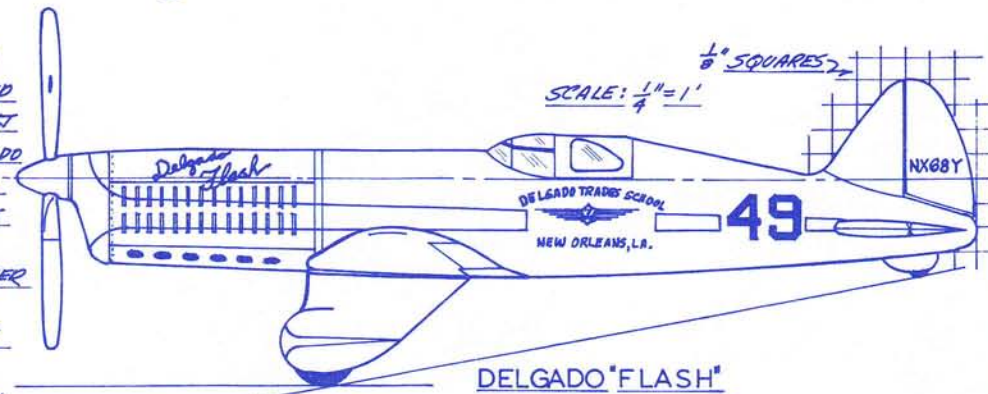
FOLKERTS SK-1 "WHITTENBECK SPL"

THE "MAID" WAS DESIGNED BY BYRON ARMSTRONG OF THE DELGADO TRADE SCHOOL AND BUILT BY STUDENTS OF THE SAME SCHOOL. THE RED AIRCRAFT HAD A SPAN OF 22'9" AND A LENGTH OF 22'. IT WAS OF ALL PLYWOOD CONSTRUCTION AND POWERED BY A V-12 CURTISS CONQUEROR ENGINE. AFTER 18 FLIGHTS THE 300 MPH + AIRCRAFT CRASHED NEVER HAVING ENTERED A RACE



DELGADO "MAID"

CONSTRUCTION WAS STARTED ON "FLASH" IN 1933 BUT NOT FINISHED UNTIL 1937. IT ALSO WAS BUILT BY THE STUDENTS OF THE DELGADO TRADE SCHOOL. DURING BUILDING IT WAS FITTED WITH A RETRACT GEAR & 4 CYL. MENASCO. THE GEAR WAS CHANGED & A 6 CYLINDER MENASCO FITTED. FLOWN BY C. MACARTHUR IN '37 & '38 THE BLACK & WHITE RACER WAS UNSUCCESSFUL DUE TO MECHANICAL PROBLEMS.



DELGADO "FLASH"

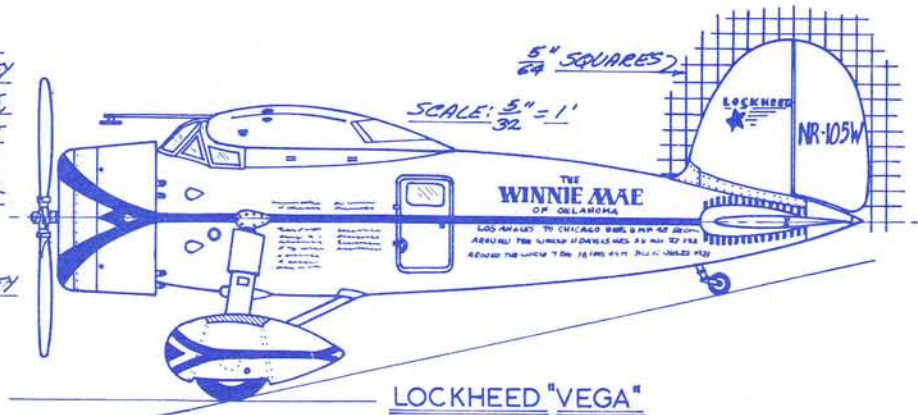
APPENDIX III



A FREQUENT VISITOR AT THE NATIONALS, WILEY POST'S LOCKHEED "VEGA" THAT WILEY HAD FLOWN AROUND THE WORLD IN 7 DAYS, 18 HOURS, 45 MINUTES FOR A SOLO FLIGHT RECORD. HE HAD USED THE SAME PLANE IN 1931 WITH HAROLD GORTY ON AN EARLIER AROUND THE WORLD RECORD.

SPAN - 41' LENGTH 27'6"

POWERPLANT - 500 H.P. PRATT & WHITNEY WASP. COLOR SCHEME - WHITE WITH BLUE TRIM.



LOCKHEED "VEGA"

PAINTED CREAM WITH RED AND GOLD TRIM ROSCOE TURNER'S "AIR EXPRESS" WAS A STABLE MATE OF HIS FAMOUS "57" WEDELL-WILLIAMS RACER. HE SET MANY INTER-CITY RECORDS WITH THIS AIRCRAFT INCLUDING A COAST TO COAST RECORD OF 19 HOURS, 42 MINUTES, 30 SECONDS. SPAN - 43' LENGTH 27'6"

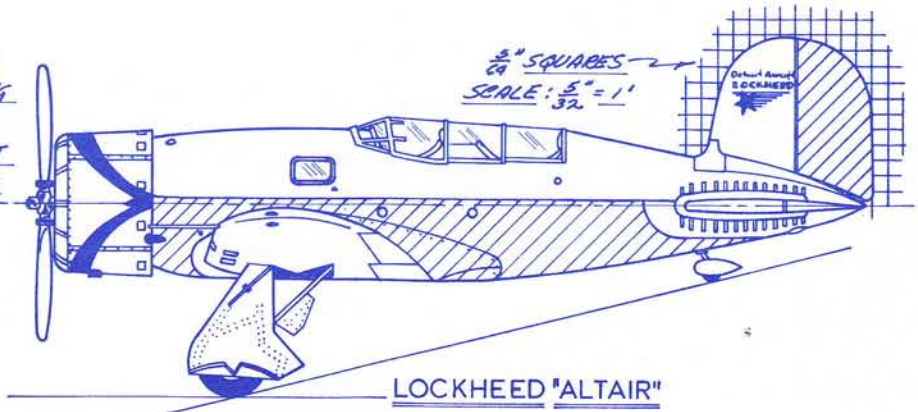
POWERPLANT WAS A PRATT & WHITNEY 420 H.P. WASP



LOCKHEED "AIR EXPRESS"

FLOWN BY IRA EAKER IN 1931 THOMPSON TROPHY RACE TO 5TH PLACE AVERAGING 196.6 MPH AND 1931 BENDIX TROPHY RACE AVERAGING 186.1 MPH. AIRCRAFT WAS POWERED BY A PRATT & WHITNEY WASP 510 1340 CU. IN. ENGINE. SPAN - 42'9" LENGTH - 28'11"

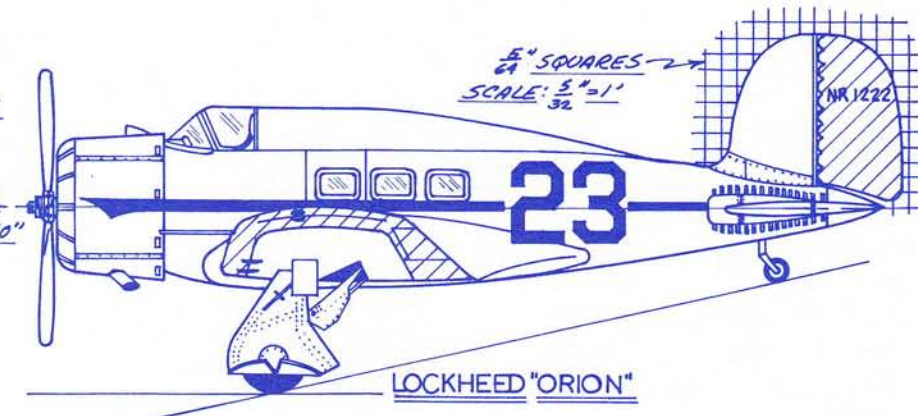
EMPTY WEIGHT - 3550 LBS  
GROSS WEIGHT - 4409 LBS



LOCKHEED "ALTAIR"

RED WITH WHITE TRIM "ORION" WAS FLOWN BY PAUL MANTZ TO THIRD PLACE IN 1938 BENDIX TROPHY RACE AVERAGING 206.6 MPH OTHER "ORIONS" WERE FLOWN IN THE BENDIX IN 1931, '35, '36 AND '39. SPAN - 42'9 1/4" LENGTH - 28'10"

POWERPLANT - 750 H.P. WRIGHT CYCLONE

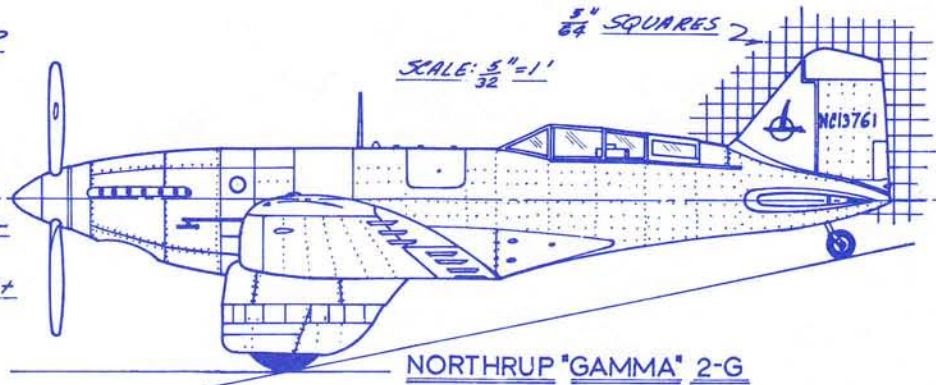


LOCKHEED "ORION"

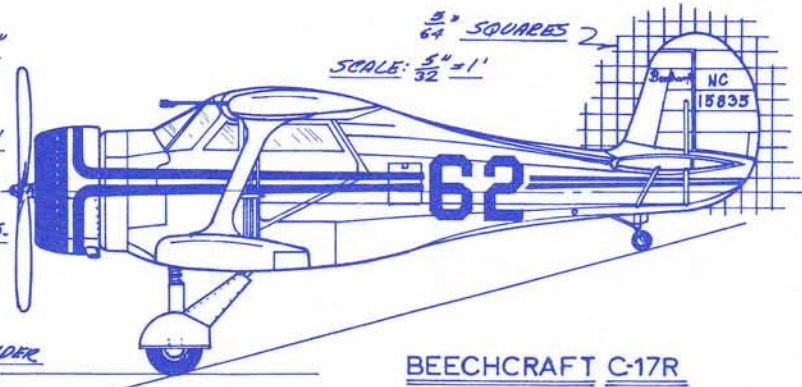


## APPENDIX IV

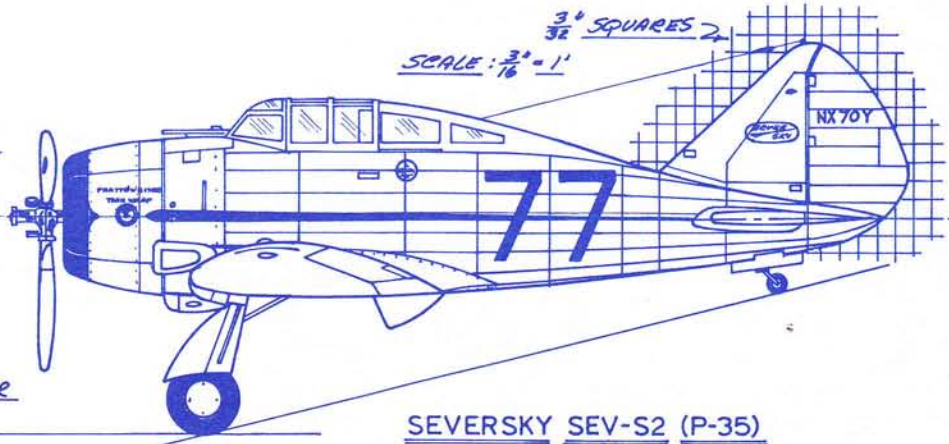
THE "GAMMA" NORMALLY HAD A 750 HP WRIGHT CYCLONE RADIAL ENGINE. HOWEVER, THIS "ONE OF A KIND" WAS BUILT FOR JACKIE COCHRAN FOR AIR RACING. POWERPLANT WAS A 705 H.P. GEARED CURTISS CONQUEROR SV6-1570F-4 V-12 SUPERCHARGED ENGINE. SPAN-40' LENGTH-29' TOP SPEED-200 MPH + COLOR SCHEME WAS NATURAL ALUMINUM.



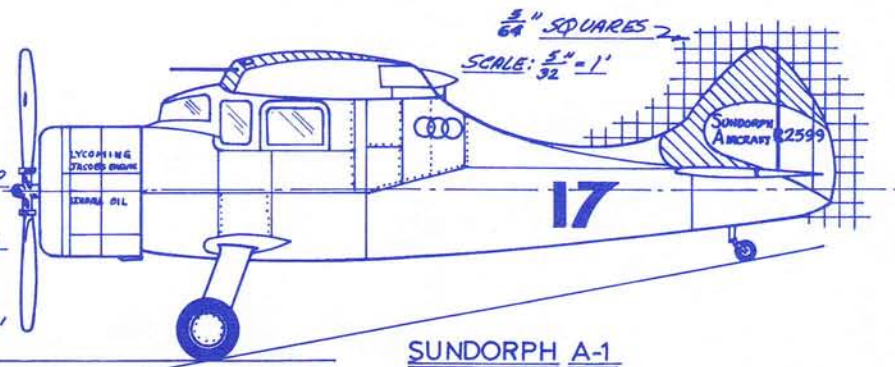
THIS STOCK C-17R "STAGGERWING" WAS FLOWN BY LOUISE THADEN AND BLANCH MOYES TO FIRST PLACE IN THE 1936 BENDIX TROPHY RACE. AIRCRAFT HAD A NORMAL CRUISE SPEED OF 202 MPH AT ALTITUDE. EMPTY WEIGHT-2225 LBS. GROSS WEIGHT-3900 LBS. RANGE 700 MILES. SPAN-34'6" LENGTH-24'5" POWERPLANT-WRIGHT R-975E-3 420 HP 9 CYLINDER ENGINE.



THE SEV-S2 SHOWN WAS THE FIRST PLACE WINNER IN 1937 AND 1939 BENDIX TROPHY RACES. PILOT WAS FRANK FULLER WITH AN AVERAGE SPEED IN '39 OF 282.1 MPH. PLANE WAS METALLIC BLUE AND HIGHLY POLISHED. SPAN-36' LENGTH-25'6" EMPTY WEIGHT-3852 LBS. GROSS WEIGHT-6390 LBS. POWERPLANT-1000 HP 9 CYLINDER PRATT & WHITNEY "WASP"



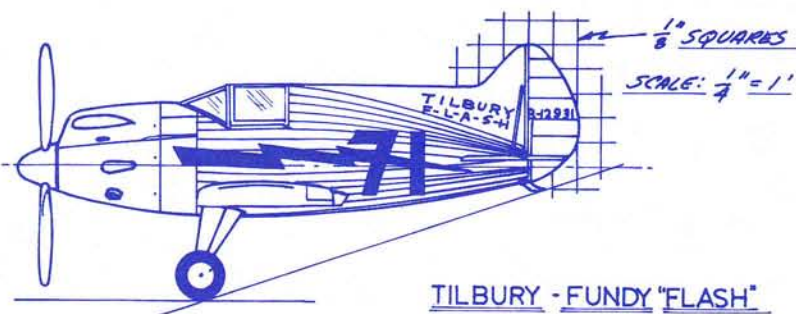
DESIGNED, BUILT & FLOWN BY EILER SUNDORPH AIRCRAFT FINISHED 6TH IN 1937 BENDIX TROPHY RACE AVERAGING 166.2 MPH. FUSELAGE WAS ALL METAL WITH FABRIC COVERED WOOD STRUCTURED WINGS. POWERPLANT WAS 285 HP JACOBS RADIAL. PLANE WAS DESIGNED AS AN EXECUTIVE TRANSPORT & RACED FOR ADVERTISING PURPOSES. LENGTH-27 1/2' CESSNA WINGS WERE USED





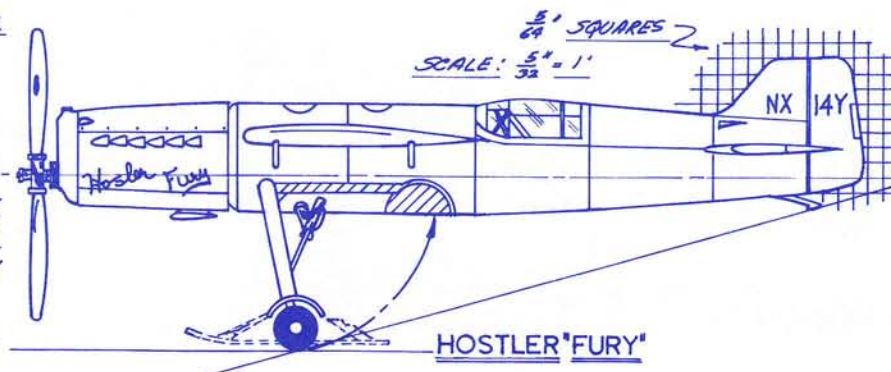
## APPENDIX V

BUILT IN 1932 THE "FLASH" FIRST RACED AT THE 1933 AMERICAN AIR RACES AT CHICAGO WINNING THE 115 CO. IN. EVENT AT 114.92 MPH. POWERPLANT WAS A 45 H.P. CHURCH ENGINE. SPAN - 16' LENGTH - 11' 6" EMPTY WEIGHT 270 LBS. CRAFT WAS RACED THROUGH 1935 ATTAINING A TOP PYLON SPEED OF 115.8 MPH



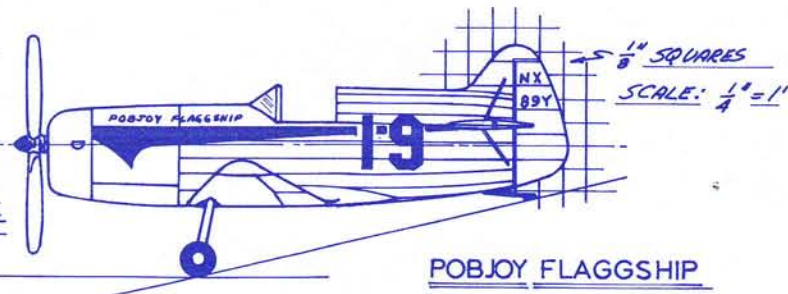
TILBURY - FUNDY "FLASH"

BUILT IN 1938 THE "FURY", DESIGNED, BUILT AND FLOWN BY RUSSELL A. HOSTLER WAS TO BE A PROTOTYPE OF A LONG RANGE AIR CORPS ATTACK PLANE. IT WAS POWERED BY A 450 H.P. CURTISS D-12 ENGINE. COLOR SCHEME WAS RED. LENGTH - 28' SPAN - 16' AS LANDING SPEED WAS ESTIMATED AT OVER 100 MPH TRIAL STRAIGHT AHEAD FLIGHTS WITH SKIS WERE MADE FROM A FROZEN LAKE. LANDING GEAR HYDRAULICALLY RETRACTED REARWARD PROJECT ABANDONED DUE TO WWII



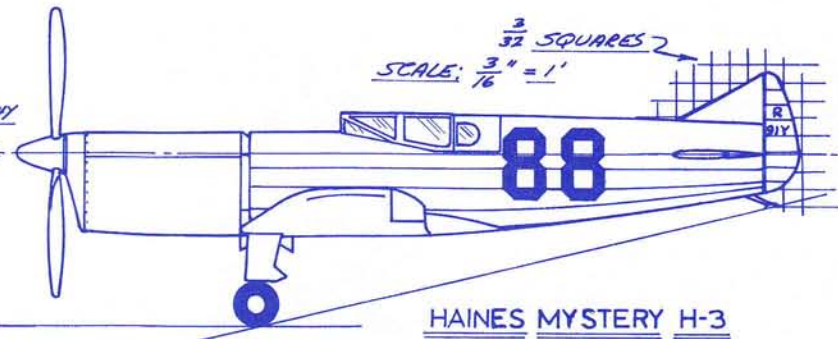
HOSTLER "FURY"

ORIGINALLY BUILT IN 1937 BY CLAUDE FLAGG. POWERPLANT WAS 90HP PBOJOY NIAGRA I 7 CYLINDER ENGINE. SPAN - 12' 7" LENGTH - 11' 6" WING AREA - 26.4 FT<sup>2</sup>. EMPTY WEIGHT - 430 LBS. GROSS WEIGHT - 700 LBS MAX SPEED - 235 MPH. FUSELAGE AND TAIL CONSTRUCTION WERE WELDED STEEL TUBE WITH FABRIC OVER WIRE SCREEN COVERING. WING CONSTRUCTION WAS SPRUCE SPARS WITH PLYWOOD COVERING. INWARD RETRACTING GEAR. UNSTABLE & NOT RACED AT '38 & '39 NATS.



