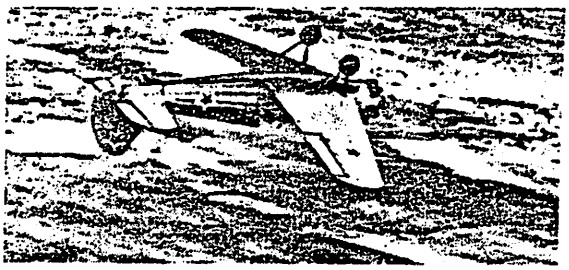
AKWINDS

62, 30-81

CLEVELAND FREE FLIGHT SOCIETY

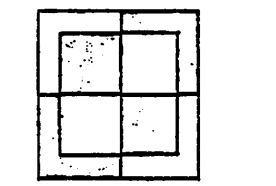


YAKOLEV UT-2

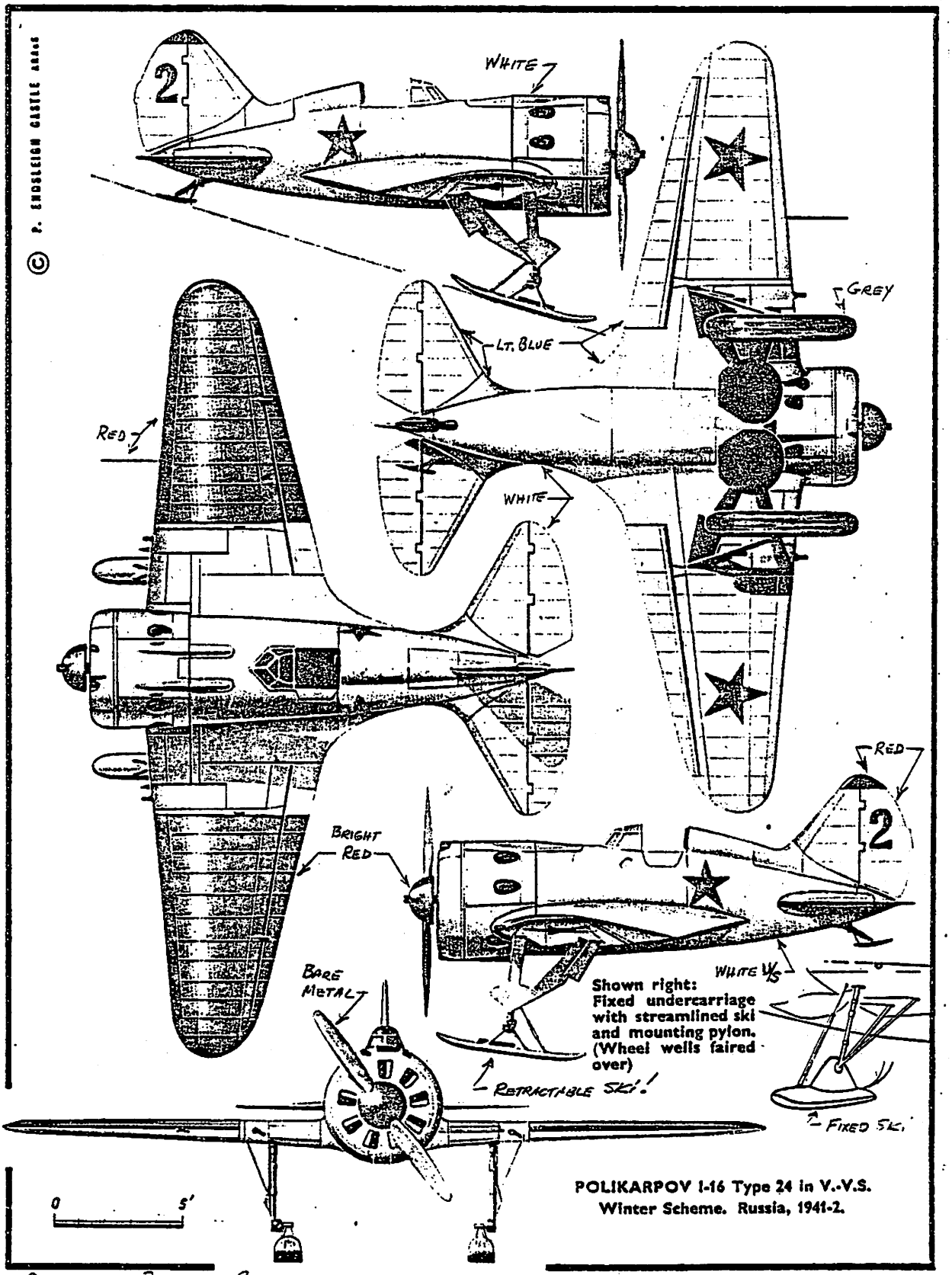
TRW T/M 2833

23555 EUCLID AVE.

CLEVELAND, OH 44117



POLIKARPOV I-16 TYPE 10 "RATA"
"CM MOSCA"



COURTESY PROFILE PUBLICATION 122 LOOK FOR REISSUE!

CROSSWINDS

CLEVELAND FREE FLIGHT SOCIETY

CROSSWINDS QUARTERLY

VOLUME 8 NO. 3
ISSUE NO. 62, 3Q 1981

CROSSWINDS

4909 N. Sedgewick

Lyndhurst, Ohio 44124

EDITOR: RUSS BROWN

(216) 382-4821

JANUARY 16,1982

EDITORIAL COMMENT.

Still in the red; let's build on it! Think snow and all that flakey stuff. Maybe we deserve a tour of duty on the Russian Front for reporting A.W.O.L. with these '81 issues. All snowed in during the second artic down draft, the Russian Front may be warmer.It's not so hot in Poland either Nes Paw? As the snow piles up and we dig in or out, issue 61 is on hold in our push for the Black (BULLET I)! No sweat, at below zero F here; lets bite the bullet and get cracking on this issue #62. Mike Zand just reported in that he has his half of issue 63 set, and looking for Dick woodward's CO_2 O.T. drawing. We will not be overly concerned with issue number sequence here. In 100 years it won't make any difference.