POBJOY FLAGGSHIP

THE H-3 WAS BUILT & FLOWN BY FRANK HAINES OF DETROIT. IT WAS COMPLETED IN 1937 AND PLACED 6TH IN 1937 GREVE TROPHY RACE AT A SLOW 177.71 MPH AVERAGE SPEED. NOTE THE SWEEPED BACK LEADING EDGE OF WING & UNUSUAL CANOPY. COLOR SCHEME OF RACER WAS BRONZE. HAINES AND RACER MET THEIR END IN 1938 MIAMI SILVA TROPHY RACE.



HAINES MYSTERY H-3

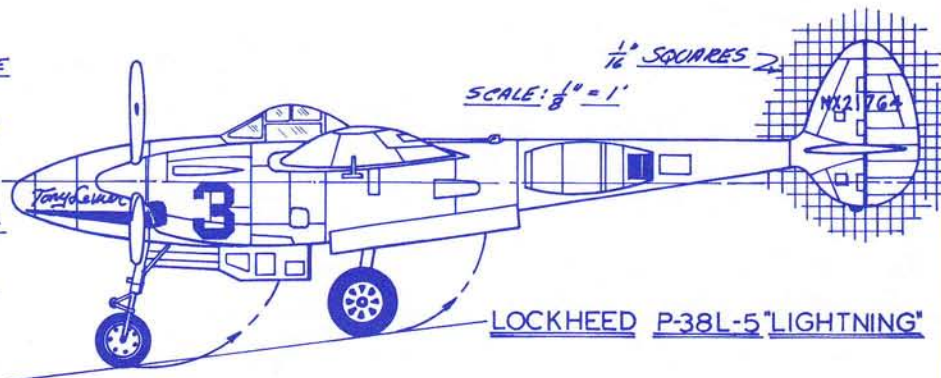


## APPENDIX VI

THIS BRIGHT RED "LIGHTNING" WAS FLOWN BY TONY LEVIER TO 5TH PLACE IN 1947 THOMPSON TROPHY RACE. IT WAS ONE OF SEVERAL P-38S FLOWN AT NATIONALS ALTHOUGH THE REST WERE BENDIX CONTESTANTS.

NUMBER '3' WAS MODIFIED WITH SUPERCHARGERS AND STABILIZER TIPS REMOVED PLUS ADDITIONAL GAS CAPACITY.

SPAN-52' AREA-327.5 FT<sup>2</sup>  
LENGTH-37'10" POWERPLANTS:  
2 1425 HP ALLISON V-1710-80/91  
V-12 LIQUID COOLED ENGINES

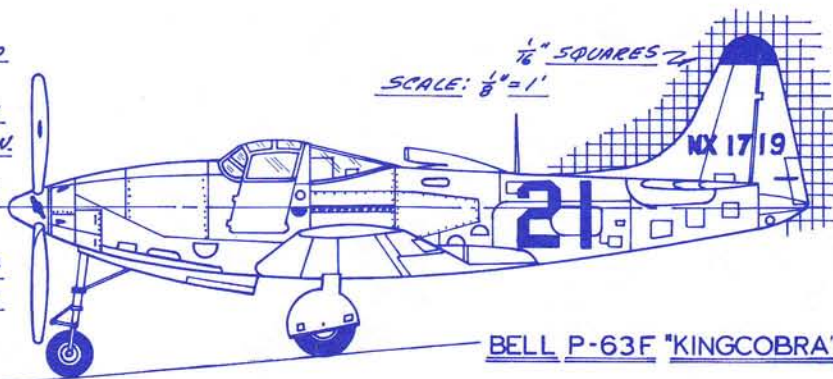


LOCKHEED P-38L-5 "LIGHTNING"

ONE OF SEVERAL "KINGCOBRAS" ENTERED IN VARIOUS NATIONAL AIR RACES.

NUMBER '21' WAS FLOWN TO 10TH PLACE IN 1946 THOMPSON BY H.L. PEMBERTON.

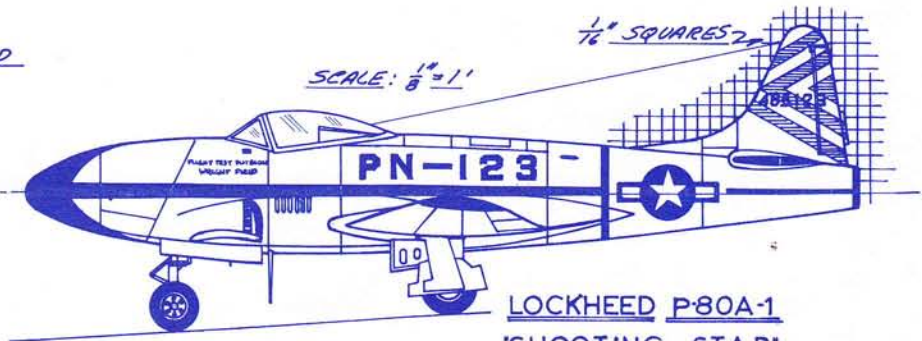
IT WAS SOLE "F" SERIES WITH MODIFIED LARGER FIN & RUDDER FOR BETTER CONTROL. SPAN-38'4" LENGTH-32'8" WING AREA-248 FT<sup>2</sup>  
WEIGHT EMPTY-6375 LBS. GROSS WEIGHT-8800 LBS. POWERPLANT-1325 HP ALLISON V-1710-93 12 CYLINDER LIQUID COOLED ENGINE



BELL P-63F "KINGCOBRA"

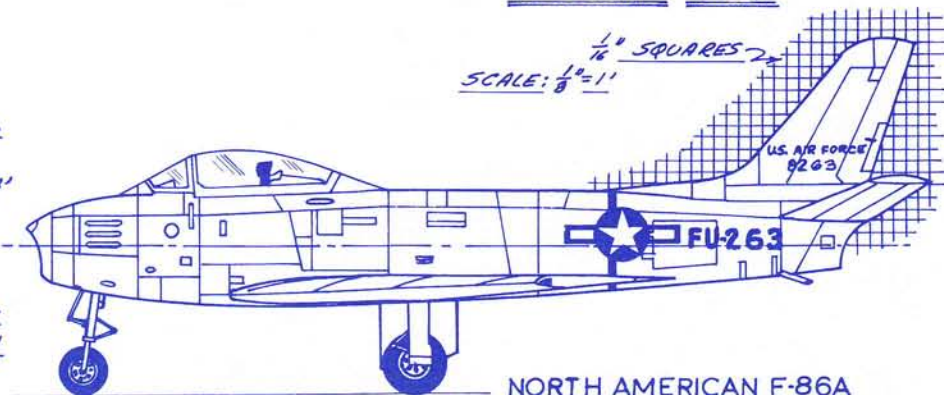
WINNER OF THE 1946 THOMPSON "J" TROPHY AT 515.853 MPH PILOTED BY MAJOR GUS LUNDQUIST. P-80 WAS USAF'S 1ST FULL SCALE PRODUCTION JET FIGHTER.

SPAN-38'10 1/2" LENGTH-34'6" WEIGHT EMPTY-7920 LBS.  
GROSS WEIGHT MAX-14,000 LBS.  
WING AREA-238 FT<sup>2</sup>  
POWERPLANT-4600 LBS ST. THRUST  
ALLISON J-33-63-9



LOCKHEED P-80A-1  
"SHOOTING STAR"

"SABRE" FLOWN BY CAPT. BRUCE CUNNINGHAM TO VICTORY IN 1949 THOMPSON TROPHY JET DIVISION RACE AT 586.173 MPH. SPAN-37.12' WING AREA-287.9 FT<sup>2</sup> LENGTH-37.54' POWERPLANT-6E J-47-63-13 5200 LBS STATIC THRUST. AIRCRAFT WAS CAPABLE OF OVER MACH 1 SPEEDS IN A DIVE AND WAS STANDARD USAF FIGHTER DURING KOREAN WAR



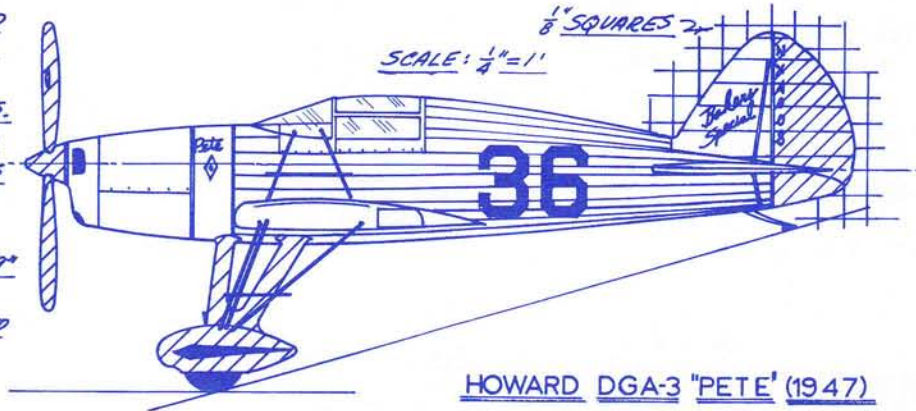
NORTH AMERICAN F-86A  
"SABRE"





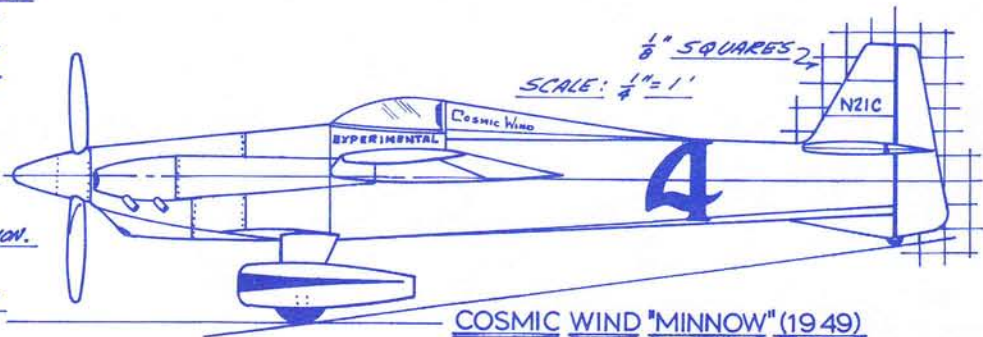
## APPENDIX VII

BUILT IN 1930 BY BEN HOWARD AND KNOWN AS "PETE" AIR-CRAFT WAS FAMOUS AT THE NATIONALS DURING THE 1930'S. REBUILT BY RAY BAKER IN 1947 TO USE THE CONTINENTAL C-85 ENGINE FOR THE GOODYEAR TROPHY RACE. SPAN-20'1" WING AREA-63FT<sup>2</sup> LENGTH-17'9" RACER WAS UNSUCCESSFUL IN POST WAR RACES DUE TO ADDED WEIGHT.



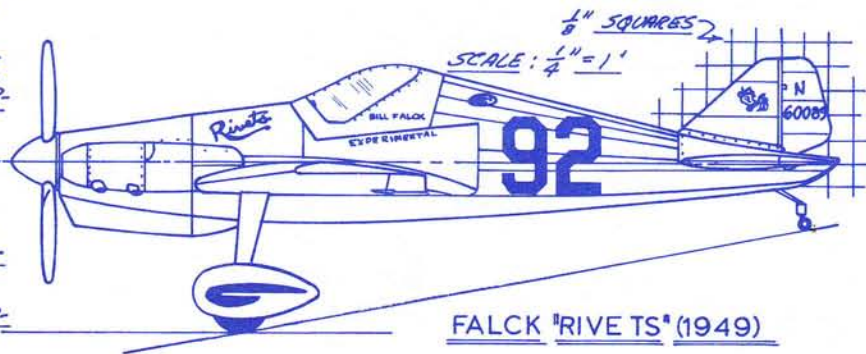
HOWARD DGA-3 "PETE" (1947)

MINNOW "4" WAS GREATLY CHANGED FOR 1949 GOODYEAR TROPHY RACE. LOW WING WAS MOVED HALF WAY UP FUSELAGE. FUSELAGE WAS STRETCHED OVER THREE FEET AND FABRIC COVERED STEEL FRAMEWORK REPLACED FORMER METAL AFT FUSELAGE AND TAIL. FLOWN TO 5TH PLACE IN '49 GOODYEAR BY HERMAN 'FISH' SALMON. SPAN-16' LENGTH-18'10" EMPTY WEIGHT-602 LBS. MAX SPEED WAS OVER 200 MPH.



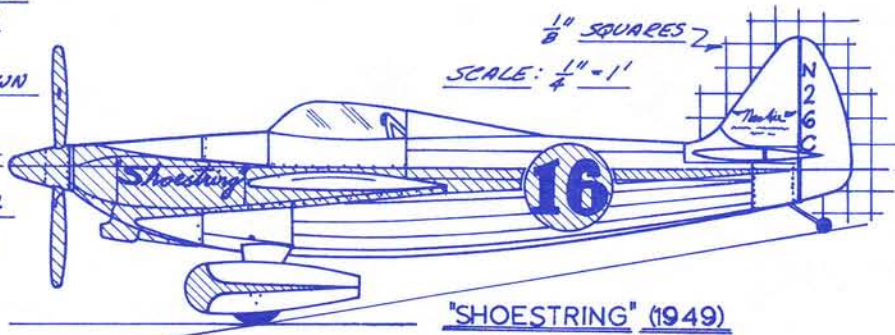
COSMIC WIND "MINNOW" (1949)

STARTING OUT IN 1948 AS A VERY HOME LY GOODYEAR MIDGET "RIVETS" DESIGNED, BUILT, AND RACED BY BILL FALCK HAD STARTED TO LOOK MUCH LIKE ITS FAMOUS 1950'S RACING CONFIGURATION BY 1949. SPAN-17.8' LENGTH-17' COLOR SCHEME RED WITH YELLOW TRIM. ALL METAL WING & FORWARD FUSELAGE. STEEL TUBE FABRIC COVERED AFT FUSELAGE & TAIL. CRAFT WON CONSOLATION GOODYEAR IN 1949 AT 162.6 MPH.



FALCK "RIVETS" (1949)

"SHOESTRING" WAS DESIGNED BY ROD KREIMENDAHL AND BUILT BY CARL VINCENT AST. IN 1949 CRAFT WON GOODYEAR 7TH PLACE FLOWN BY BOB DOWNEY. SPAN-19' LENGTH-17'9" COLOR SCHEME-CHARTREUSE AND RED. CRAFT WENT ON TO WIN 1951 CONTINENTAL TROPHY RACE. POWERPLANT-CONTINENTAL C-85 125 HP

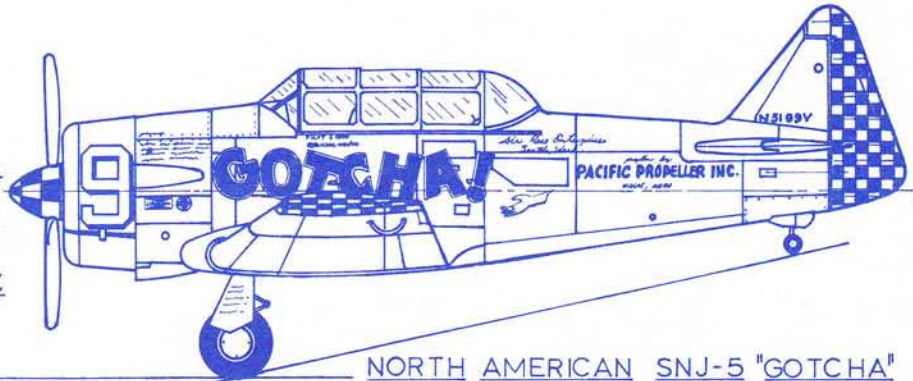


"SHOESTRING" (1949)



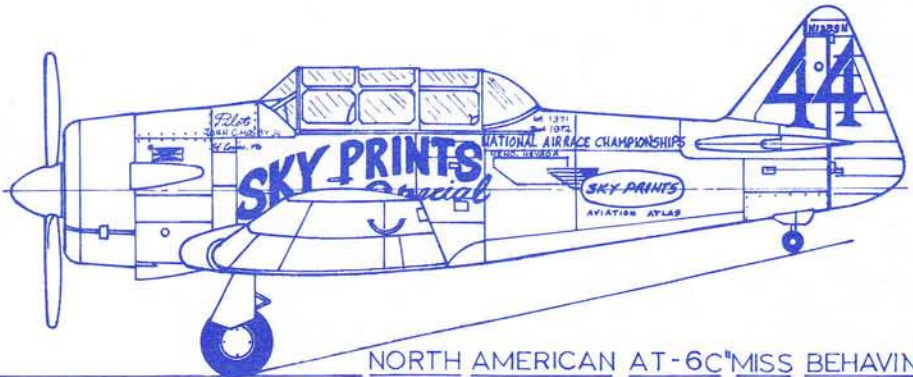
APPENDIX VIII

'GOTCHA' IS PAINTED ORANGE WITH BLACK AND WHITE TRIM, FLOWN BY PATRICK J. PALMER TO 3RD PLACE IN '73 RENO CHAMPIONSHIP RACE AT 203.822 MPH. - TOOK 1ST IN CALIFORNIA AIR CLASSIC AT 219.891 MPH. IN '73. CRAFT PLACED 2ND IN '72 RENO SILVER CONSOLATION RACE AT 197.20 MPH. AT RENO '71. PALMER PLACED 3RD IN AT-6 SILVER CONSOLATION RACE AT 196.19 MPH.; CRAFT TOOK RENO '75 RACE AT 207.19 MPH.