A big red star; two of 'em, to Bob Howard and Dave Pishnery for this issue rubbernicks, as Dave has the rolly poly Polikarpov off the drawing board and ready to fly in formation with Bob's Polish or Red UT-2M plan. The UT-2M features a nice big scale tail. and a long nose made even longer by the swept back leading edge wing shape. Lt. cadets should learn to fly the UT-2M trainer before advance training in exciting combat types. A Russian version of a demolition derby auto show. had Russians living near airports gathering on the hill sides to watch new pilots land the hot fighters.

Now this ever lovin' Red Rata is a donkey of another color! A flying donkey, part wood a-la-Pinoakichio in his bad ass days. But this wood donkey can really fly. Certainly an appeal - ing challange. The CO_2 power mode is presented in consideration of the short nose. With the I-16 free flight, you will need a good swig of dihedral too. The pleasing Polikarpov shape tail may be big enough at scale, especially if you make it thick. If you favor modifications to the construction plan, consider using a 1/32" X 1/4" spar and ribs as a thick symmetrical airfoil. Block up the outlines about 1/16" to center. The wing needs dihedral. At least as much as the dotted line angle center joint shown. Two and a 1/16" under each wing tip is 12 degrees, and almost up to the upper fuselage to nose level. Wing tip wash out,to keep the stall and drag inboard, can be 6% of the tip rib chord length, or about 1/8" of shim under the trailing edge.

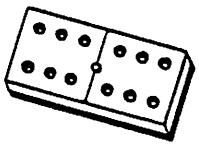
A rubber power rendition of the I-16 is a real good place to experiment with front end gears to put the weight to work. Lots of room for a big nose block, so you can pull the gear rack and prop assembly for winding or 500 hr service checks! A 3:1 gear box may be a good place to start if you don't have one ready to drop in. Rotza ruck Russky.

Tell you wet Ivan; I van' to draw you up a set of scale skis so you can build a gear down on skis hand launch or R.O.S. version. You may want to cover the deck with styro foam snow crumbs. The threat of artificial snow all over the floor should be enough to convince the scale judge to classify skis with floats for hand launch!

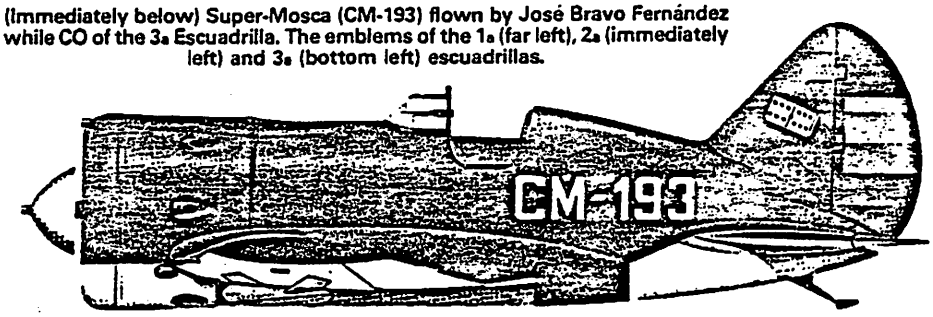
Russian Southern Front V.V.S. colors with the bright red outer wing tops on winter temporal white is highly visible. In service, the white wash dirtys up fast, showing through green upper surface paint streaks and panel edges, and wear points. Some I-16's had red stars on the wing tops on green schemes. In Spanish Civil War markings, the Mosca or Rata can fly in D.C. Blue Flight theater Spanish Fly Combat events too. Don Belote has enlarged drawings of an older plan at 23½" or 31" span for FAC or Jumbo Combat. $1.75 for 23½" and $2 plus 3o.50 postage. That's DON BELOTE, 1834 ERAME PLACE TOLEDO,OH 43613 . $2 was for the 31" Jumbo. John Pond Plans shows 4 sizes on old list#10, but now at higher prices on later lists.



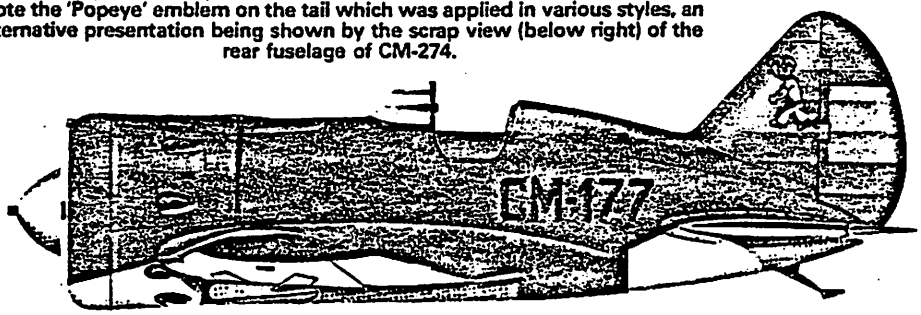


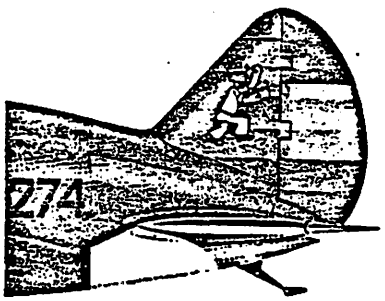


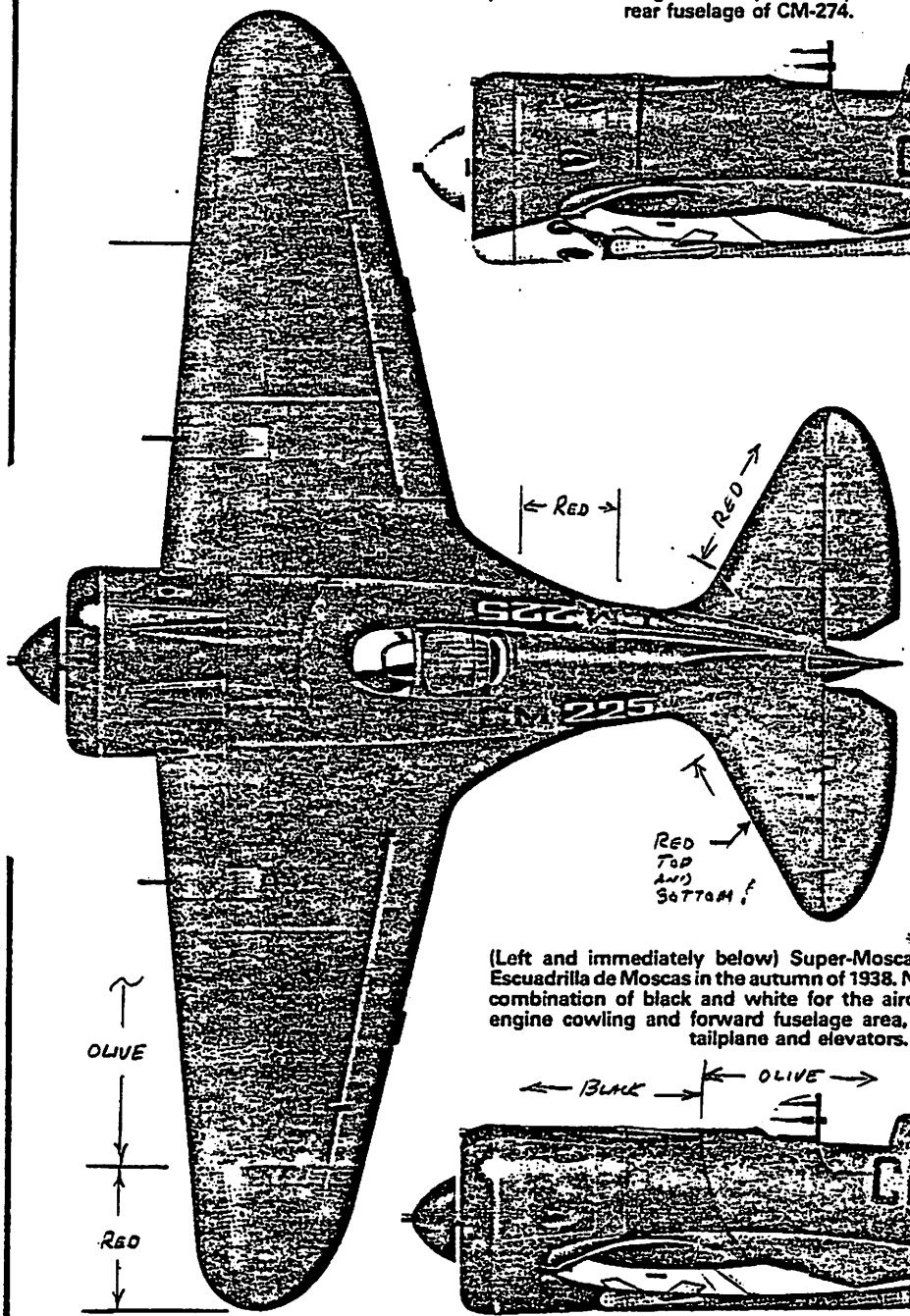
(Immediately below) Super-Mosca (CM-193) flown by José Bravo Fernández while CO of the 3a Escuadrilla. The emblems of the 1a (far left), 2a (immediately left) and 3a (bottom left) escuadrillas.



(Immediately below) Super-Mosca (CM-177) of the 4a Escuadrilla de Moscas. Note the 'Popeye' emblem on the tail which was applied in various styles, an alternative presentation being shown by the scrap view (below right) of the rear fuselage of CM-274.









(Left and immediately below) Super-Mosca* (CM-225) of the 7a Escuadrilla de Moscas in the autumn of 1938. Note the non-standard combination of black and white for the aircraft serial, the black engine cowling and forward fuselage area, and the red tail fin, tailplane and elevators.

*"Super Mosca" Powered by Wright Cyclone F.54

THE POLIKARPOV I-16

By Orange Bug

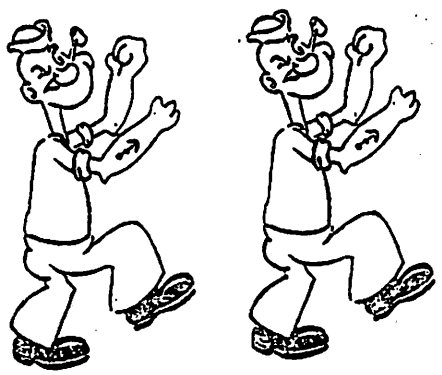
Known by many names throughout its illustrious career, the Polikarpov I-16 was actually the forerunner of many innovations that were to play a major role in the Second World War that was to come. It was the first low wing fighter to have an enclosed cockpit and retractable landing gear in an age of wire braced biplanes and fabric.

It served in Spain on both sides, in China against the Japanese in 1937, in Mongolia in 1938 and Finland in 1939 during the Winter War. By WWII, it was pretty much worn thin but soldiered on against the Nazis until the end of 1943. It faired pretty well against the Fiat CR .32 and Heinkel HE 51, but was no match for the Japanese Zero and BF 109E later on in its career. A favorite combat tactic it soon developed was to come down from out of the sun in a steep dive and zoom climb back to a same height and repeat again. It was made in 17 different types, the most popular being the I-16 Type 10 and I-16 type 24B. It operated on skis and hung from a bomber as a parasite fighter. It used machine guns, cannons, rockets, bombs and at one point as a rammer over its motherland. Of basically plywood construction, it was easily serviced in the field under all conditions.