NORTH AMERICAN SNJ-5 "GOTCHA"

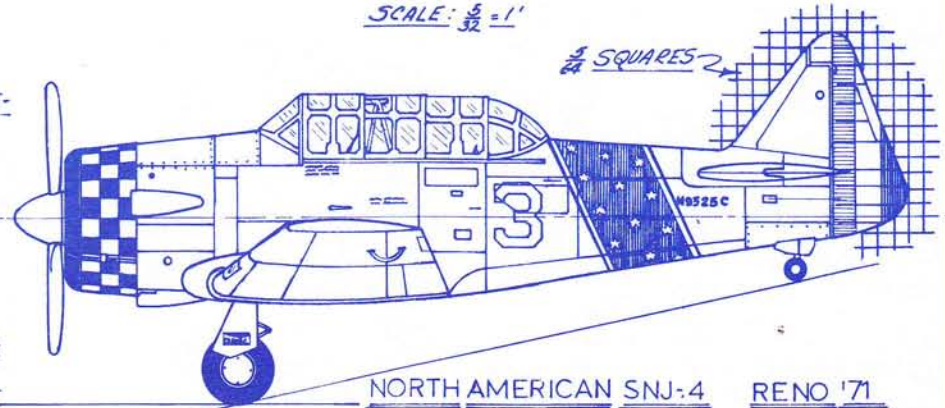
'SKY PRINTS SPECIAL' IS RED WITH WHITE LETTERING. SPINNER IS POLISHED ALUMINUM. JOHN MOSBY TOOK 1ST IN HAROLD NEUMAN CLASSIC @ 207.69 MPH. MIAMI '73 FLOWN BY JACK LOWERS AT RENO '73 TO 1ST IN CONSOLATION RACE AT 212.390 M.P.H. IN 1972 MOSBY TOOK 1ST IN QUALIFYING TRIALS AT 210.526 MPH. & 2ND IN AT-6 CHAMPIONSHIP RACE @ 201.305 MPH.



NORTH AMERICAN AT-6C "MISS BEHAVIN"

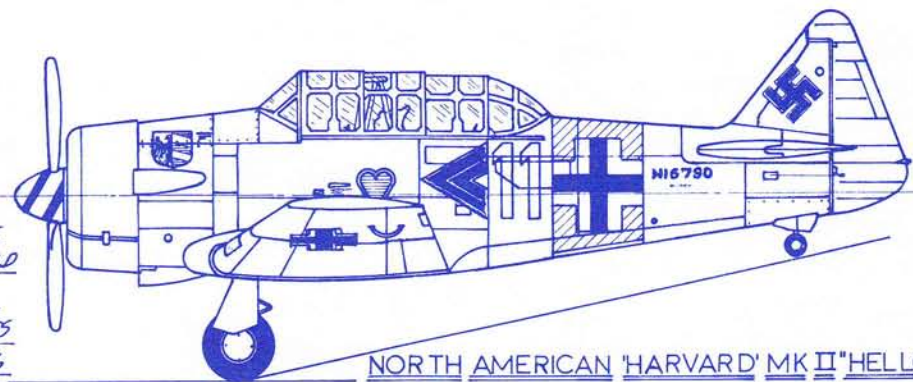
SCALE:  $\frac{5}{32} = 1'$

THE AIRCRAFT AT RIGHT HAS BEIGE-YELLOW WINGS AND STABILIZER. FUSELAGE IS GLOSSY OLIVE DRAB, BLACK AND WHITE CHECKERBOARD ON COUL, WHITE WHEELS & SPINNER, RED, WHITE & BLUE RUDDER, BLUE BAND AROUND FUSELAGE WITH WHITE STARS AND BORDER. QUALIFIED AT RENO '71 IN 3RD PLACE AT 204.16 MPH BY RICHARD SYKES.



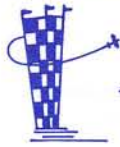
NORTH AMERICAN SNJ-4 RENO '71

THIS MARK II IS PAINTED A HIGH GLOSS DARK GREEN. RACE NUMBERS AND AREA AROUND CROSS ARE WHITE. BAND AROUND FUSELAGE IS YELLOW. CROSS & CHEVRONS ARE BLACK. FLOWN BY CALVIN CONROY TO 5TH PLACE IN HAROLD NEUMAN SPEED CLASSIC AT 196.01 MPH. - MIAMI '73. OWNER E.T. MODES FLEW CRAFT TO 5TH AT RENO AT-6 CONSOLATION RACE RENO '73 @ 199.692 M.P.H.



NORTH AMERICAN 'HARVARD' MK II "HELLO"

CM



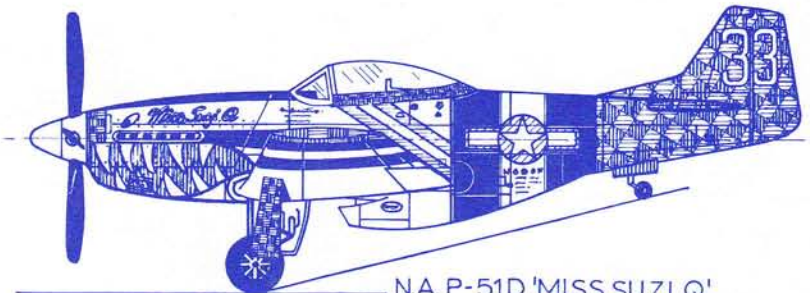
APPENDIX IX

THIS AIRCRAFT IS THE WELL KNOWN UNLIMITED RACE PLANE SEEN AT MAJOR AIR RACES SUCH AS RENO, MOJAVE & MIAMI. PILOTED BY THE WORLD RENOWNED AEROBATIC PILOT BOB HOOVER OF ROCKWELL INTERNATIONAL "SHRIKE COMMANDER" & F-86 STUNT FAME, WHILE NOT AN AIR RACER, THIS YELLOW AND BLACK P-51, BECAUSE OF ITS YEARS SERVING AIR RACING, IS INCLUDED HERE.



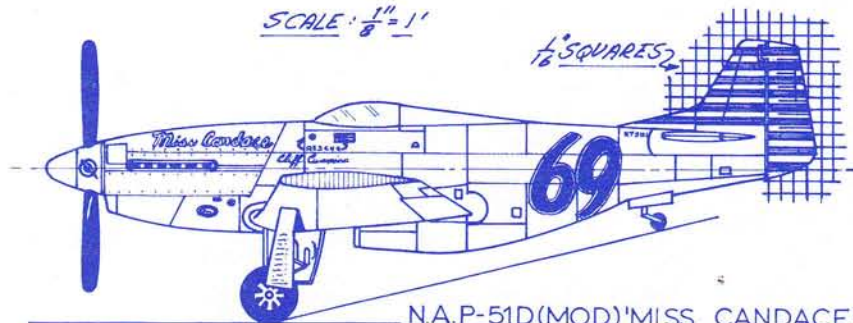
NORTH AMERICAN P-51D 'MUSTANG'

THE COLOR SCHEME OF THIS AIRCRAFT ALMOST DEFIES DESCRIPTION. THE AREAS OF CHECKERBOARD ARE RED & YELLOW, BLACK BANDS SURROUND THE STAR & BAR INSIGNIA WHICH IS LIGHT BLUE. SHARK MOUTH IS RED & WHITE. BALANCE OF TRIM IS BLACK & YELLOW AS SHOWN. AIRCRAFT IS OWNED & FLOWN BY KEN BURNSTINE. DUE TO SEVERAL TECHNICALITIES IT WON THE '74 RENO RACE AT ONLY 381.82 M.P.H.



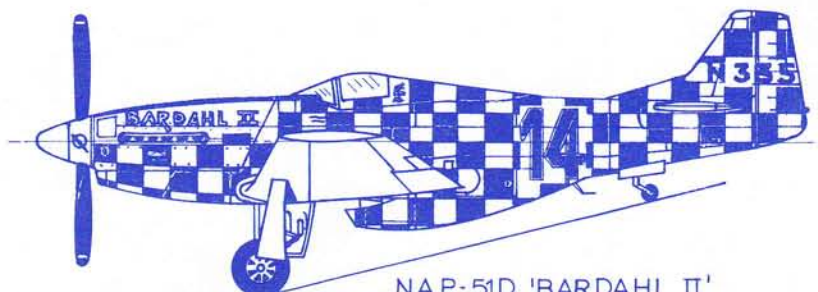
N.A. P-51D 'MISS SUZI Q'

CLIFF CUMMINS OWNS AND RACES "MISS CANDACE". THIS 'MUSTANG' HAS CLIPPED WINGS, MODIFIED OIL COOLER ON FUSELAGE BOTTOM AND GREATLY REDUCED CANOPY. STRIPES ON TAIL ARE RED. NAME OF AIRCRAFT IS WHITE TRIMMED IN YELLOW & BLACK. NUMBER "69" IS BLACK - YELLOW BORDER. CUMMINS FLEW AIRCRAFT TO 2ND PLACE AT RENO '73 @ 417.076 M.P.H.



N.A. P-51D (MOD) 'MISS CANDACE'

EDWARD WEINER FLEW THIS YELLOW & BLACK CHECKERBOARD AIRCRAFT CROSS COUNTRY IN THE HAROLD CLUB TRANSCONTINENTAL TROPHY DASH FROM MILWAUKEE TO RENO IN 1968. CRAFT WON RACE AT AN AVERAGE SPEED OF 361.141 M.P.H. #14 & "BARDAHL" WERE BLACK WITH WHITE TRIM. LANDING GEAR, WHEEL WELLS WERE WHITE. ROLLSROYCE MERLIN V-1650-7 DELIVERED 1700 H.P. - MAX. SPEED WAS 450 M.P.H.



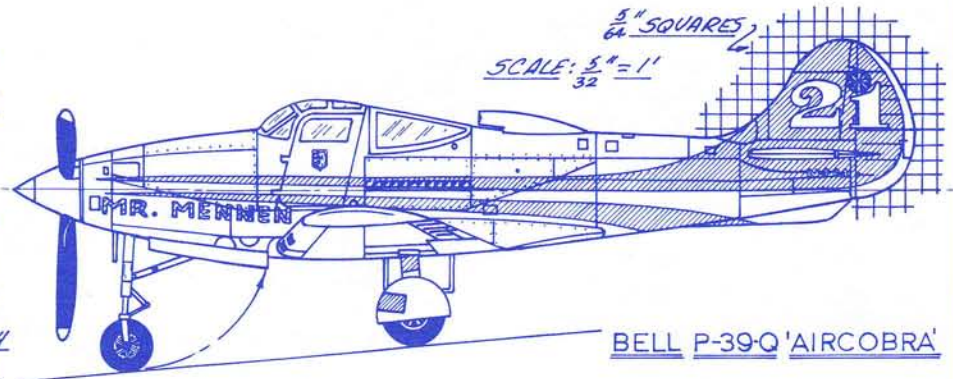
N.A. P-51D 'BARDAHL II'

CH



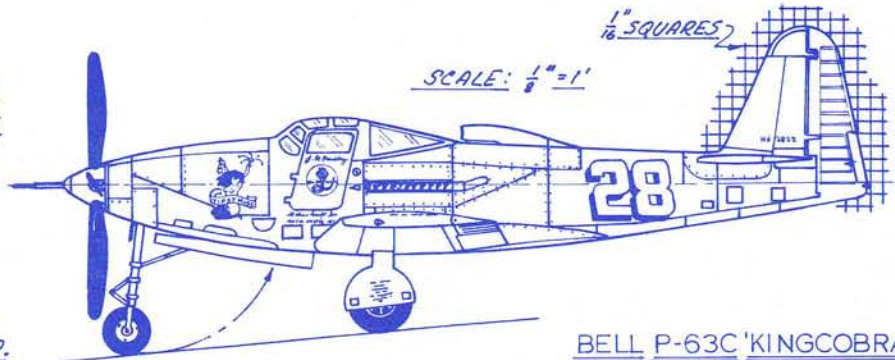
## APPENDIX X

MIRA J. SLOVAK'S "MR. MENNEN" ARRIVED AT RENO IN 1972 TOO LATE TO QUALIFY FOR THE UNLIMITED EVENT. HOWEVER THE FLASHY 'COBRA' WAS A REAL CROWD PLEASER FROM AN APPEARANCE STANDPOINT. CRAFT WAS ALL WHITE WITH GREEN STRIPES & MARKINGS EDGED IN GOLD. 12 CYLINDER ALLISON ENGINE CAN PUT OUT 2200 H.P., SPAN IS 34 FT., LENGTH IS 30' 2". LICENSE NUMBER IS N40A.



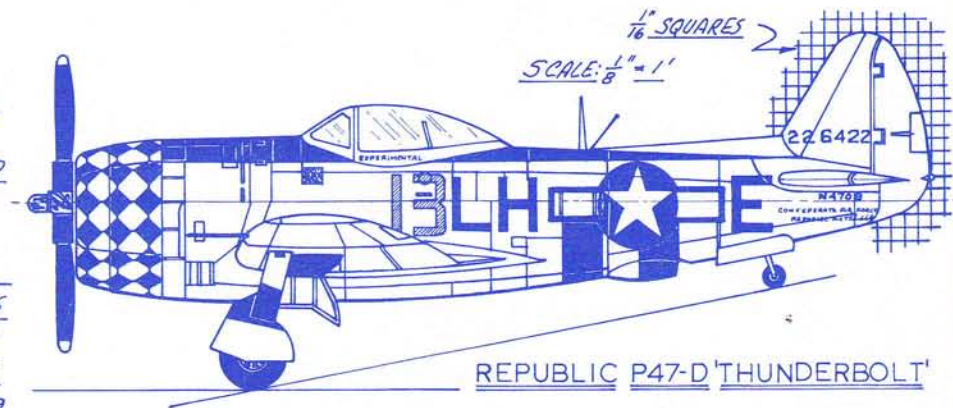
BELL P-39Q 'AIRCobra'

JOHN R. SANDBERG'S FLAMING RED 'COBRA' HAS A POLISHED CHROME PLATED SPINNER, WHITE LETTERING WITH BLACK TRIM AND BLACK 'TIPSY MISS'. AIRCRAFT HAS HAD POOR LUCK AT RENO & MOJAVE DUE TO MECHANICAL PROBLEMS. WINGS HAVE BEEN CLIPPED, AIR-SCOOP ENLARGED, EXHAUST MODIFIED AND WING FILLETS ENLARGED. ALLISON ENGINE PUTS OUT 2300 H.P.



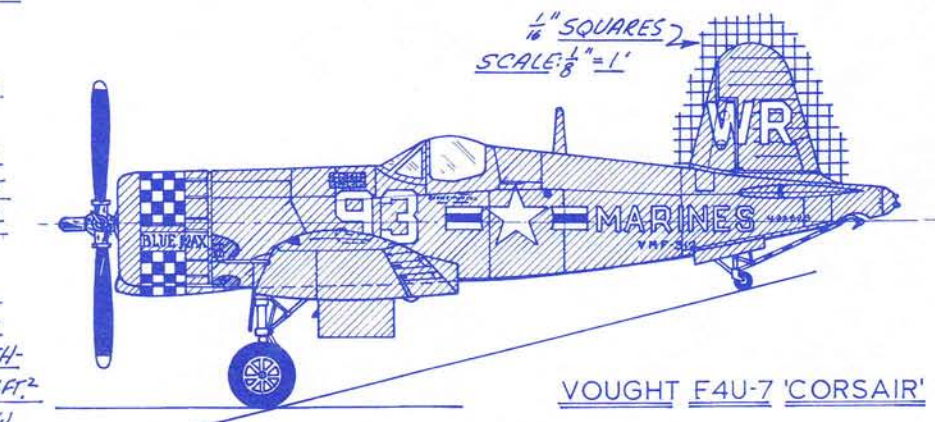
BELL P-63C 'KINGCOBRA'

A MOST UNUSUAL ENTRY IN THE RENO UNLIMITED CATEGORY, THIS 'JUG' PLACED 4TH IN THE '74 UNLIMITED MEDALLION RACE PILOTTED BY MARVIN "LEFTY" GARDNER. AIRCRAFT IS LIGHT GRAY WITH YELLOW & BLACK CHECKERED COWLING. DIMENSIONS ARE: SPAN-40' 9 3/8"; LENGTH-36' 1 3/4"; HEIGHT-14' 7"; WING AREA-300 FT<sup>2</sup>. POWERPLANT IS 2635 H.P. P&W R-2800-59.



REPUBLIC P-47-D 'THUNDERBOLT'

THIS 'CORSAIR' DONE IN THE MARKINGS OF VMF-312 USMC, CVE-115 BAIROKO, KOREA, FEB. 1952 IS PILOTTED BY ROBERT E. GUILFORD. CRAFT TOOK 6TH PLACE IN '74 RENO UNLIMITED MEDALLION RACE. COLOR IS NAVY BLUE WITH RED & WHITE CHECKERED COWL. ALL LETTERING IS WHITE. SPAN-41'; LENGTH-34 1/2'; HEIGHT-13'; WING AREA-314 FT<sup>2</sup>. POWERPLANT IS 2100 H.P. P&W 2800-18W.