The model depicted is a Super-Mosca of the 7a Escuadrilla in the summer of 1938 flown by the Spanish Republic Air Force.

At the end of the Spanish Civil War, only 52 aircraft were left, 22 of these being airworthy. By frugal cannibalization, one example lasted until 1953. The ships leading particulars are as follows:

Span	= 29' 6"
Length	= 19' 7"
Weight	= 3,781 lb (take-off)
Armament	= 4 x 7.62 mm machine guns
Speed	= 323 at sea level

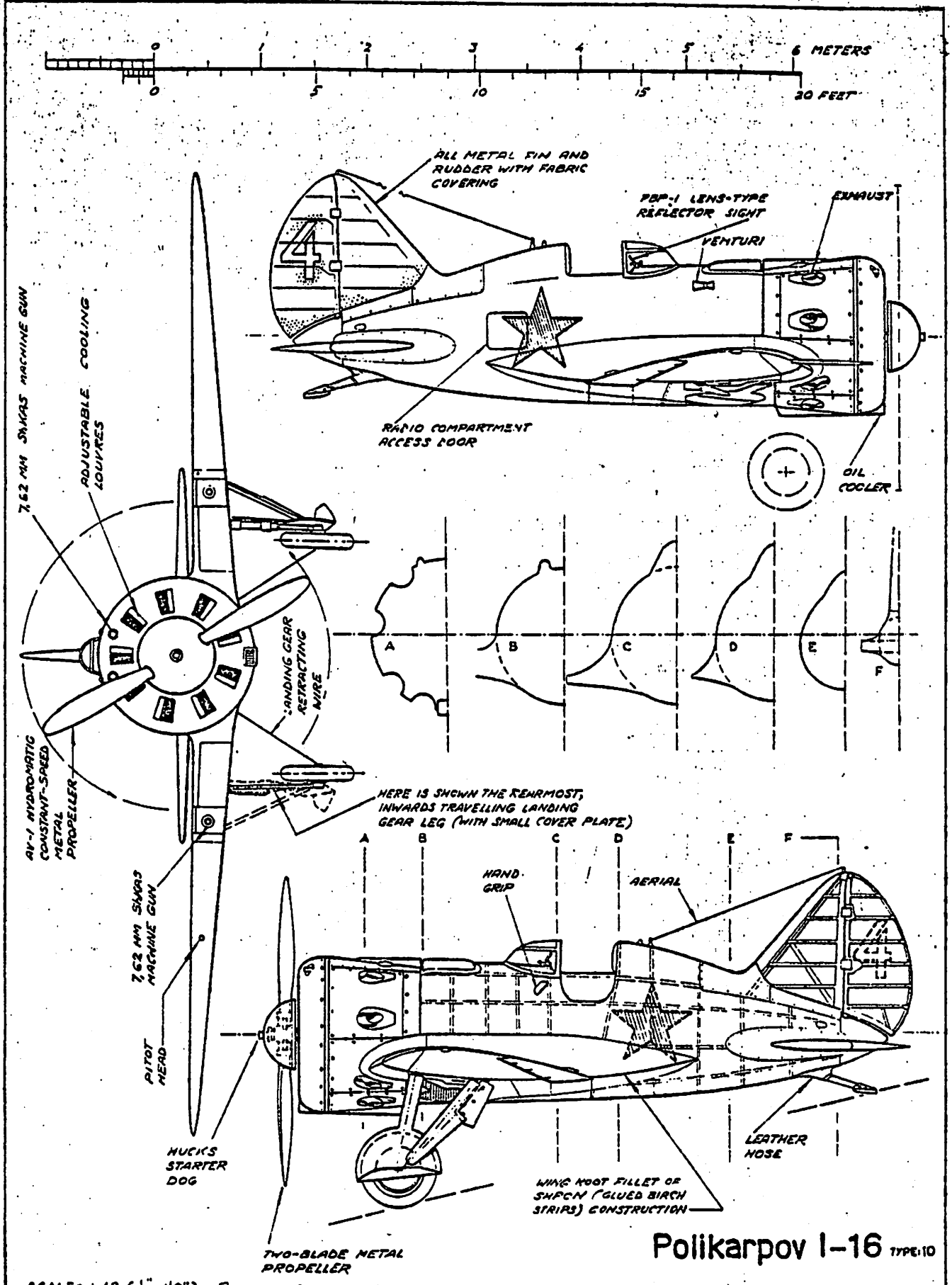


Reference Material

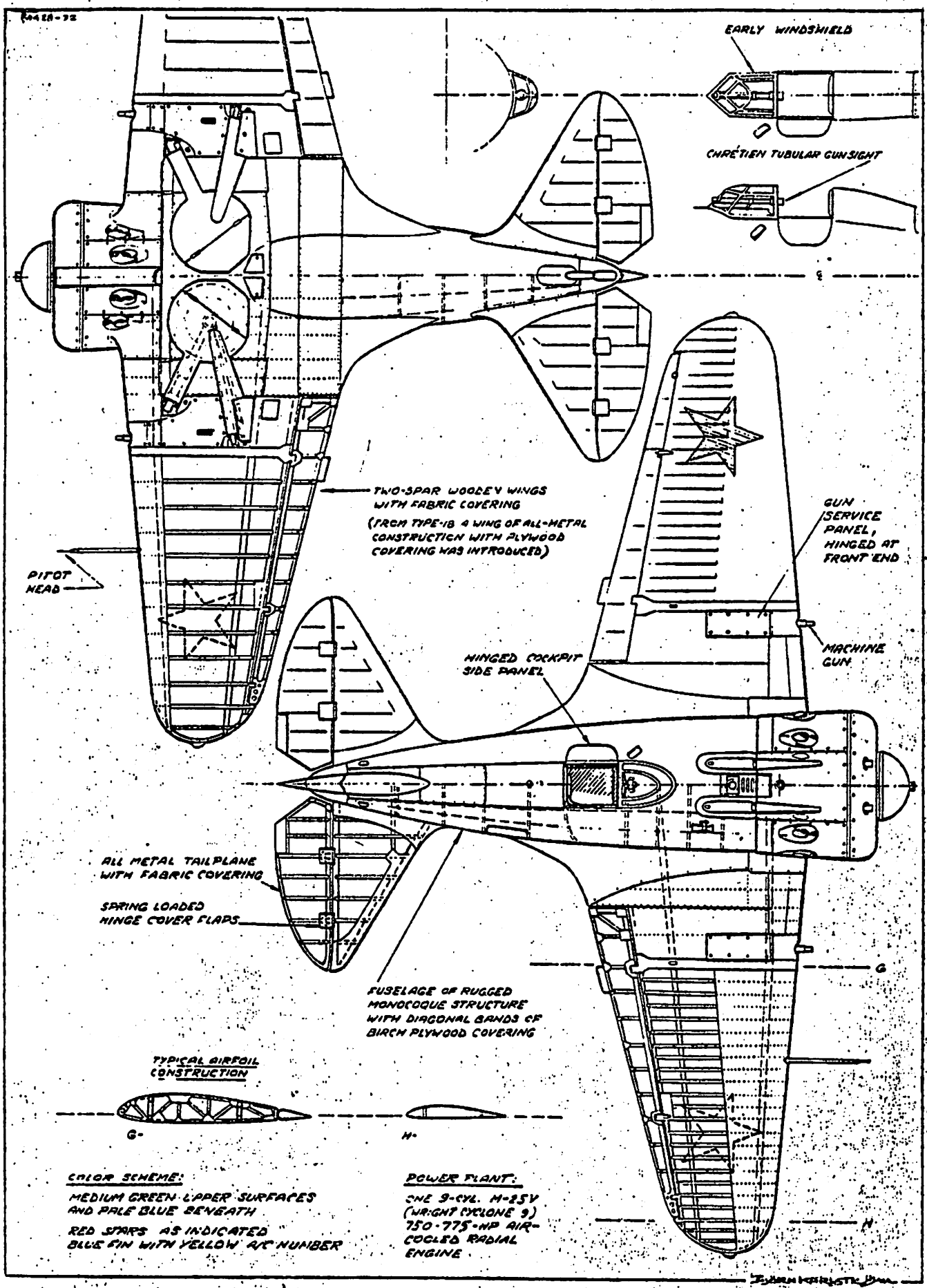
Air Enthusiast #1, 1975, Pages 1-16
Profile Publications, #122
American Aircraft Model, June 1974
Scale Modeller, August 1979

Aliases

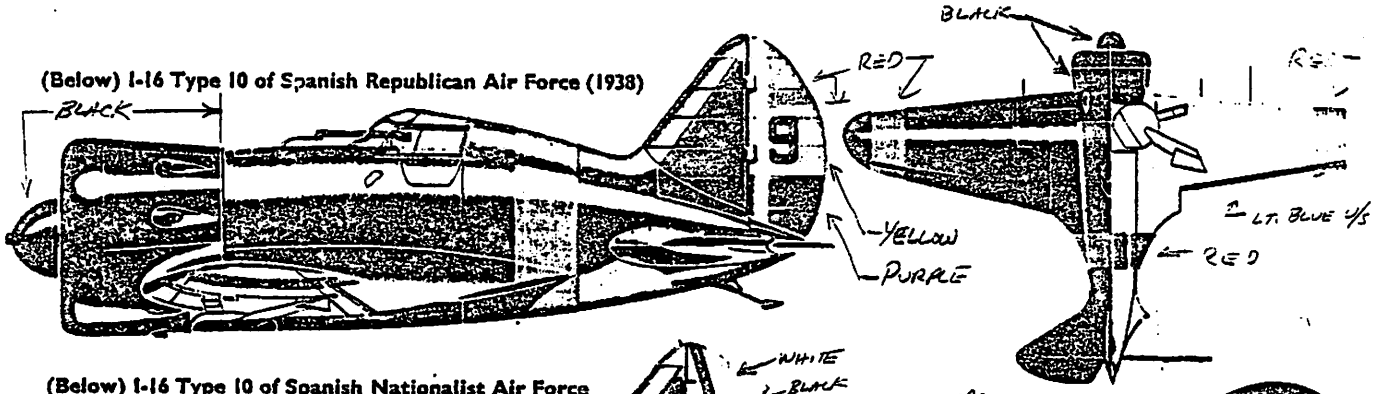
"Yastrebok"	- Young Eagle (Russia)	"Dienstjager"	- Duty Fighter (Germany)
"Mosca"	- Fly (Spain)	"Ishak"	- Little Donkey (Russia)
"Rata"	- Rat (Spain)		
"Abu"	- Gadfly (Japan)		



COURTESY AMERICAN AIRCRAFT MODELER JUNE, 1974
WITH TEXT BY PARICIA GROVES

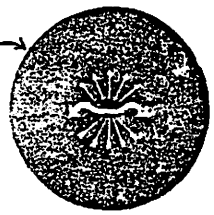

EARLY WINDSHIELD
CHRÉTIEN TUBULAR GUNSIGHT
TWO-SPAR WOODEY WINGS WITH FABRIC COVERING
(FROM TYPE-1B 4 WING OF ALL-METAL CONSTRUCTION WITH PLYWOOD COVERING WAS INTRODUCED)
PITOT HEAD
GUN SERVICE PANEL, HINGED AT FRONT END
MACHINE GUN
HINGED COCKPIT SIDE PANEL
ALL METAL TAILPLANE WITH FABRIC COVERING
SPRING LOADED HINGE COVER FLAPS
FUSELAGE OF RUGGED MONOCOQUE STRUCTURE WITH DIAGONAL BANDS OF BIRCH PLYWOOD COVERING
TYPICAL AIRFOIL CONSTRUCTION
G
H
COLOR SCHEME:
MEDIUM GREEN UPPER SURFACES AND PALE BLUE BENEATH
RED STARS AS INDICATED
BLUE FIN WITH YELLOW AC NUMBER
POWER PLANT:
ONE 9-CYL. M-25V (WRIGHT CYCLONE 9) 750-775-HP AIR-COOLED RADIAL ENGINE