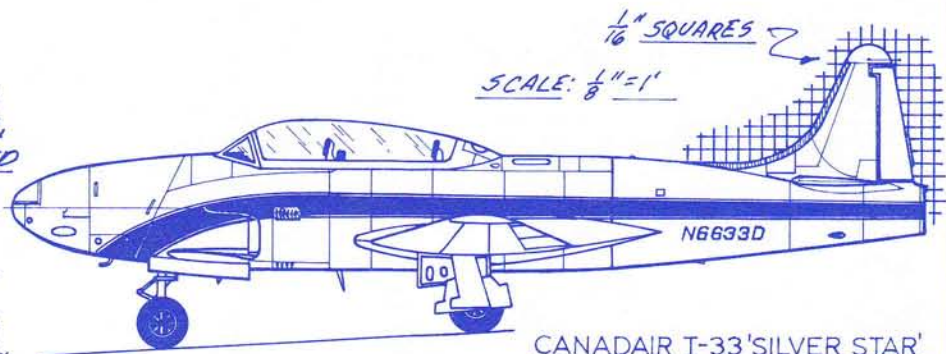
VOUGHT F4U-7 'CORSAIR'

CH



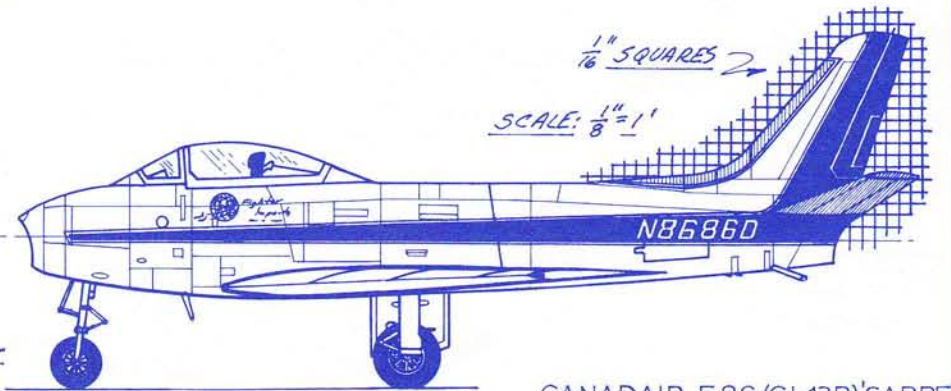
APPENDIX XI

THE T-33 IS A STRETCHED ADAP-  
TATION OF THE LOCKHEED F-80C  
'SHOOTING STAR' TO ALLOW FOR A SEC-  
OND SEAT. THE LATE LEROY PENHALL,  
OWNER OF 'FIGHTER IMPORTS,' OBTAINED  
T-33 & F-86 JETS FROM CANADA FOR  
MODIFICATION & RESALE IN U.S. RED  
AND YELLOW CRAFT AT RIGHT WAS FLOWN  
IN JET RACE AT MOJAVE '74 & '75.  
SPAN - 38' 10 1/2"; LENGTH - 37' 9"; HEIGHT -  
11' 8"; WING AREA - 237 FT<sup>2</sup>; MAX SPEED - 580 MPH.



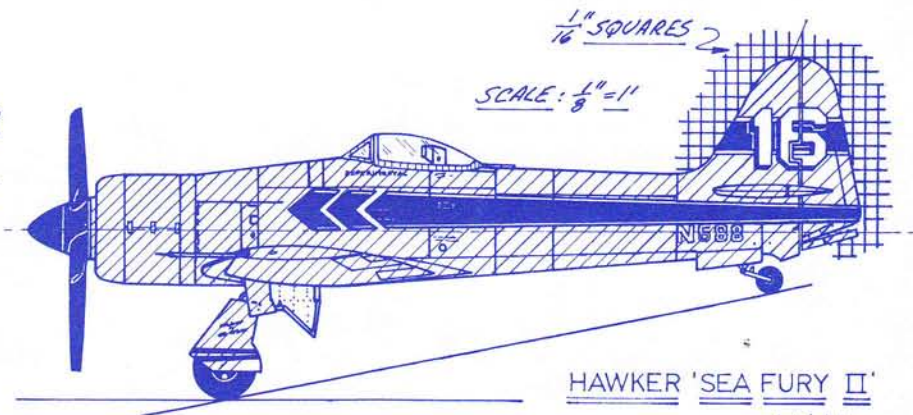
CANADAIR T-33 'SILVER STAR'

'SABRE' SHOWN IS ALL WHITE WITH  
RED STRIPE. LEADING EDGE OF  
VERTICAL FIN IS POLISHED ALUMINUM.  
'FIGHTER IMPORTS' TRADE MARK IS  
BLUE AND LICENSE NUMBER IS GOLD.  
F-86 & T-33 ABOVE WERE BUILT  
BY CANADAIR LTD. SPAN - 37' 1";  
LENGTH - 37' 6"; HEIGHT - 14' 7";  
WING AREA - 287.9 FT<sup>2</sup>. MAX SPEED -  
680 M.P.H. CRAFT COMPETED IN  
MOJAVE JET RACES.



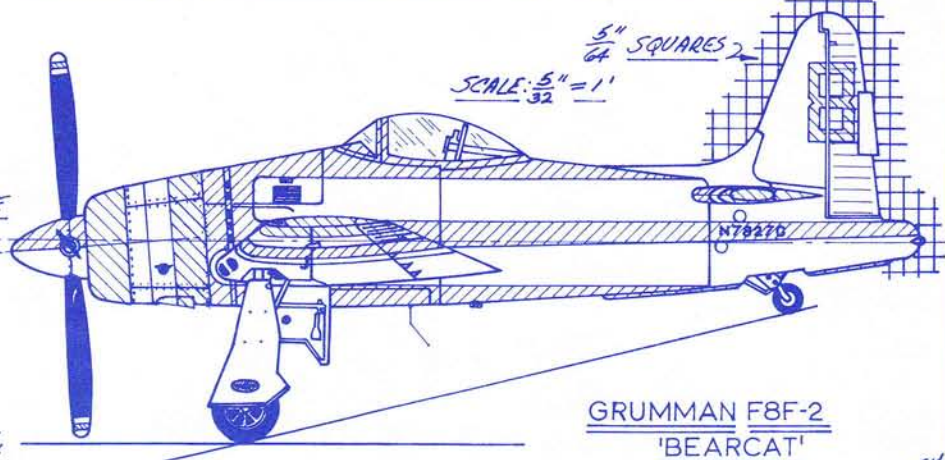
CANADAIR F-86 (CL-13B) 'SABRE'

LLOYD A. HAMILTON OWNS THIS HAWKER  
SEA FURY II. 1972 COLOR SCHEME  
SHOWN IS DARK GREEN WITH YELLOW  
FUSELAGE & TAIL STRIPE. LICENSE  
AND RACING NUMERALS WERE WHITE.  
CRAFT WAS LATER CHANGED TO SEA-  
FOAM GREEN WITH ROYAL AUSTRALIAN  
NAVY MARKINGS. HAMILTON PLACED  
THIRD IN HEAT 2-A IN 1972 UN-  
LIMITED CONTEST AT RENO.



HAWKER 'SEA FURY II'

CRAFT APPEARED AT RENO IN 1969  
FLOWN BY WALTER OHLRICH. IT  
BORE A RED #10 RACING NUMBER ON  
THE FIN. THE SPINNER WAS ALTERNATE  
RED, WHITE & BLUE QUARTERS. COWL  
WAS RED WITH WHITE STRIPE IN CENTER.  
STRIPING ON WHITE FUSELAGE  
WAS BLUE. PLANE WAS NAMED 'MISS  
PRISS'. JOHN A. HERLIHY NOW OWNS  
PLANE (RENAMED 'SWEET P') AND HAD  
STRIPPED PAINT FOR 1974 RENO RACE.



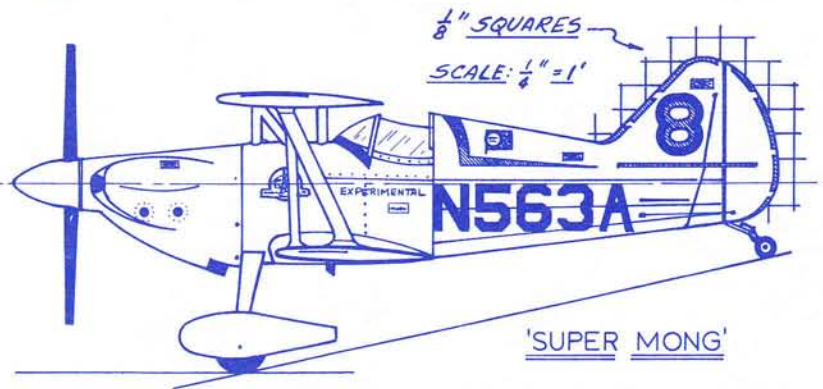
GRUMMAN F8F-2  
'BEARCAT'

CH



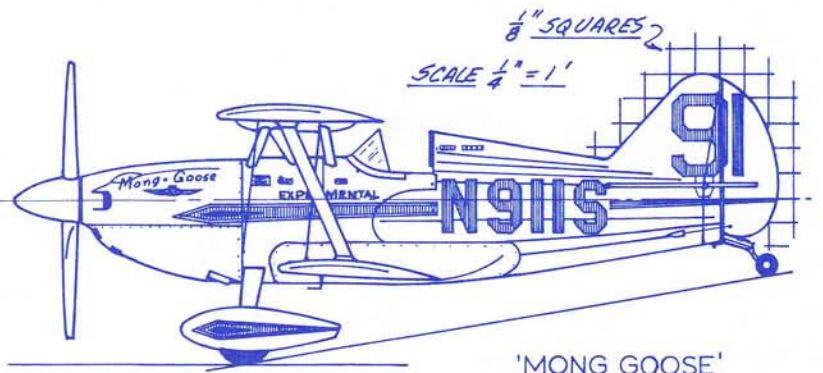
## APPENDIX XII

CLEMENS F. FISCHER HAS MADE HIS 'MONG SPURT' INTO 'SUPER MONG' BY CHANGING WINGS TO LAMINAR FLOW FIBERGLASS COVERED ALUMINUM FRAMED ONES THAT ARE ONLY  $2\frac{3}{32}$ " THICK. ALSO HE HAS ADDED A CLOSE FITTING COOWL. AIRCRAFT IS ALL WHITE WITH BLACK LICENSE, BLACK & GREEN "8" AND GREEN TRIM. FISCHER HAS FLOWN IN EVERY CHAMPIONSHIP RENO BIPLANE RACE SINCE 1965. HE CAME IN THIRD IN 1968, HIS BEST RACE.



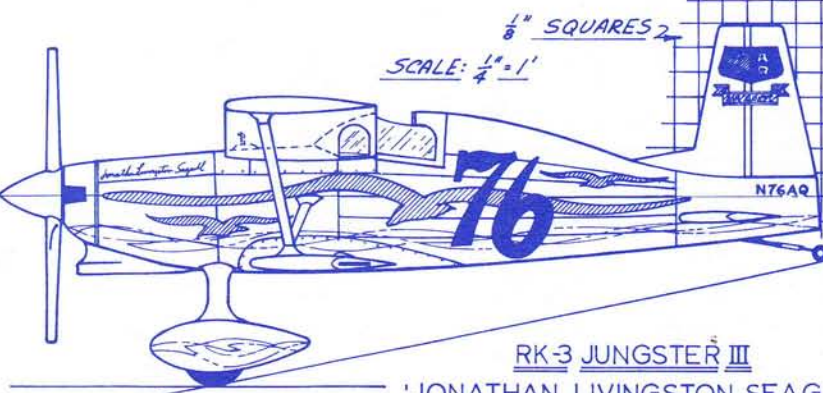
'SUPER MONG'

WILLIAM NAGEL BUILT 'MONG GOOSE' AND HAS POWERED IT WITH A KIT BUILT FRANKLIN 4 CYLINDER ENGINE. COLOR SCHEME IS ALL WHITE BASE COLOR. RACE NUMBERS AND LICENSE NUMBERS ARE RED-ORANGE. INNER STRIPES ON FUSELAGE SIDES, WHEEL PANTS, WING & STAB ARE RED ORANGE-WITH DARK BLUE OUTLINE. 'MONG GOOSE' IS DARK BLUE. LENGTH-  $15'8\frac{1}{2}"$ ; SPAN =  $12'1"$ . PLANE SO FAR HAS BEEN SLOW DUE TO ENGINE.



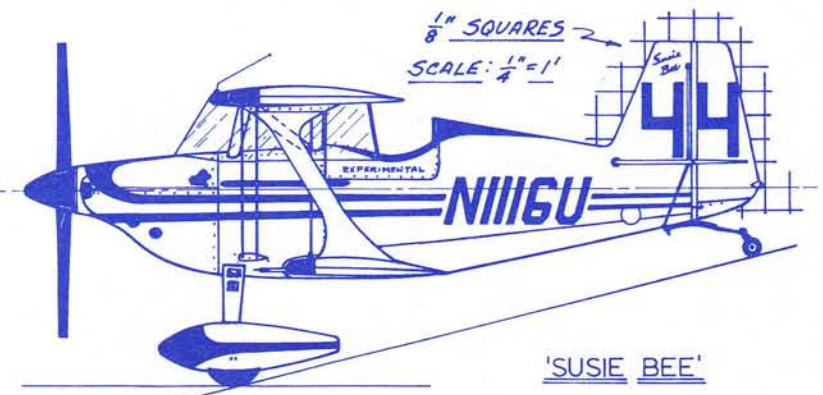
'MONG GOOSE'

'J.L. SEAGULL' WAS DESIGNED AND BUILT BY RIM KAMSKAS. FLOWN BY CURRENT OWNER J.O. HALL AIRCRAFT WON 2ND PLACE IN RENO BIPLANE CHAMPIONSHIP RACE IN 1972 AT 180.04 M.P.H.. FANCY PAINT SCHEME WAS DESIGNED BY ARTIST KENTHONS. CRAFT IS ALL WHITE WITH GOLD GULLS; VARIOUS SHADES OF BLUE ON LOWER FUSELAGE & PANTS CREATE WAVE EFFECT.



RK-3 JUNGSTER III  
'JONATHAN LIVINGSTON SEAGULL'

EARL HOFFMAN HAS FLOWN 'SUSIE BEE', AN ORIGINAL DESIGN BUILT BY GENE SALINA IN 1967, IN THE RENO CHAMP. BIPLANE RACE EVERY YEAR SINCE 1969 EXCEPT 1972. COLOR SCHEME IS WHITE WITH BLACK TRIM & GOLD PIN STRIPE. WING IS FABRIC COVERED WOOD; SPAN  $15'5"$ . FUSELAGE IS FABRIC COVERED STEEL TUBE FRAMEWORK. LENGTH IS  $15'2"$ . LYCOMING O-290-6 ENG.

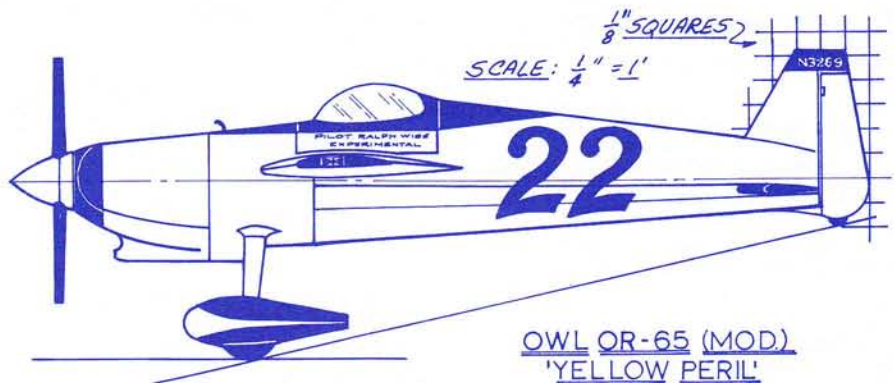


'SUSIE BEE'



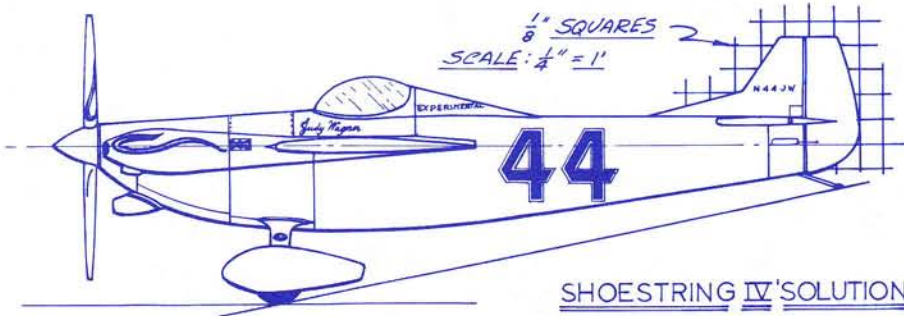
### APPENDIX XIII

THE OWL RACER OR-65-2 "YELLOW PERIL" HAS A SPECIAL WING DESIGNED BY OWNER, BUILDER, PILOT, RALPH WISE. SPAN IS 20'5"; CHORD AT ROOT IS 50" AND 25" AT TIPS. COLOR SCHEME IS YELLOW WITH MAROON TRIM & POLISHED ALUMINUM SPINNER. CRAFT TOOK 1ST IN '72 F-1 MED-ALLION RACE (RENO) AT 195.181 MPH. PLANE WAS SOLD TO JERRY HIBBARD AND HAS SINCE CRASHED & BURNED.



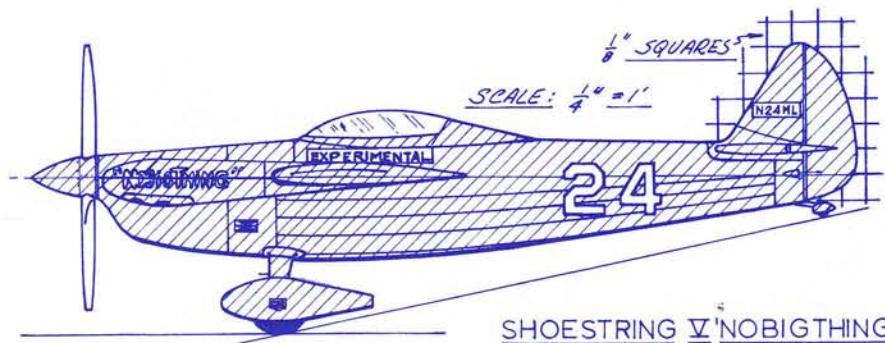
OWL OR-65 (MOD)  
'YELLOW PERIL'

JUDITH WAGNER BUILT THIS SHOE-STRING IV FROM KETNER PLANS IN 1971. NAMED "WAGNER SOLUTION" AIRCRAFT IS PAINTED A HIGH GLOSS BRIGHT ORANGE. MODIFICATIONS INCLUDE CLIPPED RUDDER & FIN, ADDED DORSAL FIN AND CLEANED UP CARB. INTAKE. POWERPLANT IS O-200 CONTINENTAL. SHE PLACED 5TH IN FORMULA ONE HEAT 1-A IN 1973 AT 210.117 M.P.H.