(Below) I-16 Type 10 of Spanish Republican Air Force (1938)



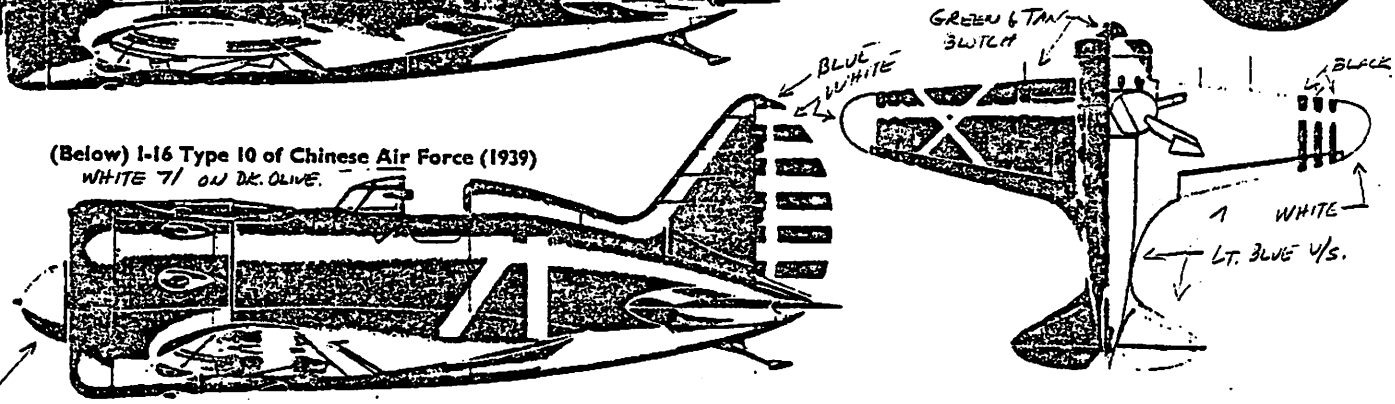
(Below) I-16 Type 10 of Spanish Nationalist Air Force Fighter Group 1W (1938)



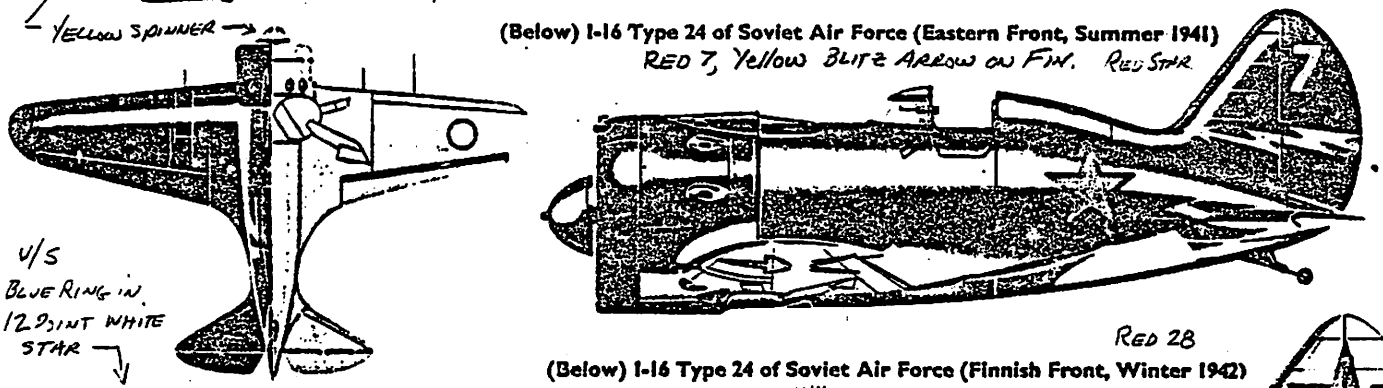


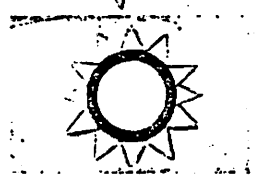
(Above) Spanish Republican I-16 Type 10, (right) emblem of Spanish Nationalist Air Force, and (below) Spanish Nationalist I-16 Type 10

(Below) I-16 Type 10 of Chinese Air Force (1939)



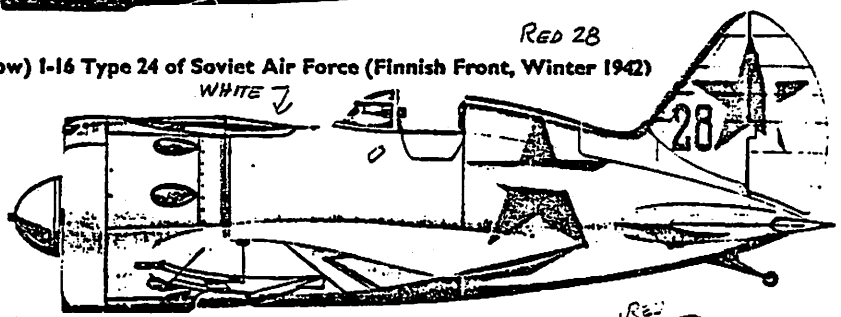
(Below) I-16 Type 24 of Soviet Air Force (Eastern Front, Summer 1941)