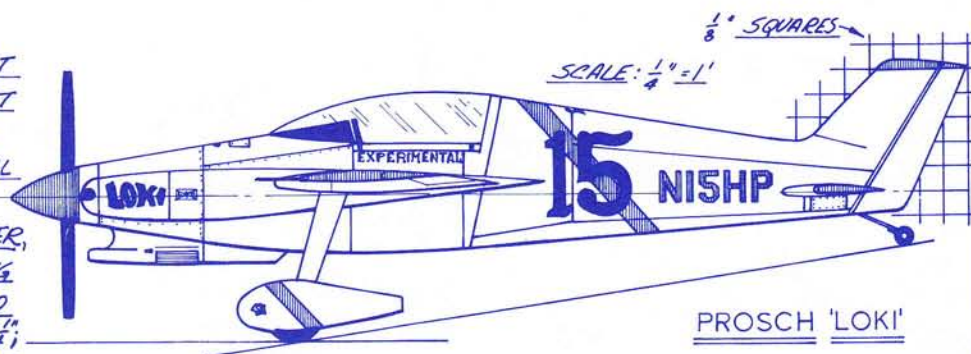
SHOESTRING IV 'SOLUTION'

BUILT BY MUNROE LYETH, JR. "NOBIGTHING" IS A SHOESTRING K-10 FROM KETNER PLANS. COLOR SCHEME IS RED WITH WHITE NAME & RACE NUMBER. #24 HAS BLACK OUTLINE. OTHER LETTERING IS BLACK ON WHITE BACKGROUNDS. PLANE WAS BUILT IN '72 AND PLACED 6TH IN HEAT 1-A AT RENO '72. AIRCRAFT WAS RACED AT MIAMI IN 1973.



SHOESTRING V 'NOBIGTHING'

ERNEST PROSCH DESIGNED & BUILT "LOKI" FOR 1973 SEASON. EXCEPT FOR FIBERGLASS WHEEL PANTS AND WING FILLETS CRAFT IS ALL METAL. COLOR SCHEME IS ALL WHITE WITH RED-ORANGE SPINNER, STRIPES, LICENSE NO. AND FLYING SURFACE TIPS. RACING NO. AND "LOKI" ARE BLACK. SPAN-17'10 1/4"; LENGTH-19'10 1/2". RACED AT RENO IN '73 & '74 BY ROBERT REINSETH.



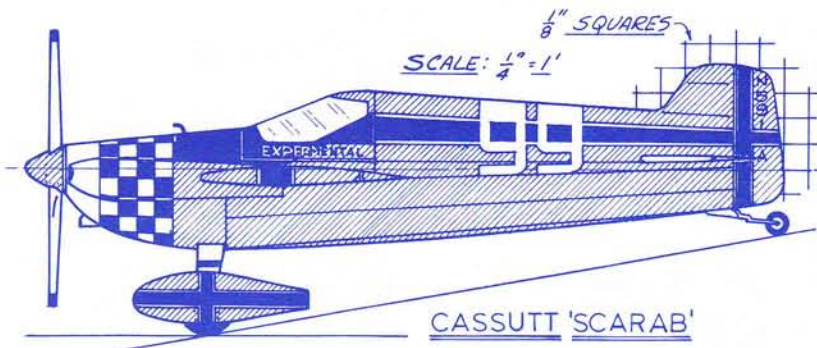
PROSCH 'LOKI'

CM



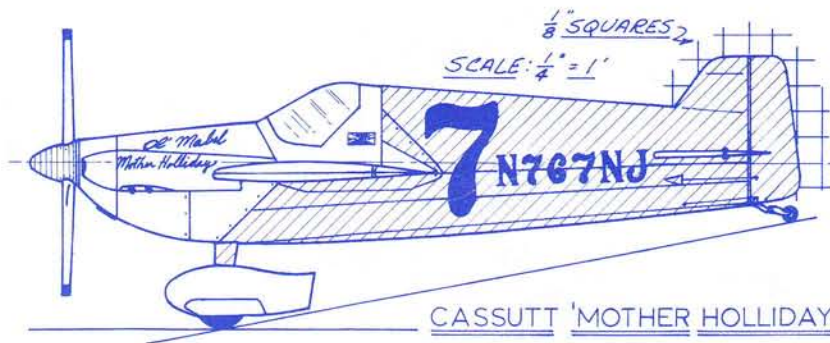
## APPENDIX XIV

'SCARAB', A CASSUTT III, WAS BUILT IN 1967 BY BOB GREIGER AND RACED AT FREDERICK MD. & RENO IN 1968. OWNED BY THE ERIE-SCARAB RACING ASSOCIATION OF CLEVELAND, CRAFT WAS FLOWN BY SAL LANESE. COLOR SCHEME WAS RED WITH BLACK AND WHITE TRIM. LICENSE NUMBER AND 'EXPERIMENTAL' WERE GOLD. SPAN = 15' LENGTH = 16'3" WOOD WING; STEEL TUBE & FABRIC FUSELAGE & TAIL.



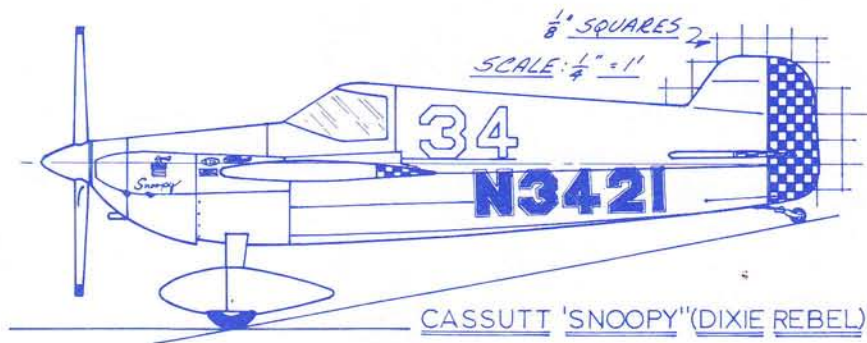
CASSUTT 'SCARAB'

FUSELAGE OF 'MOTHER HOLLIDAY' IS CASSUTT FITTED WITH 'RUIETS' STYLE CANOPY. WING WAS DESIGNED BY OWNER, BUILDER, PILOT NICK JONES. COLOR SCHEME IS BLUE & WHITE FUSELAGE AND TAIL; RACE AND LICENSE NUMBER ARE GOLD - OTHER MARKING BLACK. WINGS ARE NATURAL MAHOGANY FINISH. LENGTH = 16'; SPAN = 15' WHEEL PANTS HAVE CLAM-SHELL DOORS.



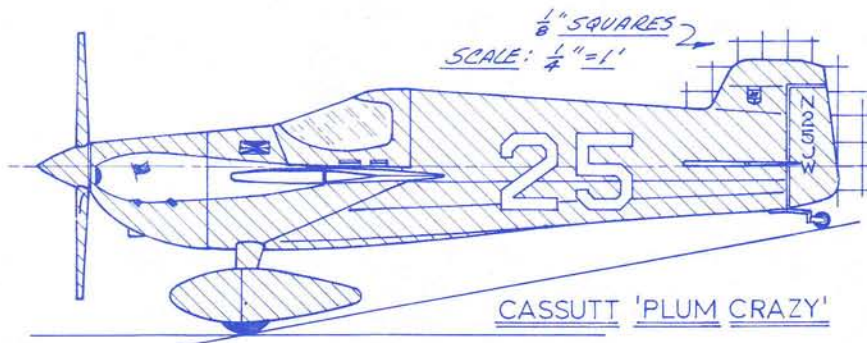
CASSUTT 'MOTHER HOLLIDAY'

"SNOOPY", A CASSUTT II, WAS BUILT IN 1967 BY JIM WILSON AND RACED BY HIM AT CLEVELAND & MIAMI. PLANE IS PAINTED LAUENDER MIST WITH WHITE SPINNER & RACE NUMBER; BLACK & WHITE CHECKERBOARD ON CONTROL SURFACES; BLACK LICENSE NUMBER. SPAN = 14'10 1/2" LENGTH = 16'8". CRAFT SOLD TO JOHN THOMPSON IN '70; RENAMED 'DIXIE REBEL'.



CASSUTT 'SNOOPY' ('DIXIE REBEL')

JIM WILSON BUILT "PLUM CRAZY" WITH A SPECIAL SELF DESIGNED THIN TAPERED WING FOR WHICH HE SELLS PLANS. SPAN = 18' LENGTH = 17'4". COLOR SCHEME IS PLUM FUSELAGE & PANTS; WHITE 'APPLE CHEEKS' AND RACE NUMBER. WINGS AND STABILIZER ARE WHITE. WILSON PLACED 4TH IN 1972 & 1973 IN RENO CHAMPIONSHIP FORMULA ONE RACES.

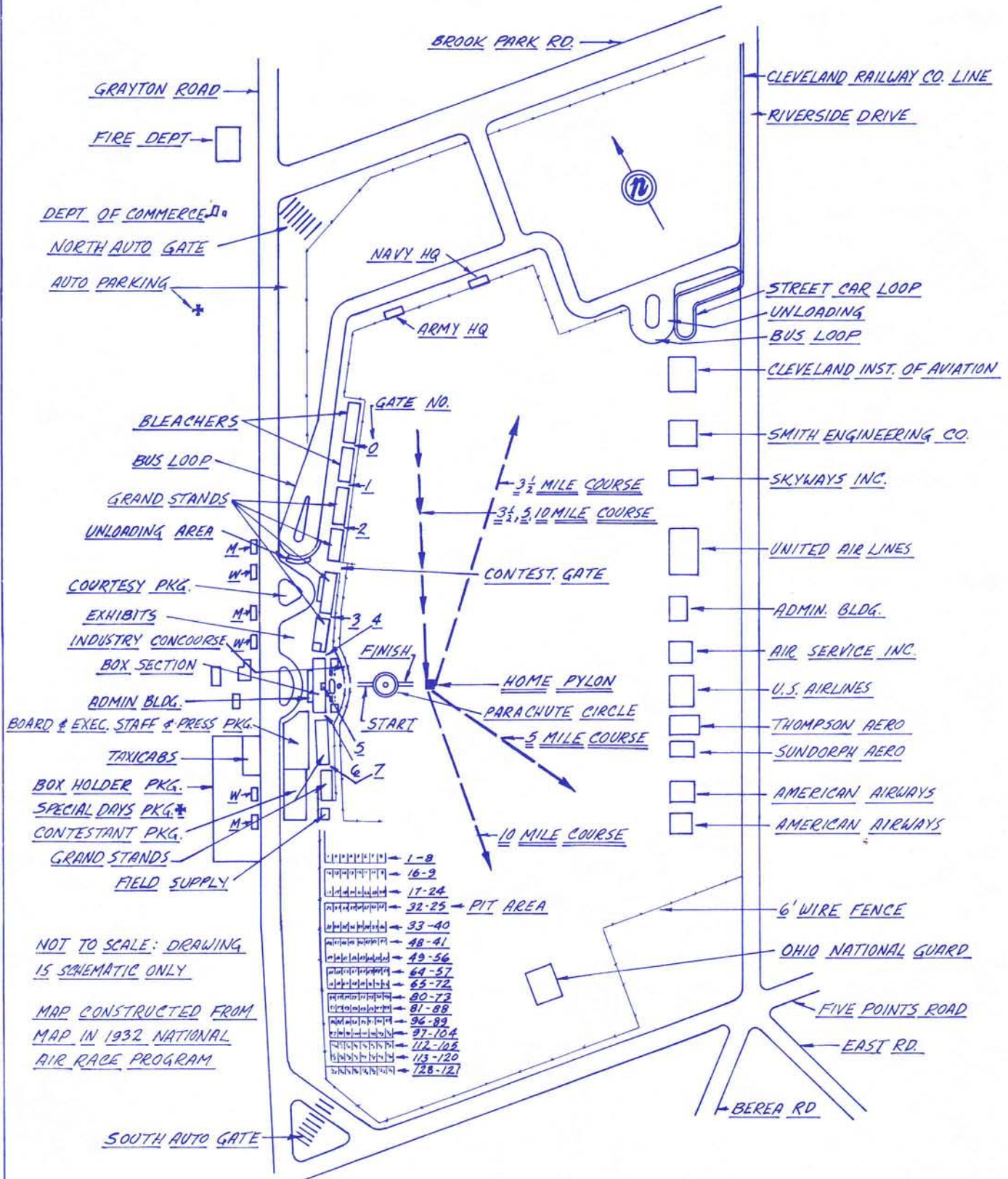


CASSUTT 'PLUM CRAZY'





# FIELD LAYOUT 1932 NATIONAL AIR RACES AT CLEVELAND, OHIO



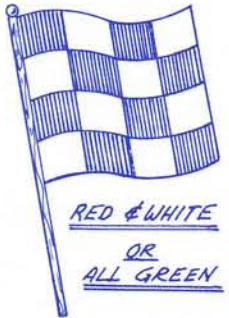
NOT TO SCALE: DRAWING  
IS SCHEMATIC ONLY

MAP CONSTRUCTED FROM  
MAP IN 1932 NATIONAL  
AIR RACE PROGRAM

HELD AUGUST 27 THRU SEPTEMBER 5, 1932 WAS THE YEAR OF JIMMY DOOLITTLE & GEE BEE R-1 TRIUMPH.  
OVER 55,000 RACE FANS CHEERED THIS AMAZING COMBINATION OF MAN & MACHINE. A VINTAGE RACING YEAR!

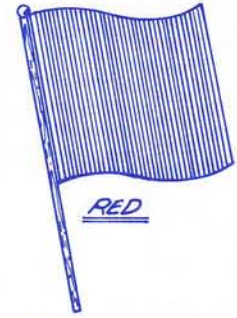


RACING FLAGS AND THEIR MEANING



RED & WHITE  
OR  
ALL GREEN

START OF RACE



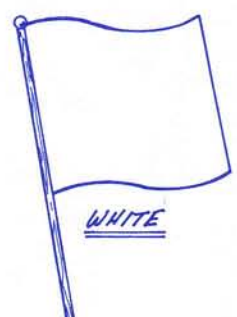
RED

RACE CANCELLED



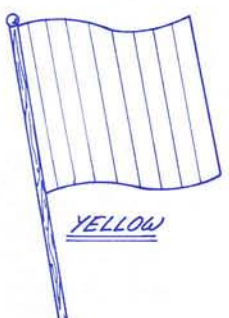
BLACK

CONTESTANT DISQUALIFIED  
AIRCRAFT TO VACATE COURSE



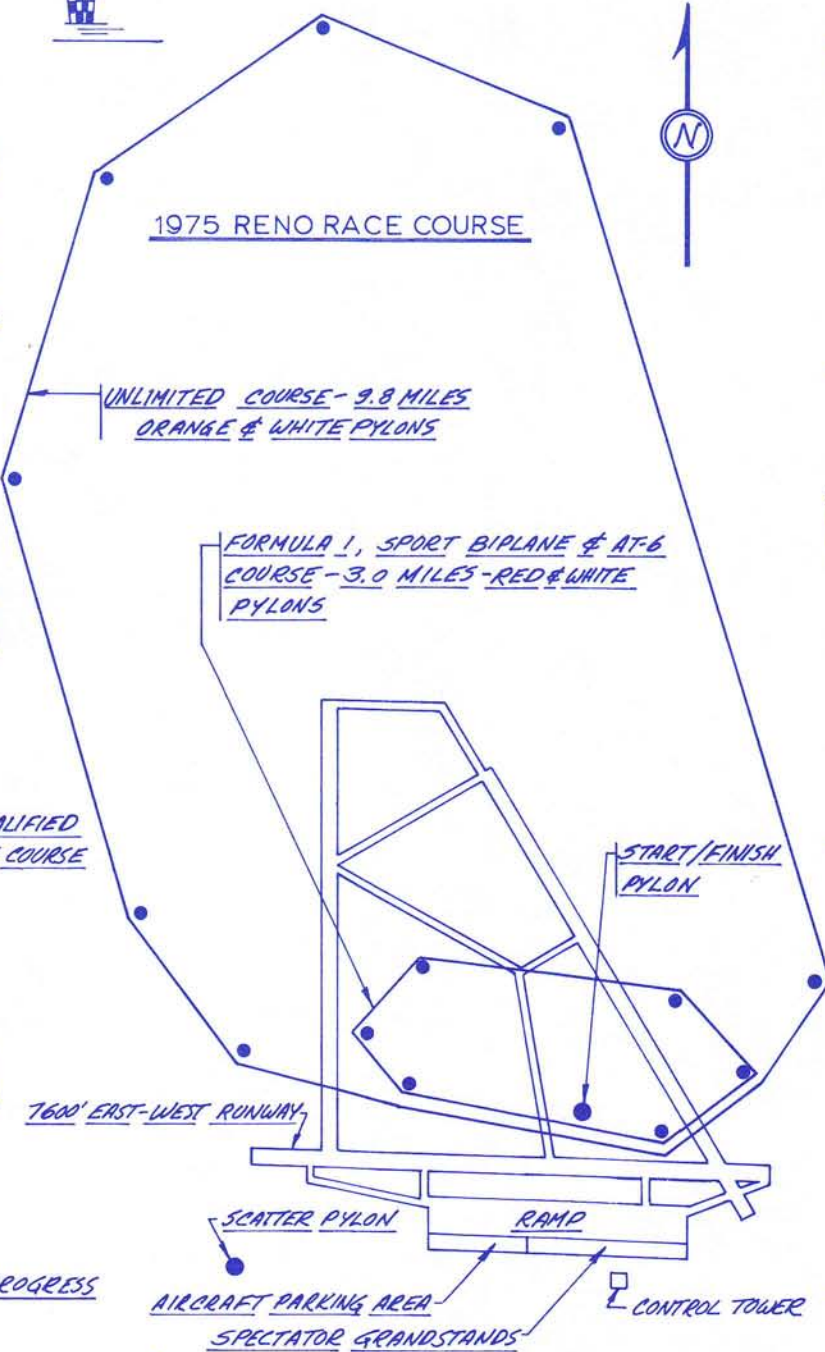
WHITE

START OF LAST LAP



YELLOW

EMERGENCY IN PROGRESS



1975 RENO RACE COURSE

UNLIMITED COURSE - 9.8 MILES  
ORANGE & WHITE PYLONS

FORMULA 1, SPORT BIPLANE & AT-6  
COURSE - 3.0 MILES - RED & WHITE  
PYLONS

START/FINISH  
PYLON

7600' EAST-WEST RUNWAY

SCATTER PYLON

RAMP

AIRCRAFT PARKING AREA

SPECTATOR GRANDSTANDS

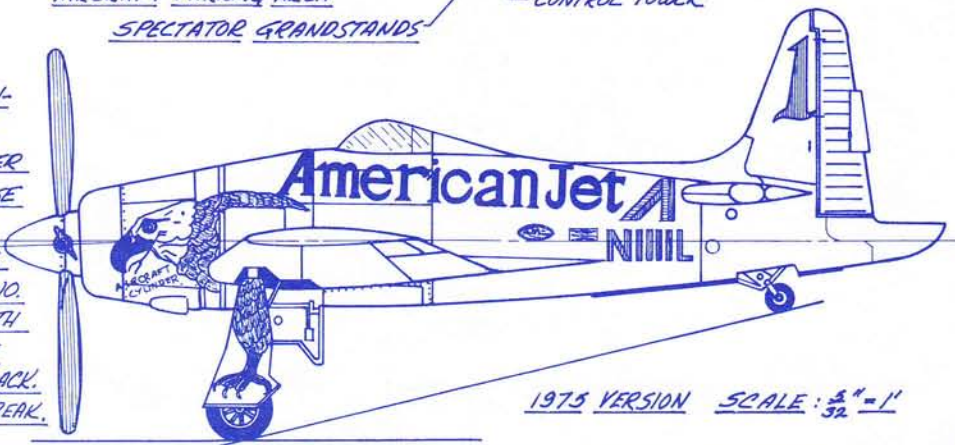
CONTROL TOWER

RACE IS FINISHED



BLACK & WHITE

THE VIEW AT RIGHT SHOWS "CON-  
QUEST 1", THE WORLDS PROP  
DRIVEN SPEED RECORD HOLDER  
(483.041 MPH; 9-21-69; SEE PAGE  
14) AT MOJAVE & RENO 1975.  
DUE TO MECHANICAL PROBLEMS  
CRAFT DID NOT RACE AT RENO.  
COLOR SCHEME IS YELLOW WITH  
RED PROP, LICENCE AND RACE  
NUMBERS. "AMERICAN JET" IS BLACK.  
EAGLE IS BLACK; ORANGE FEET & BEAK.