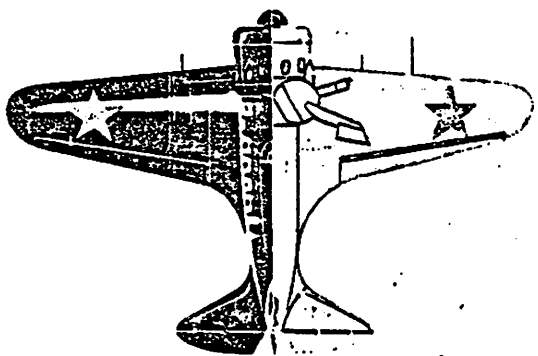




(Above, left) Chinese I-16 Type 10, (left) Chinese national marking 1937-39, and (below, left) Soviet Air Force Type 24

(Below) I-16 Type 24 of Soviet Air Force (Finnish Front, Winter 1942)





(Below) I-16 Type 24 of Soviet Air Force (Eastern Front, 1942)



WHITE No 13, 3A, CCCP!

AAI COURTESY

DECORATIONS OF THE U. S. S. R.



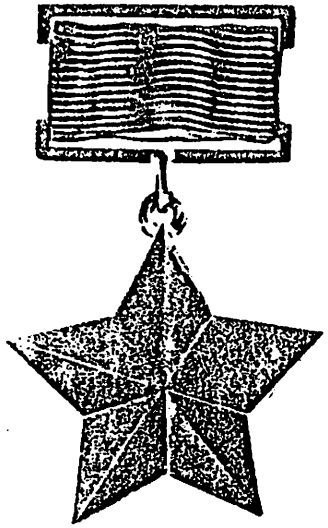
ORDER OF THE PATRIOTIC WAR, only Soviet award given for specific achievements. Goes to enlisted men, officers.



MEDAL FOR MILITARY SERVICES, awarded to enlisted men and officers for action beyond call of ordinary duty.



MEDAL FOR VALOR, military award ranking just above the *Medal for Military Services* in Soviet honor system.



THE GOLD STAR MEDAL, with *The Order of Lenin,* goes to anyone awarded the title, "Hero of the Soviet Union."



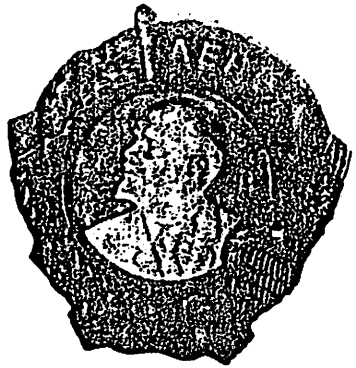
Reverse side of GOLD STAR MEDAL. Before institution of 1942 awards, it was the highest military decoration.



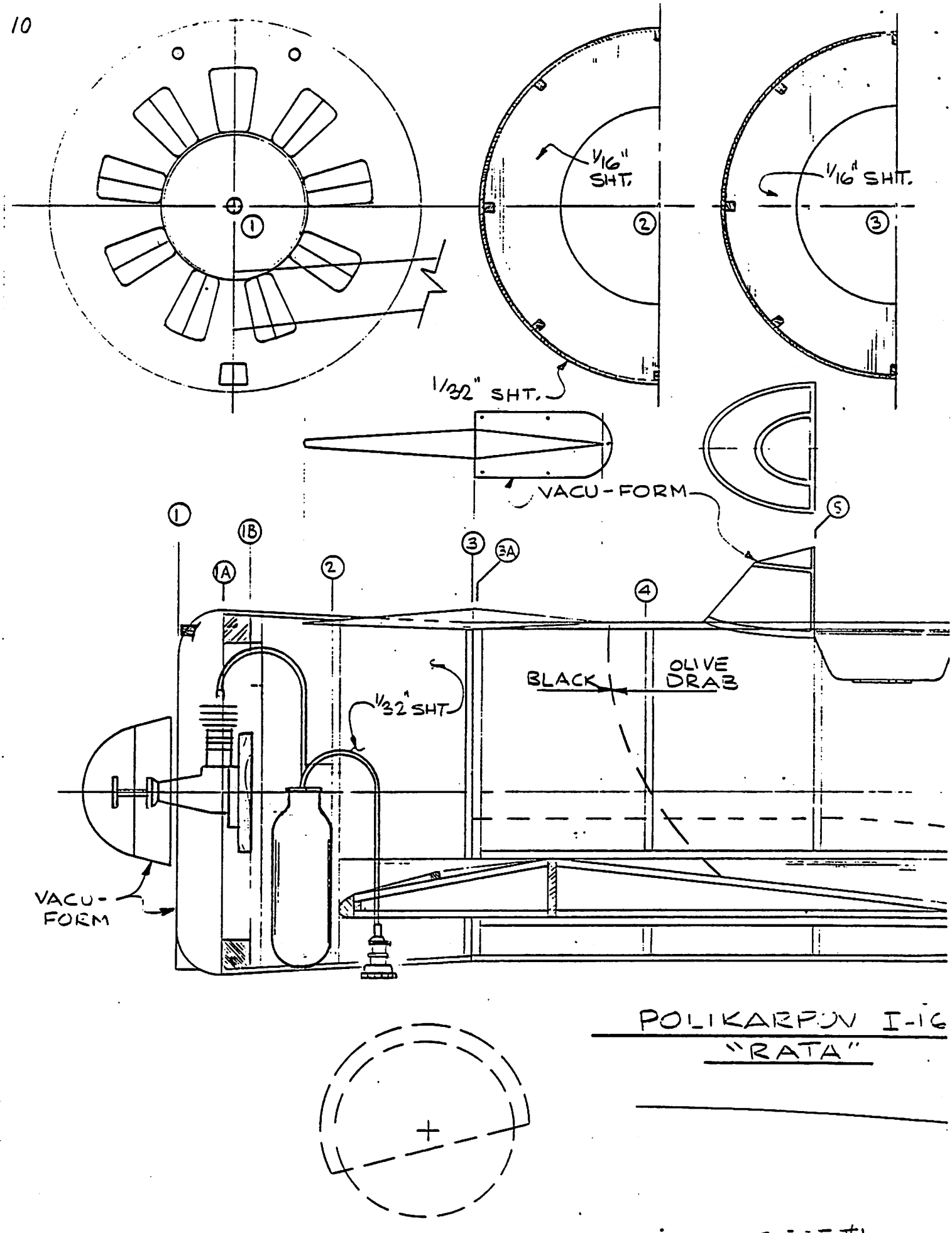
THE ORDER OF THE RED BANNER, military decoration worn by commanders and enlisted men. Won by many AF men.