1975 VERSION SCALE: 5/32" = 1'

OK

# TABLE OF ENTRIES IN MAJOR AIR RACES

## JAMES GORDON BENNETT CUP

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1909	Curtiss	Golden Flyer	47.6	1910	Grahame-White	Bleriot XI bis	61.0	1911	Weyman	Nieuport	78.0
	Bleriot	Bleriot XI	46.8		Moisant	Bleriot XI	31.5		Leblanc	Bleriot	75.8
	Latham	Antoinette	42.5		Ogilvie	Wright C	29.4		Nieuport	Nieuport	75.1
	Lefebvre	Wright	37.7		Latham	Antoinette	17.8		Ogilvie	Baby Wright	53.3
	Cockburn	Earman	—		Leblanc	Bleriot	—		Chevalier	Nieuport	—
			Drexel	Bleriot XI	—	Hamel	Bleriot	—			
			Radley	Bleriot XI bis	—						
			Brookins	Baby Wright	—						
1912	Vedrines	Deperdussin	105.5	1913	Provost	Deperdussin	124.5	1920	Sadi-Lecoq	Nieuport	168.5
	Provost	Deperdussin	103.8		Vedrines	Bleriot XI	123.0		deRomanet	Spad	113.5
	Frey	Hanriot	—		Gilbert	Deperdussin	119.5		Kirch	Nieuport	—
			—		Crombez	Deperdussin	106.9		Raynham	Martinsyde	—
								Schroeder	Verville Packard	—	
								Rinehart	Dayton Wright	—	
								Rohles	Curtiss Texas Wildcat	—	

## SCHNEIDER TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1913	Provost	Deperdussin	45.7	1914	Pixton	Sopwith Tabloid	86.5	1920	Bologna	Savoia S-12	107.2
	Weyman	Nieuport	—		Burri	F.B.A.	62.0				
1921	Briganti	Macchi M-7	117.9	1922	Baird	Sea Lion III	145.7	1923	Rittenhouse	Curtiss R-3	177.4
	Zanetti	Macchi M-19	—		Passaleva	Savoia S-51	143.5		Irvine	Curtiss R-3	173.5
					Zanetti	Macchi M-17	133.0		Baird	Sea Lion III	157.2
				Corniglio	Macchi M-7	90.6	Hurel	Cams 38	—		
								Wead	Wright NW-2	—	
1921	Briganti	Macchi M-7	117.9	1922	Baird	Sea Lion III	145.7	1923	Webster	Nieuport	168.5
	Zanetti	Macchi M-19	—		Passaleva	Savoia S-51	143.5		Worsley	Spad	113.5
				Zanetti	Macchi M-17	133.0	Guazzetti	Nieuport	—		
				Corniglio	Macchi M-7	90.6	Raynham	Martinsyde	—		
								Kinkead	Verville Packard	—	
								deBernardi	Dayton Wright	—	
1925	Doolittle	Curtiss R3C-2	232.6	1926	deBernardi	Macchi M-39	246.5	1927	Webster	Supermarine S-5	281.6
	Broad	Gloster III	199.2		Schilt	Curtiss R3C-2	231.3		Worsley	Supermarine S-5	273.1
	deBriganti	Macchi M-33	168.4		Bacula	Macchi M-39	218.0		Guazzetti	Macchi M-52	—
	Cuddihy	Curtiss R3C-2	—		Tomlinson	Curtiss F6C-1	136.9		Kinkead	Gloster IV B	—
	Ostie	Curtiss R3C-2	—		Cuddihy	Curtiss R3C-4	—		deBernardi	Macchi M-52	—
	Baird	Supermarine S-4	—								

## SCHNEIDER TROPHY RACE (CONTINUED)

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1929	Waghorn	Supermarine S-6	328.6	1931	Boothman	Supermarine S-6B	340.1				
	DalMolin	Macchi M-52R	284.2								
	Grieg	Supermarine S-5	282.1								
	Atcherly	Supermarine S-6	—								
	Cadringer	Macchi M-67	—								
	Monti	Macchi M-67	—								

## PULITZER TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1920	Mosely	Verville Packard	156.5	1921	Acosta	Curtiss R-1	176.7	1922	Maughan	Curtiss R-6	205.8
	Hartney	Thomas Morse MB-3	148.0		Coombs	Curtiss Cox	170.3		Maitland	Curtiss R-6	198.8
	Acosta	SVA A-1	134.5		Macready	Thomas Morse MB-6	160.7		Brow	Curtiss R-2	193.2
	Streett	Orewco "D"	133.0		Bertaud	Ansaldto Balilla	149.8		Williams	Curtiss R-1	188.0
	Laurents	Vought VE-7	125.0		Hartney	Thomas Morse MB-7	—		Barksdale	Verville Sperry R-3	181.0
	Roulot	DeHaviland DH-4	124.0		Curran	SVA-9	—		Mosely	Verville Packard R-1	179.0
	Taylor	SVA-9	117.0						Johnson	Verville Sperry R-3	178.0
	Kirby	SE-5A	116.7						Whitehead	Leoning R-4	170.2
	Colt	Morane-Saulnier	95.0						Schulz	Leoning R-4	160.9
	Bradley	Leoning Special	150.0								
1923	Williams	Curtiss R2C-1	243.7	1924	Mills	Verville Sperry R-3	215.7	1925	Bettis	Curtiss R3C-1	248.9
	Brow	Curtiss R2C-1	241.8		Brookley	Curtiss R-6	214.7		Williams	Curtiss R3C-1	241.7
	Sanderson	Wright F2W	230.1		Stoner	Curtiss PW-8A	167.9		Dawson	Curtiss P-1	169.9
	Callaway	Wright F2W	230.0		Skeel	Curtiss R-6	—		Norton	Curtiss PW-8	168.8
	Miller	Curtiss R-6	218.9						Cook	Curtiss PW-8	167.4
	Corkill	Curtiss R-6	216.5						Cuddihy	Curtiss PW-8	—
	Pearson	Verville Sperry R-3	—								

## NATIONAL AIR RACES 1926-1928

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1926	Cuddihy	Boeing FB-3	180.5	1927	Batten	Curtiss XP-6A	201.2	1928	Jeter	Boeing XF4B-1	172.3
	Elliott	Curtiss P-2	178.6		Lyon	Curtiss XP-6A	189.6		Cruise	Boeing F2B-1	159.9
	Hoyt	Curtiss P-2	170.9		Jeter	Boeing FB-5	176.9		Harrigan	Boeing F2B-1	151.6
	Nutt	Curtiss P-2	170.8		Regan	Boeing FB-5	175.9		Burroughs	Boeing F2B-1	150.3
	McCormick	Curtiss P-2	169.6		Bogan	Boeing FB-5	172.9		Crommelin	Boeing F2B-1	149.8
	Barner	Boeing FB-3	163.6		Beverly	Boeing PW-9C	169.7		Williamson	Boeing F2B-1	146.0
	Sanderson	Boeing FB-3	163.4		Rogers	Curtiss F6C-4	161.5				
	Ballard	Curtiss P-1	159.3		Cornelius	Curtiss P-1B	161.5				
	McKierman	Curtiss P-1	—		Woodring	Curtiss P-1B	159.2				
					Malloy	Curtiss P-1B	—				

# THOMPSON TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1929	Davis Breene Turner	Travel Air Model R Curtiss Hawk P-3A Lockheed "Vega"	194.9 186.8 163.8	1930	Holman Haizlip Howard Adams	Laird "Solution" Travel Air Model R Howard "Pete" Travel Air Biplane	201.9 199.8 162.8 142.6	1931	Bayles Wedell Jackson Hall Eaker Howard Ong Doolittle	Gee Bee Model Z Wedell-Williams "44" Laird "Solution" Gee Bee Model Y Lockheed Altair Howard "Pete" Laird Speedwing Laird "Super Solution"	236.2 228.0 211.2 201.3 196.8 163.6 153.0 —
1932	Doolittle Wedell Turner Haizlip Gehlbach Hall Ong	Gee Bee R-1 Wedell-Williams "44" Wedell-Williams "57" Wedell-Williams "92" Gee Bee R-2 Hall "Bulldog" Howard "Ike"	252.7 242.5 233.0 231.3 222.1 215.6 191.1	1933	Wedell Gehlbach Minor Hague Granville	Wedell-Williams "44" Wedell-Williams "92" Howard "Mike" Keith-Rider R-2 Gee Bee Model Y	237.9 224.9 199.9 183.2 173.1	1934	Turner Minor Worthen Neumann Rae Chester	Wedell-Williams "57" Brown B-2 Wedell-Williams "45" Howard "Ike" Keith-Rider R-1 Chester "Jeep"	248.1 214.9 208.4 207.1 205.4 191.6
1935	Neumann Wittman Rae Jacobson Miles McKeen Turner	Howard "Mr. Mulligan" Wittman "Bonzo" Keith-Rider R-1 Howard "Mike" Seversky SEV-3 Brown B-2 Wedell-Williams "57"	220.2 218.7 213.9 209.1 193.6 188.9 —	1936	Detroyat Ortman Rae Neumann McKeen Crosby	Caudron C-460 Keith Rider R-3 Keith Rider R-4 Folkerts "Tools" Brown B-2 Crosby Special CR-3	264.3 248.0 236.6 233.1 230.5 226.1	1937	Kling Ortman Turner Sinclair Wittman Moore Gotch	Folkerts "Jupiter" Marcoux Bromberg R-3 Laird-Turner LTR-14 Seversky SEV-S2 Wittman "Bonzo" Seversky SEV-S2 Schoenfeldt "Firecracker"	256.9 256.8 253.8 252.4 250.1 238.4 217.8
1938	Turner Ortman Wittman Wade Mackey Jacobson	Laird-Turner LTR-14 Marcoux Bromberg R-3 Wittman "Bonzo" HM-1 (Time Flies) Wedell-Williams "57" Keith-Rider "8 Ball"	283.4 269.7 259.1 249.8 249.6 214.5	1939	Turner LeVier Ortman Crosby Wittman Mackey	Laird-Turner LTR-14 Schoenfeldt "Firecracker" Marcoux Bromberg R-3 Crosby Special CR-4 Wittman "Bonzo" Wedell-Williams "57"	282.5 272.5 254.4 244.5 241.3 232.9	1946	Johnston LeVier Ortman Raymond Swanson Cleland Edmundson Wittman Lilly Pemberton	P-39Q "Aircobra" P-38L-5 "Lightning" P-51D-30 "Mustang" P-51D "Mustang" P-51D "Mustang" F-2G-1 "Corsair" P-51D "Mustang" P-63C-5 "Kingcobra" P-63A "Kingcobra" P-63F "Kingcobra"	373.9 370.1 367.6 364.6 362.1 357.5 354.4 341.2 328.2 304.4
1947	Cleland Becker Demming Beville LeVier Bour	F-2G-1 "Corsair" F-2G-1 "Corsair" P-39Q "Aircobra" P-51D "Mustang" P-38L-5 "Lightning" P-63A "Kingcobra"	396.1 390.1 389.8 360.8 357.5 327.3	1948	Johnson Raymond Newhall Brown	P-51D "Mustang" P-51D "Mustang" P-63C-5 "Kingcobra" P-39Q "Aircobra"	383.8 365.2 313.6 392.4	1949	Cleland Puckett McKillen Beville Tucker Hagerstrom Newhall Hannon Johnson Odom	F-2G-1 "Corsair" F-2G-1 "Corsair" F-2G-1 "Corsair" P-51D "Mustang" P-63C-5 "Kingcobra" P-51D "Mustang" P-51K "Mustang" P-51A "Mustang" P-51D "Mustang" P-51C "Mustang"	397.1 393.5 387.6 381.2 378.3 372.7 372.3 300.4 — —

## BENDIX TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	
1931	Doolittle	Laird "Super Solution"	223.0	1932	Haizlip	Wedell-Williams "92"	245.0	1933	Turner	Wedell-Williams "57"	214.8	
	Johnson	Lockheed "Orion"	198.8		Wedell	Wedell-Williams "44"	232.0		Wedell-Williams "44"	209.2		
	Blevins	Lockheed "Orion"	189.0		Turner	Wedell-Williams "57"	226.0		Gee Bee R-1	—		
	Eacker	Lockheed Altair	186.1		Gehlbach	Gee Bee R-2	210.0		Gee Bee R-2	—		
	Vance	Vance Flying Wing	—		Vance	—		Gehlbach	Wedell-Williams "92"	—		
	Earhart	—	—		Earhart	—		Earhart	Lockheed "Vega"	—		
1934	Davis	Wedell-Williams "44"	216.2	1936	Thaden-Noyes	Beech C-17	165.3	1937	Fuller	Seversky SEV-S2 (P-35)	258.2	
	Worthen	Wedell-Williams "92"	203.2		Ingalls	Lockheed "Orion"	157.5		Ortman	Marcoux Bromberg R-3	224.8	
	Gehlbach	Gee Bee "QED"	—		Bulick	Vultee VIA-1	156.5		Cochran	Beech "Staggerwing"	194.7	
					Pomeroy	Douglas DC-2	151.5		Sinclair	Seversky SEV-S2	184.9	
1935	Neumann-Howard	Howard "Mr. Mulligan"	238.7		Earhart	Lockheed "Electra"	148.7	Burcham	Lockheed 12	184.5		
	Turner	Wedell-Williams "57"	238.5		Howard-Wife	Howard "Mr. Mulligan"	—	Sundorph	Sundorph A-1	166.2		
	Thaw	Northrup "Gamma"	201.9		Jacobson	Northrup "Gamma"	—	Perlick	Beech "Staggerwing" A17F	—		
	Hunt	Lockheed "Orion"	174.8		Miles	Gee Bee "QED"	—	Mackey	Wedell-Williams "44"	—		
1938	Cochran	Seversky SEV-S2	249.7	1939	Fuller	Seversky SEV-S2	282.1	1946	Mantz	P-51C "Mustang"	435.5	
	Fuller	Seversky SEV-S2	238.6		Bussy	Bellanca Trimotor	244.5		Cochran	P-51B "Mustang"	420.9	
	Mantz	Lockheed "Orion"	206.6		Mantz	Lockheed "Orion"	234.9		Mayson	P-51C "Mustang"	408.2	
	Constant	Beech "Staggerwing"	199.3		Constant	Beech "Staggerwing"	231.4		Eddy	P-51D "Mustang"	373.3	
	Hadley	Beech "Staggerwing"	181.8		Davis	Spartan 7W	196.8		Harp	P-38 "Lightning"	370.4	
	Lajatte	Spartan 7W	177.4		Maycock	Beech "Staggerwing"	187.2		Husted	A-26C "Invader"	367.9	
	Armistead	Gee Bee "QED"	—						Tucker	P-63C-5 "Kingcobra"	367.1	
	Perlick	Beech A-17F	—									
Cordova	Bellanca Trimotor	—										
1947	Mantz	P-51C "Mustang"	460.4	1948	Mantz	P-51C "Mustang"	448.0	1949	DeBona	P-51C "Mustang"	470.1	
	DeBona	P-51D "Mustang"	458.2		Carney	P-51C "Mustang"	446.1		Reaver	P-51C "Mustang"	450.2	
	Lunken	P-51D "Mustang"	408.7		Cochran	P-51B "Mustang"	445.8		Salmon	P-51C "Mustang"	449.2	
	Gimbel	P-51B "Mustang"	404.1		Lunken	P-51D "Mustang"	441.6		Bussart	DH "Mosquito"	343.8	
	Eddy	P-51D "Mustang"	376.5		Stallings	DH "Mosquito"	341.1		Cameron	B-26C "Invader"	—	
	Mayson	P-51C "Mustang"	376.1		DeBona	P-51C "Mustang"	—		Perron	AT-12	—	
	Whitton	FG-1 "Corsair"	320.0									

## GREVE TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1934	Minor	Brown B-2	213.3	1936	Detroit	Caudron C-460	247.3
	Neumann	Howard "Ike"	211.6		Neumann	Folkerts "Toots"	225.9
	Rae	Keith-Rider R-1	211.0		Chester	Chester "Jeep"	224.7
	Miles	Miles & Atwood Spl.	206.2		Kling	Keith-Rider "Suzy"	218.3
	Chester	Chester "Jeep"	203.4		Jacobson	Howard "Mike"	214.4
				Rae	Keith-Rider R-1	212.3	
				McKeen	Brown B-2	204.5	
				Miles	Miles & Atwood Spl.	—	

## GREVE TROPHY RACE (CONTINUED)

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1937	Kling	Folkerts SK-3	232.27	1938	LeVier	Schoenfeld-Rider R-4	250.9	1939	Chester	Chester "Goon"	263.4
	Wittman	"Chief Oshkosh"	231.99		Chester	Chester "Goon"	250.4		LeVier	Schoenfeld-Rider R-4	—
	Gotch	Schoenfeld-Rider R-4	231.59		Jacobson	Rider R-6 "8 Ball"	218.2		Crosby	Crosby CR-4	—
	Rae	Folkerts SK4	224.19		Ortman	Marcoux-Bromberg-Jackrabbit	192.5		Williams	Brown B-2	—
	McKeen	Brown B-2	223.64		Crosby	Crosby CR-4	—				
	Haines	Haines H-3	177.71		Dory	Bushey-McGrew	—				
	McArthur	Delgado "Flash"	—								

## GOODYEAR TROPHY RACE

Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed	Year	Pilot	Aircraft	Speed
1947	Brennand	Wittman "Buster"	165.9	1948	Salmon	Cosmic Wind "Minnow"	169.7	1949	Brennand	Wittman "Buster"	177.3
	Penrose	"Chester Swee Pea"	165.4		Wittman	Wittman Special	168.9		Sorenson	"Deerfly"	176.7
	Salmon	Cosmic Wind "Special"	158.8		Chester	Chester "Swee Pea II"	168.2		Wittman	Wittman "Bonzo"	176.2
	LeVier	Cosmic Wind "Little Toni"	157.9		Brennand	Wittman "Buster"	167.1		Ast	Cosmic Wind "Ballerina"	176.0
	Siem	"Loose Siem"	151.3		Robinson	Cosmic Wind "Little Toni"	165.1		Salmon	Cosmic Wind "Minnow"	175.7
	Robinson	Modified Brown B-1	143.9		Quigley	Pitts Special	164.9		Mone	Williams "Estrellita"	175.0
					Downey	Cosmic Wind "Ballerina"	161.5		Downey	Mercury Air	171.4
					Lefevers	Falcon Special	156.6		Johnson	Long LA-1	167.3
									Kistler	Kistler Special	153.4
									Foss	"Jinny"	—

## CHAMPIONSHIP RACE RESULTS: RENO

### UNLIMITED

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1964	Love	North American	8	381.96	1965	Greenamyre	Grumman	1	375.10	1966	Greenamyre	Grumman	1	396.22
	Slovak	Grumman	80	355.52		Lyford	North American	8	368.57		Hall	North American	2	372.70
	Lacy	North American	64	354.74		Lacy	North American	64	356.97		Lacy	North American	64	360.63
	Hall	North American	2	344.45		Slovak	Grumman	80	356.00		Adams	North American	9	—
	Ohlrich	Grumman	10	343.43		Ohlrich	Grumman	10	333.22		Weaver	North American	15	—
	Weiner	North American	14	282.72		Shelton	North American	12	331.99		Lyford	North American	8	—
	Greenamyre	Grumman	1	351.88										
1967	Greenamyre	Grumman	1	392.62	1968	Greenamyre	Grumman	1	388.65	1969	Greenamyre	Grumman	1	412.63
	Weiner	North American	45	373.71		Hall	North American	5	386.85		Hall	North American	5	377.23
	Lacy	North American	64	363.21		Lacy	North American	64	388.12		Lacy	North American	64	371.70
	Hall	North American	5	363.07		Ohlrich	Grumman	10	344.30		Cummins	North American	69	358.84
	Loening	North American	2	359.87		Weiner	North American	49	—		Shelton	Grumman	70	356.37
	Lyford	North American	8	—		Loening	North American	2	—		Balz	Grumman	7	318.29

# UNLIMITED (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1970	Lacy	North American P-51D	64	387.34	1971	Greenamyer	Grumman F8F-2	1	413.99	1972	Balz	North American P-51D	5	416.16
	Loening	North American P-51D	2	376.69		Shelton	Grumman F8F-2	77	413.07		Shelton	Grumman F8F-2	77	404.70
	Penhall	North American P-51D	81	373.82		Cooper	Hawker "Sea Fury"	87	412.58		Keefe	North American P-51D	11	398.53
	Keefe	North American P-51D	11	371.55		Balz	North American P-51D	5	412.10		Lacy	North American P-51D	64	341.89
	Balz	Grumman F8F-1	7	334.43		Penhall	North American P-51D	81	385.57		Mitchem	Goodyear FG-10	94	341.99
	Greenamyer	Grumman F8F-2	1	297.06		Keefe	North American P-51D	11	—		Baillie	Fury II	0	340.83
	Shelton	Grumman F8F-2	77	—		Loening	North American P-51D	2	—		Laidley	Grumman F8F-2	1	—
1973	Shelton	Grumman F8F-2	77	428.16	1974	Burnstine	North American P-51D	33	381.48	1975	Shelton	Grumman F8F-2	77	429.92
	Cummins	North American P-51D	69	417.08		Henderson	North American P-51D	25	372.03		McClain	North American P-51D	5	427.31
	Wright	North American P-51D	5	407.50		Wright	North American P-51D	66	340.24		Sliker	Grumman F8F-2	4	381.97
	Sliker	Grumman F8F-2	4	381.60		Herlihy	Grumman F8F-2	20	320.25		Burnstine	North American P-51D	34	—
	Keefe	North American P-51D	11	359.27		Shelton	Grumman F8F-2	77	—		Klabo	North American P-51D	85	—
	Love	North American P-51D	97	—		Love	North American P-51D	97	—		Cummins	North American P-51D	69	—
	Fountain	Grumman F8F-2	24	—		McClain	North American P-51D	5	—		Levitz	North American P-51D	81	—
1976	Gardner	North American P-51D	25	379.62	1977	Greenamyer	North American RB-51	5	430.70	1978	Hinton	North American RB-51	5	415.46
	Greenamyer	North American P-51D	1	366.36		Whittington	North American P-51D	09	425.70		Whittington	North American P-51D	09	414.77
	Keefe	North American P-51D	11	326.77		Cummins	North American P-51D	69	424.36		Putman	North American P-51D	86	396.21
	Leeward	North American P-51D	9	302.99		Klabo	North American P-51D	85	407.92		Keefe	North American P-51D	11	374.69
	Whittington	North American P-51D	09	—		Putman	North American P-51D	86	389.08		Smith	North American P-51D	4	370.39
	Klabo	North American P-51D	85	—		McClain	North American P-51D	17	383.49		Hamilton	Hawker "Sea Fury"	16	342.14
	McClain	North American RB-51	5	—		Gardner	North American P-51D	25	374.67		Wright	North American P-51D	20	—
Crocker	North American P-51D	6	—											
1979	Crocker	"Sumthin' Else"	6	422.30	1980	McClain	"Jeannie"	69	433.01	1981	Holm	"Jeannie"	69	431.29
	Hinton	"Red Baron"	5	415.97		Crocker	"Sumthin' Else"	6	429.78		Crocker	"Sumthin' Else"	6	419.37
	Putman	"Ciuchetton"	86	399.91		Whittington	"Precious Metal"	9	404.70		Hevle	"Mangia-Pane"	72	388.14
	Klabo	"Fat Cat"	85	387.00		Putman	"Ciuchetton"	86	397.81		Klabo	"Fat Cat"	85	379.29
	Hamilton	"Baby Gorilla"	16	343.72		Whittington	"GeGe II"	4	358.45		Martin	"Ridge Runner"	7	364.42
				Hamilton				Hamilton	"Baby Gorilla"	16	357.50			
1982	Hevle	"Dago Red"	4	405.09	1983	Anderson	"Dreadnought"	8	425.24	1984	Holm	"Stiletto"	84	437.62
	Klabo	"Fat Cat"	85	386.48		Whittington	"Precious Metal"	9	414.65		Crocker	"Sumthin' Else"	6	431.15
	Williams	"No Name Lady"	86	386.09		Crocker	"Sumthin' Else"	6	394.60		Hinton	Super Corsair	1	413.69
	Hinton	"Bud Light Special"	1	362.50		Destefani	"Mangia-Pane"	72	384.36		Leeward	Leeward Air Ranch Spec.	44	407.41
	Destefani	"Mangia-Pane"	72	354.86							Levitz	"Tippy Too"	28	385.59
	Dille	"Lou IV"	19	349.91		Kelley	"Lou IV"	19	349.91		Granley	"Miss America"	11	384.39
1985	Hinton	Super Corsair	1	438.19	1986	Brickert	"Dreadnought"	8	434.49	1987	Destefani	"Strega"	7	452.56
	Anderson	"Dreadnought"	8	429.43		Hamilton	"Furias"	15	429.37		Brickert	"Dreadnought"	8	449.75
	Brickert	"Dago Red"	4	426.85		Destefani	"Strega"	7	416.88		Preston	"Dago Red"	4	439.46
	Hamilton	"Furias"	15	411.95		Preston	"Dago Red"	4	413.85		Maloney	Super Corsair	1	416.91
						Penny	"Rare Bear"	77	407.57		Williams	"Pegasus"	55	386.89
				Kelley	"Lou IV"	19	367.56	Levitz	"Miss Ashley"	38	375.82			



# UNLIMITED (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1988	Shelton	"Rare Bear"	77	456.82	1989	Shelton	"Rare Bear"	77	450.91	1990	Rheinschild	"Risky Business"	45	415.53
	Brickert	"Dreadnought"	8	451.20		Brickert	"Dreadnought"	8	427.87		Levitz	"Miss Ashley"	38	407.21
	Hinton	"Tsunami"	18	429.95		Ma loney	All Coast Super Corsair	1	406.27		Cutshall	"E2S"	91	380.30
	Putman	"Georgia Mae"	69	408.29		Yancey	"Yak II"	101	406.05		Gardner	"Thunderbird"	25	376.88
	Hamilton	"Furias"	15	403.63		Hinton	"Tsunami"	18	385.75		Baker	"Sky Fury"	711	372.12
	Maloney	Super Corsair	1	368.13		Price	"Dago Red"	4	384.32		Janes	"Cottonmouth"	20	371.84
						Crocker	"Sumthin' Else"	6	358.89		Stephens	"Baby Gorilla"	16	369.33
1991	Shelton	"Rare Bear"	77	481.62	1992	Destefani	"Strega"	7	450.84	1993	Destefani	"Strega"	7	455.38
	Destefani	"Strega"	7	478.68		Sanders	"Dreadnought"	8	442.50		Sanders	"Dreadnought"	8	450.62
	Holm	"Tsunami"	18	478.14		Yancey	"Perestroika"	101	433.56		Yancey	"Yak II"	101	439.54
	Yancey	"Perestroika"	101	428.29		Jackson	"Stiletto"	84	426.22		Rheinschild	"Risky Business"	45	436.94
	Sanders	"Dreadnought"	8	426.51		Rupp	"Old Crow"	5	424.24		Eldridge	Coast Super Corsair	1	418.66
	Rheinschild	"Risky Business"	45	423.50		Eldridge	Coast Super Corsair	1	420.80		Pardue	"Seafury"	66	406.71
	Maloney	"All Coast"	1	406.42		Levitz	"Miss Ashley"	38	378.34		Speer	"Deja Vu"	56	399.87
	Pardue	"Fury"	66	357.67										

# FORMULA I

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1964	Porter	Miller "Little Gem"	14	193.44	1965	Porter	"Deerfly"	39	202.14	1966	Falck	"Rivets"	92	193.10
	Wittman	Wittman "Bonzo"	1	187.42		Falck	"Rivets"	92	196.19		Wittman	"Bonzo"	1	191.90
	Scholl	"Miss San Bernardino"	31	171.76		Downey	Miller "Ole Tiger"	14	194.44		Downey	Miller "Ole Tiger"	14	189.01
	Downey	"Miss Cosmic Wind"	6	166.57		Scholl	"Miss San Bernardino"	31	190.06		Scholl	"Miss San Bernardino"	31	185.25
	Quarton	Cagsutt-Quarton	19	162.86		Townsend	"French Quarter Special"	7	184.40		Berry	"Miss Dallas"	97	174.45
						Stead	"Miss Cosmic Wind"	6	—		Cote	"Shoestring"	16	—
1967	Falck	"Rivets"	92	202.70	1968	Cote	"Shoestring"	16	214.61	1969	Cote	"Shoestring"	16	214.61
	Downey	Miller "Ole Tiger"	14	201.19		Falck	"Rivets"	92	212.36		Falck	"Rivets"	92	212.36
	Cote	"Shoestring"	16	200.56		Downey	"Ole Tiger"	14	211.87		Downey	"Ole Tiger"	14	211.87
	Stover	"Miss San Bernardino"	31	191.08		Baker	"Boo Ray"	81	198.44		Baker	"Boo Ray"	81	198.44
	Baker	Baker "Boo Ray"	81	183.89		Berry	"Little Toni"	7	197.59		Pedigo	"Pogo"	87	198.44
	Wilson	Wilson "Snoopy"	34	—		Jella	"Little Bit"	2	187.09		Jones	"Mother Holliday"	7	198.44
											Berry	"Little Toni"	3	197.59
											Jella	"Little Bit"	2	187.0
1970	Cote	"Shoestring"	16	220.07	1971	Cote	"Shoestring"	16	224.14	1972	Cote	"Shoestring"	16	223.95
	Falck	"Rivets"	92	215.96		Falck	"Rivets"	92	220.30		Moeller	"Boo Ray"	81	220.97
	Moeller	"Boo Ray"	81	210.84		Downey	"Ole Tiger"	14	219.25		Downey	"Ole Tiger"	14	212.91
	Minges	"Ol' Blue"	97	206.53		Wilson	"Plum Crazy"	25	212.46		Wilson	"Plum Crazy"	25	210.47
	Downey	"Ole Tiger"	14	206.14		Jones	"Mother Holliday"	7	210.73		Stevenson	"Fan"	11	205.91
	Jones	"Mother Holliday"	7	205.42		Thomson	"Dixie Rebel"	34	207.03		DeLuca	"Li' Quickie"	71	205.76
	Berry	"Little Toni"	3	199.91		Budde	"El Bandito"	10	193.00		Beck	"Pogo"	87	203.92
						Moeller	"Boo Ray"	81	—		Falck	"Rivets"	92	—

# FORMULA I (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	
1973	Cote	"Shoestring"	16	231.26	1974	Cote	"Shoestring"	16	235.42	1975	Cote	"Shoestring"	16	227.46	
	Jones (J.P.)	"Stinger"	21	229.54		Moeller	"Boo Ray"	81	226.24		DeLuca	"Li'l' Quickie"	71	226.84	
	Moeller	"Boo Ray"	81	225.38		DeLuca	"Li'l' Quickie"	71	222.68		Falck	"Rivets"	92	222.41	
	Falck	"Rivets"	92	224.16		Jones (J.P.)	"Stinger"	21	220.18		Moeller	"Boo Ray"	81	221.09	
	DeLuca	"Li'l' Quickie"	71	219.60		Jones	"Mother Holliday"	7	220.13		Wofford	"Proud Bird"	9	218.98	
	Beck	"Knat"	18	214.63		Falck	"Rivets"	92	219.68		Jones	"Mother Holliday"	7	218.09	
	Jones	"Mother Holliday"	7	211.27		Stevenson	"Fang"	11	219.18		Wagner	"Wagner Solution"	44	217.96	
Wilson	"Plum Crazy"	25	207.21	Downey	"Ole Tiger"	14	209.71	Baker	"Aquarius"	20	214.71				
1976	DeLuca	"Li'l' Quickie"	71	228.75	1977	Parker	"Top Turkey"	93	226.12	1978	Championship Race cancelled due to high winds.				
	Downey	"Falcon"	28	222.39		Wagner	"Wagner Solution"	44	217.52						
	Falck	"Rivets"	92	221.65		Wilson	"Aloha"	71	217.41						
	Wagner	"Wagner Solution"	44	220.46		Wofford	"Schultz-Lemire"	9	216.92						
	Moeller	"Boo Ray"	81	219.74		Reinseth	"Pole Cat"	6	216.65						
	Tuttle	"Pegasus"	95	215.41		Summers	"Hansen Special"	35	202.96						
	Buddle	"Okie Streaker"	19	204.40		Eskildsen	"Kistler Special"	31	170.72						
Stevenson	"Fang"	11	196.59												
1979	Parker	"Wild Turkey"	3	240.09	1980	Parker	"American Special"	3	249.07	1981	Cote	"Shoestring"	16	232.13	
	Cote	"Shoestring/Circus, Circus"	16	236.01		Cote	"Shoestring/Circus, Circus"	16	242.96		Wagner	"Wagner Solution"	44	221.87	
	Wagner	"Wagner Solution"	44	232.51		Wagner	"Wagner Solution"	44	238.79		Fogg	"Aloha"	1	221.51	
	Wentworth	"Fang"	11	225.47		Moeller	"Boo Ray"	81	232.54		Jensen	"Penguin"	25	217.30	
	Wise	"Wise Owl"	7	225.38		Drew	"Fang"	11	229.84		Miller	"Texas Gem"	73	216.02	
	Wilson	"Aloha"	71	221.63		Downey	"Falcon"	28	225.78		Dowd	"Illusion"	5	211.56	
						Anspach	"Polecat"	93	225.72		Summers	"Sump'n Else"	35	208.62	
1982	Sharp	"Aero Magic"	43	224.52	1983	Wentworth	"Flexi-Flyer"	69	239.02	1984	Cote	"Judy"	44	236.07	
	Fogg	"Aloha"	1	223.90		Thompson	"Empire Strikes Back"	71	224.85		Aslett	"Flexi-Flyer"	69	235.34	
	Dowd	"Illusion"	5	222.87		Dowd	"Illusion"	5	224.18		Sharp	"Aero Magic"	43	233.81	
	Miller	"Texas Gem"	73	—		Cote	"Judy's Turn"	44	223.88		Dowd	"Illusion"	5	229.90	
	Jensen	"Penguin"	25	—		Sharp	"Aero Magic"	43	222.11		Miller	"Texas Gem"	73	224.68	
	Wentworth	"Flexi-Flyer"	69	—		Fogg	"Aloha"	1	220.21		Fogg	"Aloha"	4	216.69	
	Wise	"Wise Owl"	7	—		Miller	"Texas Gem"	73	192.19		Beck	"Miss U.S.A."	18	—	
1985	Cote	"Judy"	44	229.09	1986	Sharp	"Aero Magic"	43	229.61	1987	Preston	"Sitting Duck"	44	232.99	
	Aslett	"Li'l' Thumper"	69	226.35		Drew	"Friberg Special"	2	222.41		Sharp	"Aero Magic"	43	227.11	
	Miller	"Texas Gem"	73	220.70		Miller	"Texas Gem"	73	221.39		Miller	"Pushy Cat"	14	224.13	
	Sawyer	"Lucy P"	74	215.50		Sawyer	"Lucy P"	74	219.65		Hubler	"Aloha"	4	220.67	
	Drew	"Alouetta"	2	212.21		Fogg	"Aloha"	4	217.99		Harris	"Gold Fever"	25	216.82	
	Summers	"Sump'n Else"	35	196.26		Harris	"Gold Fever"	25	205.45		Drew	"Friberg Special"	2	214.51	
	Harris	"Gold Fever"	25	—		Slayton	"Stinger"	21	199.92		Roberson	"Puffin"	73	206.54	

# FORMULA I (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1988	Preston	"Sitting Duck"	44	240.75	1989	Cote	"Alley Cat"	4	231.25	1990	Miller	"Pushy Cat"	14	237.41
	Sharp	"Aero Magic"	43	234.67		Miller	"Pushy Cat"	14	229.95		Porter	"Sitting Duck"	44	237.08
	Morris	"Sahara"	33	230.31		Morris	"Sahara"	33	219.25		Bumford	"Bummer's Bullet"	55	233.85
	Drew	"Fiberg Special"	2	227.62		Porter	"Aero Magic"	43	212.00		Cote	"Alley Cat"	4	230.04
	Roberson	"Puffin"	73	222.07		Kirol	"Super Shock"	77	211.15		Beck	"Miss Reno"	69	225.02
	Dowd	"Super Spook"	77	220.23		Slayton	"Stinger"	21	207.84		Gray	"F/X"	96	224.23
Miller	"Pushy Cat"	14	—	Sharp	"Blue Streak"	96	—	Gray	"Aero Magic"	43	217.78			
1991	Sharp	"Nemesis"	3	245.26	1992	Sharp	"Nemesis"	3	238.18	1993	Sharp	"Nemesis"	3	246.85
	Miller	"Pushy Cat"	14	242.21		Porter	"Sitting Duck"	44	232.31		Rossi	"Chico Puro"	63	233.86
	Bumford	"Bummer's Bullet"	55	241.59		Miller	"Pushy Cat"	14	231.01		Miller	"Pushy Cat"	14	233.55
	Porter	"Sitting Duck"	44	240.99		Bumford	"Bummer's Bullet"	55	227.79		Ippolito	"Alley Cat"	4	227.68
	Beck	"Miss Reno"	69	230.83		Bohannon	"Pushy Galore"	89	225.29		Hauptman	"Judy"	44	227.11
	Gray	"F/X"	96	224.57		Channing	"Miss Reno"	69	216.02		Hubler	"Mariah"	95	225.11
Drew	"Alouette"	2	216.56	Hubler	"Mariah"	95	215.44	Channing	"Miss Reno"	69	220.69			

# SPORT BIPLANE

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1964	Parsons	Knight Twister	—	144.57	1965	Boland	Mong Sport	3	148.68	1966	Wickliffe	"Dollar Special"	11	147.72
	Shannon	Knight Twister	—	143.41		Parsons	Knight Twister	11	146.06		White	Starduster	1	144.72
	Nagel	Knight Twister	—	131.50		Rechenmacher	EAA Biplane	22	118.81		McIntire	Pitts Special	17	144.67
	Boland	Starduster	—	130.63		Ormsbee	DSA Miniplane	5	117.42		Boland	Mong Sport	3	148.42
	Rechenmacher	EAA Special	—	120.44		Fischer	Starduster	7	115.43		Harendeen	Pitts Special	37	133.06
						White	Starduster	1	91.49		Fischer	Mong Sport	8	127.10
1967	Boland	Mong Sport	3	151.64	1968	Christian	"Mongster"	99	175.13	1969	Christian	"Mongster"	99	184.02
	White	Starduster	1	151.31		Boland	Mong Sport	3	171.18		Boland	Mong Sport	3	183.49
	McIntire	Pitts Special	17	151.29		Fischer	Mong Sport	8	155.15		Forbes	DSA Miniplane	10	159.29
	Christian	Mong Sport	99	147.69		White	Starduster	1	153.13		Hoffman	"Suzie Bee"	44	157.89
	Fischer	Mong Sport	8	146.72		Swinn	Pitts Special	37	148.37		Fischer	Mong Sport	8	157.66
	Smith	Mong Special	26	133.46		Smith	Mong Sport	26	143.90		Coons	Starduster	13	156.48
1970	Boland	Mong Sport	3	177.45	1971	Boland	Mong Sport	3	181.67	1972	Beck	"Sorceress"	89	189.72
	Christian	"Mongster"	99	168.49		Deschamps	"Sorceress"	89	175.29		Hall	"Jonathan L. Seagull"	76	180.04
	Forbes	DSA Miniplane	10	163.67		Christian	"Mongster"	99	173.84		Forbes	"Forbes Special"	10	178.03
	Warwick	"Hot Canary"	97	163.27		Forbes	DSA Forbes-Wolfram	10	169.08		Fischer	"Super Mong"	8	167.75
	Hoffman	"Susie Bee"	44	151.61		Warwick	"Hot Canary"	97	167.96		Boland	"Gone Mong"	3	184.89
	Garber	Pitts Special	18	141.45		Hoffman	"Susie Bee"	44	164.60		Christian	"Mongster"	99	—
Fischer	Mong Sport	8	156.01	Fischer	Mong Sport	8	160.68	Warwick	"Hot Canary"	97	—			
				Hall	Jungster III	76	—	Thomas	"Miss Q"	7	—			

## SPORT BIPLANE (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed			
1973	White	"Sundancer"	1	194.95	1974	White	"Sundancer"	1	198.17	1975	Beck	"Sorceress"	89	198.99			
	Beck	"Sorceress"	89	184.62		Beck	"Sorceress"	89	191.53		White	"Sundancer"	1	196.41			
	Forbes	"Olympia Swallow"	10	184.50		Forbes	Forbes Special	10	182.97		Forbes	"Cobra"	2	177.67			
	Boland	"Gone Mong"	3	178.81		Fairbanks	"White Knight"	5	170.18		Fairbanks	"White Knight"	5	171.02			
	Fairbanks	"White Knight"	5	168.88		Hoffman	"Suzie Bee"	44	168.98		Hoffman	"Suzie Bee"	44	171.02			
	Hoffman	"Suzie Bee"	44	166.03		Raven	"Spirit of '76"	76	159.20		Wrolstad	"Super Chick"	14	168.16			
	Fischer	"Super Mong"	8	161.01		Fischer	"Super Mong"	8	157.78		Fischer	"Super Mong"	8	163.64			
	Janson	DSA Miniplane	4	147.82		Janson	DSA Miniplane	4	149.15		Clark	Mong Sport	46	143.28			
	1976	Beck	"Sorceress"	89		202.15	1976	Beck	"Sorceress"		89	202.15	1980	Hines	"Sundancer"	1	206.62
		Hines	"Sundancer"	1		198.44		Hines	"Sundancer"		1	198.44		Kramer	"Cobra"	22	177.05
Forbes		"Cobra"	2	178.22	Forbes	"Cobra"		2	178.22	Fairbanks	"White Knight"	5		176.38			
Fairbanks		"White Knight"	5	177.38	Fairbanks	"White Knight"		5	177.38	Brown	"Tonapah Low"	00		172.93			
Aberle		Mong Sport	32	168.82	Aberle	Mong Sport		32	168.82	Smith	"Taste of Honey"	6		172.17			
Fischer		"Super Mong"	8	163.17	Fischer	"Super Mong"		8	163.17	Griehaber	"Mongster"	99		164.63			
Allen		Pitts Special	42	139.35	Allen	Pitts Special		42	139.35	Wentworth	"Super Chic"	14		155.40			
Brown		"Washoe Zephyr"	90	139.22	Brown	"Washoe Zephyr"		90	139.22	Beck	"Sorceress"	89		210.73			
1981		Hines	"Sundancer"	1	209.44	1982		Hines	"Sundancer"	1	209.40	1984		Beck	"Miss Tahoe"	00	189.97
		Kramer	"Cobra"	22	187.13			Mortensen	"Amsoil/Rutan Racer"	3	209.21			Fairbanks	"White Knight"	5	185.35
	Mortensen	"Amsoil/Rutan Special"	3	181.13	Beck		"Sorceress"	89	206.29	Hugo	"Taste of Honey"		6	165.49			
	Aberle	"Two Bits"	25	174.41	Aberle		"Two Bits"	25	196.46	Marrocola	"Snaggle Tooth Sal"		35	148.55			
	Allen	"Tonapah Low"	00	170.98	Hines		"Sundancer"	1	217.60	Allen	"Red Baron"		1	139.98			
	Morss	"Mongster"	99	170.28	Beck		"Sorceress"	89	202.35	1987	Aberle		"Long Gone Mong"	31	196.47		
	Kempf	"Check 6"	26	143.70	Kramer		"Cobra"	22	186.40		Fairbanks		"White Knight"	5	179.28		
	Brown	"Scarlet"	29	143.61	Preston		"Miss Lake Tahoe"	00	192.67		Allen		"Southern Air Transport"	21	178.24		
	1985	Beck	"Miss Lake Tahoe"	00	195.62		Fairbanks	"White Knight"	5		166.17		Morss	"Amsoil Pacific Flyer"	91	176.36	
		Fairbanks	"White Knight"	5	177.67		Hugo	"A Taste of Honey"	6		165.97		Meyer	"Chuck"	111	169.73	
Mortensen		"Pacific Flyer"	91	175.48	Selvidge	"Slick"	111	161.42	Selvidge		"Slick"	2	169.11				
Hugo		"Taste of Honey"	6	162.49	Brown	"Scarlet"	29	156.40	Kempf	"Bully Bee"	11	164.64					
Schulte	"Pits 'N Pieces"	42	144.70	Stubbs	"Casey"	30	154.91	Penketh	"Passion Pitts"	4	158.41						
Penketh	"Passion Pitts"	4	143.84	Penketh	"Passion Pitts"	4	150.93	1990	Mortensen	"Amsoil Pacific Flyer"	91	192.28					
1988	Preston	"Top Cat"	00	205.92	Aberle	"Wanna Play II"	40		196.14	Maxwell	"Legal Eagle"	69	184.76				
	Aberle	"Long Gone Mong"	31	203.98	Maxwell	"Legal Eagle"	69		185.65	Paquin	"Buzz Job"	90	180.46				
	Penketh	"My Pitts"	1	179.89	Mortenson	"Amsoil Pacific Flyer"	91		184.70	Penketh	"My Pitts"	1	175.78				
	Paquin	"Buzz Job"	90	179.70	Paquin	"Buzz Job"	90		179.77	Morse	—	111	173.09				
	Fairbanks	"White Knight"	5	176.47	Penketh	"My Pitts"	1		176.70	Detsch	"Uno"	55	172.50				
	Allen	"Southern Air Transport"	21	175.52	Harris	"Sonoma Red"	62		168.83	Ferguson	"Let The Good Times Roll"	20	165.85				
	Selvidge	"Slick"	2	167.64	Ferguson	"Let The Good Times Roll"	20		164.59	1990	Penketh	"Passion Pitts"	4	159.51			
	Lister	"Little Red Baron"	77	162.49	Penketh	"Passion Pitts"	4		159.51		1990	Mortensen	"Amsoil Pacific Flyer"	91	192.28		
	1988	1988	1988	1988	1988	1988	1988		1988			1988	1988	1988	1988	1988	1988

No Biplane Class races at Reno during 1977, 1978, 1979.

## SPORT BIPLANE (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1991	Ueno	"Sumari"	18	195.27	1992	Smith	"Glass Slipper"	88	193.89	1993	Nelson	"Full Tilt Boogie"	40	208.47
	Way	"Magic"	27	183.84		Allen	"Legal Eagle"	69	192.10		Cox	"Wild Thing"	33	202.49
	Allen	"Legal Eagle"	69	180.23		Johnson	"Twerpster"	40	191.90		Allen	"Legal Eagle"	69	193.68
	Smith	"Glass Slipper"	88	177.73		Way	"Magic"	27	181.35		Smith	"Glass Slipper"	88	190.64
	Stubbs	"Caseu"	30	171.69		Stubbs	"Patty Anne"	30	177.78		Way	"Magic"	27	182.32
	Penketh	"My Pitts"	1	169.21		Penketh	"My Pitts"	1	176.64		Stubbs	"Patty Anne"	30	178.57
	Enefer	"Thunder Chicken"	10	167.45		Blackwood	"Blacked Out"	111	168.27		Pacquín	"Buzz Job"	90	180.42
	Harris	"Sonoma Red"	62	164.04		Pacquín	"Buzz Job"	90	164.11		Brown	"Tonopah Low II"	00	168.39

## AT-6 (SNJ)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	
1968	Otzen	SNJ-5	1	181.32	1969	Hall	Mk. II	7	190.90	1970					
	Sykes	SNJ-4	3	181.25		Minges	AT-6D	96	182.13						
	Livingston	SNJ-5	9	180.98		Philippi	SNJ-5	4	179.89						
	Williams	SNJ-4	5	174.43		Snyder	SNJ-5	99	179.22						
	Baker	SNJ-5	6	174.09		McKinney	AT-6D	22	176.76						
	Keefe	SNJ-5	11	169.71		Malaspina	AT-6G	14	176.26						
1971	Mitchem	AT-6C	94	205.85	1972	McClain	AT-6C	25	201.59	1973	Turnbull	SNJ-5	72	206.60	
	Palmer	SNJ-5	9	195.71		Mosby	AT-6C	44	201.31		Mott	SNJ-5	42	204.35	
	Turnbull	SNJ-5	72	189.14		Turnbull	SNJ-5	72	197.04		Palmer	SNJ-5	9	203.82	
	Barrett	LSNJ-5	10	188.21		Metcalf	Mk. IV	88	188.85		Suacci	AT-6D	69	202.25	
	Kostelnik	AT-6G	47	158.20		Suacci	AT-6D	69	—		Wilson	SNJ-5	10	200.09	
	Phillippi	SNJ-5	4	—		Phillippi	SNJ-5	4	—		Early	SNJ-5	70	197.71	
1974	Palmer	AT-6F	9	211.35	1975	Palmer	AT-6F	9	207.17	1976	Palmer	AT-6F	99	210.68	
	McClain	SNJ-4	5	207.84		Buehn	SNJ-4	43	202.34		Rina	SNJ-6	73	208.95	
	Mott	SNJ-5	42	206.01		Wells	SNJ-5	9	202.25		Mosby	Mk. II	44	206.85	
	Buehn	SNJ-4	43	202.91		Rina	SNJ-6	73	200.09		Landry	SNJ-6	98	206.75	
	Wilson	SNJ-5	10	202.53		McClain	SNJ-4	5	197.85		Sykes	AT-6C	3	202.63	
	Metcalf					Turnbull	SNJ-5	72	196.95		DeWalt	AT-6	74	199.08	
1977	Twombly	T-6	41	209.66	1978	Rina	"Miss Everything"	73	205.71	No AT-6 (SNJ) Races at Reno in 1979 & 1980.					
	Palmer	T-6F	99	209.51		Twombly	"Spooled Up"	41	203.39						
	Rina	SNJ-6	73	206.16		Sykes	"Two Five Chartes"	3	201.79						
	Mott	SNJ-5	42	204.40		Mott	"Mis-Chief"	42	198.75						
	Beck	SNJ-4	2	202.82		Palmer	"Gotcha"	99	190.54						
	DeWalt	AT-6	74	200.88											
1981	Mosby	"Miss Behavin"	44	222.78	1982	Twombly	"Miss Behavin"	44	214.90	1983	Sykes	"The Mystery Ship"	14	225.94	
	Rina	"Miss Everything"	73	222.49		Rina	"Miss Everything"	73	213.85		Rina	"Miss Everything"	73	223.16	
	Beck	"Cal. Med-Fly"	2	220.27		Goss	"Warlock"	75	213.55		Buehn	"Angel's Desire"	3	222.87	
	Sykes	"Two Five Chartes"	3	219.35		Beck	"Cal. Med-Fly"	2	208.65		Mott	"Mis-Chief"	42	220.38	
	McDonald	"Big Red"	5	217.94		Buehn	"Ruthie"	39	206.92		Gist	"Texas Red"	68	217.24	
	Goss	"Warlock"	75	214.65		Gist	"Texas Red"	68	206.45		Catalano	"Nuthin' Fancy"	94	216.23	

## AT-6 (SNJ) (CONTINUED)

Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed	Year	Pilot	Aircraft	#	Speed
1984	Rina	"Miss Everything"	73	217.26	1985	Difani	"Thunderbolt"	18	213.89	1986	Van Fossen	"Miss TNT"	27	223.45
	Buehn	"Thunderbolt"	18	217.12		Goss	"Warlock"	75	213.68		Heale	"Lickety Split"	9	221.39
	Mott	"Mis-Chief"	42	216.94		Rina	"Miss Everything"	73	210.84		De Fani	"Thunderbolt"	18	220.25
	Catalano	"Nuthin' Fancy"	94	214.17		Gist	"Texas Red"	68	209.07		Redding	"After You"	88	216.27
	Goss	"Warlock"	75	213.22		Van Fossen	"Miss TNT"	27	208.83		Rina	"Miss Everything"	73	215.69
Gist	"Texas Red"	68	209.47	Mott	"Mis-Chief"	42	191.03	Goss	"Warlock"	75	213.50			
1987	Van Fossen	"Miss TNT"	27	226.36	1988	Van Fossen	"Miss TNT"	27	229.76	1989	Dwelle	"Tinkertoy"	7	222.33
	Mott	"Mischief"	42	224.78		Dwelle	"Tinkertoy"	7	227.94		Van Fossen	"Miss TNT"	27	221.12
	Goss	"Warlock"	75	223.50		Difani	"Thunderbolt"	18	220.82		Goss	"Warlock"	75	218.43
	Difani	"Thunderbolt"	18	219.22		Bruce	"Dash One"	4	220.48		Difani	"Thunderbolt"	18	213.43
	Hutchins	"Silver Baby"	1	217.73		Twombly	"Miss Behavin"	44	218.50		Macy	"Six Cat"	6	212.49
Bruce	"Dash One"	4	225.66	Goss	"Warlock"	75	213.71	Foley	"Miss Behavin"	44	208.94			
1990	Dwelle	"Tinkertoy"	7	229.26	1991	Van Fossen	"Miss TNT"	27	227.03	1992	Van Fossen	"Miss TNT"	27	234.77
	Goss	"Warlock"	75	226.78		Goss	"Warlock"	75	221.69		Goss	"Warlock"	75	228.35
	Van Fossen	"Miss TNT"	27	223.35		Day	"Catch 22"	22	220.70		Hartung	"Boomer"	89	227.29
	Macy	"Six Cat"	6	222.26		Macy	"Six Cat"	6	217.51		Macy	"Six Cat"	6	225.69
	McNeely	"Thunderbolt"	90	220.75		Hutchins	"Mystical Power"	21	215.71		Bruce	"Slo Thunder"	4	225.22
Difani	"Thunderbolt"	18	217.49	Difani	"Thunderbolt"	18	209.48	Hutchins	"Mystical Power"	21	215.28			
1993	Van Fossen	"Miss TNT"	27	226.89										
	Hartung	"Boomer"	89	223.01										
	Hutchins	"Mystical Power"	21	222.59										
	Goss	"Warlock"	75	221.81										
	Twombly	-	41	218.96										
Difani	"Thunderbolt"	18	212.19											

# The Air Racer

Unlimiteds, Formula I's, Sport Biplanes, and AT6/SNJ's.  
Thompson, Bendix, Greve, and Goodyear racers of the 30's and 40's.  
Schneider Cup floatplanes from the 20's.  
Pulitzer and Gordon Bennett Racers, famous European planes  
234 aircraft in all!

## REVIEW QUOTES

“... excellent references and a must for every serious scale modeler and aviation history enthusiast.”

—*R/C Sportsman*

“... a treasure chest for the modeler ... a must for the airplane buff ...”

—*Aviation Space Writers News*

“... an especially worthwhile addition to the reference library.”

—*Scale R/C Modeler*

“... a data bank of four and five view drawings of every significant racer ever built. The plan views were the finest we have seen and cover aircraft types that have never before been shown in such accurate detail.”

—*Airpower*

ISBN 0-933424-01-9



51995>



9 780933 424012