HAMMER AND SICKLE MEDAL, denoting a "Hero of Socialist Labor", outranks THE BADGE OF HONOR (above).

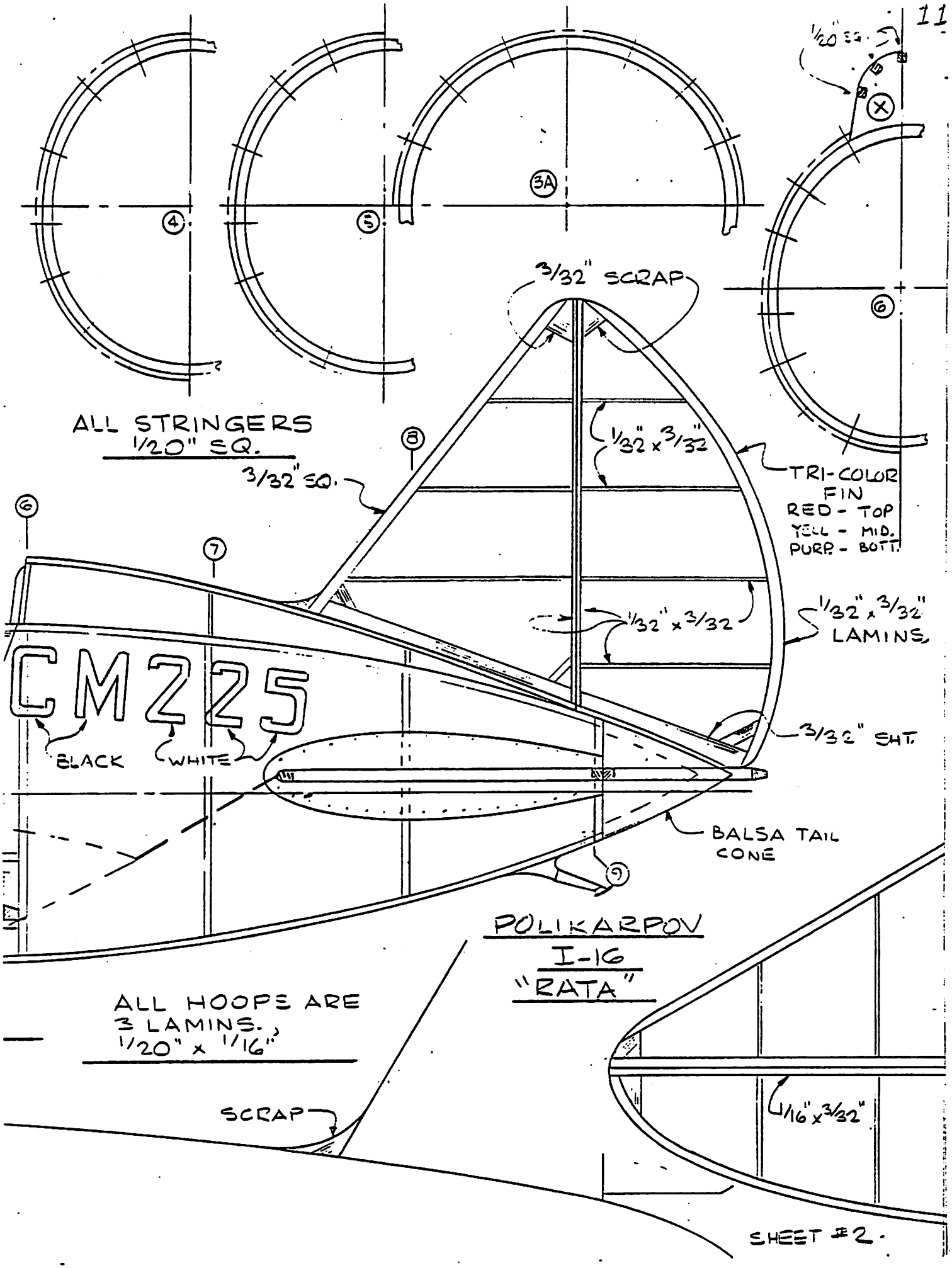


THE ORDER OF LENIN, a military and civilian decoration, may be given alone, always accompanies "Hero" titles.



POLIKARPOV I-16
"RATA"

SHEET #1.


1/20" SQ.
④
⑤
3A
⑥
3/32" SCRAP
ALL STRINGERS
1/20" SQ.
⑧
1/32" x 3/32"
TRI-COLOR
FIN
RED - TOP
YELL - MID.
PURP - BOTT.
3/32" SQ.
⑥
⑦
1/32" x 3/32"
LAMINS
CM225
BLACK
WHITE
3/32" SHT.
BALSA TAIL
CONE
⑨
POLIKARPOV
I-16
"RATA"
ALL HOOPS ARE
3 LAMINS.
1/20" x 1/16"
SCRAP
1/16" x 3/32"

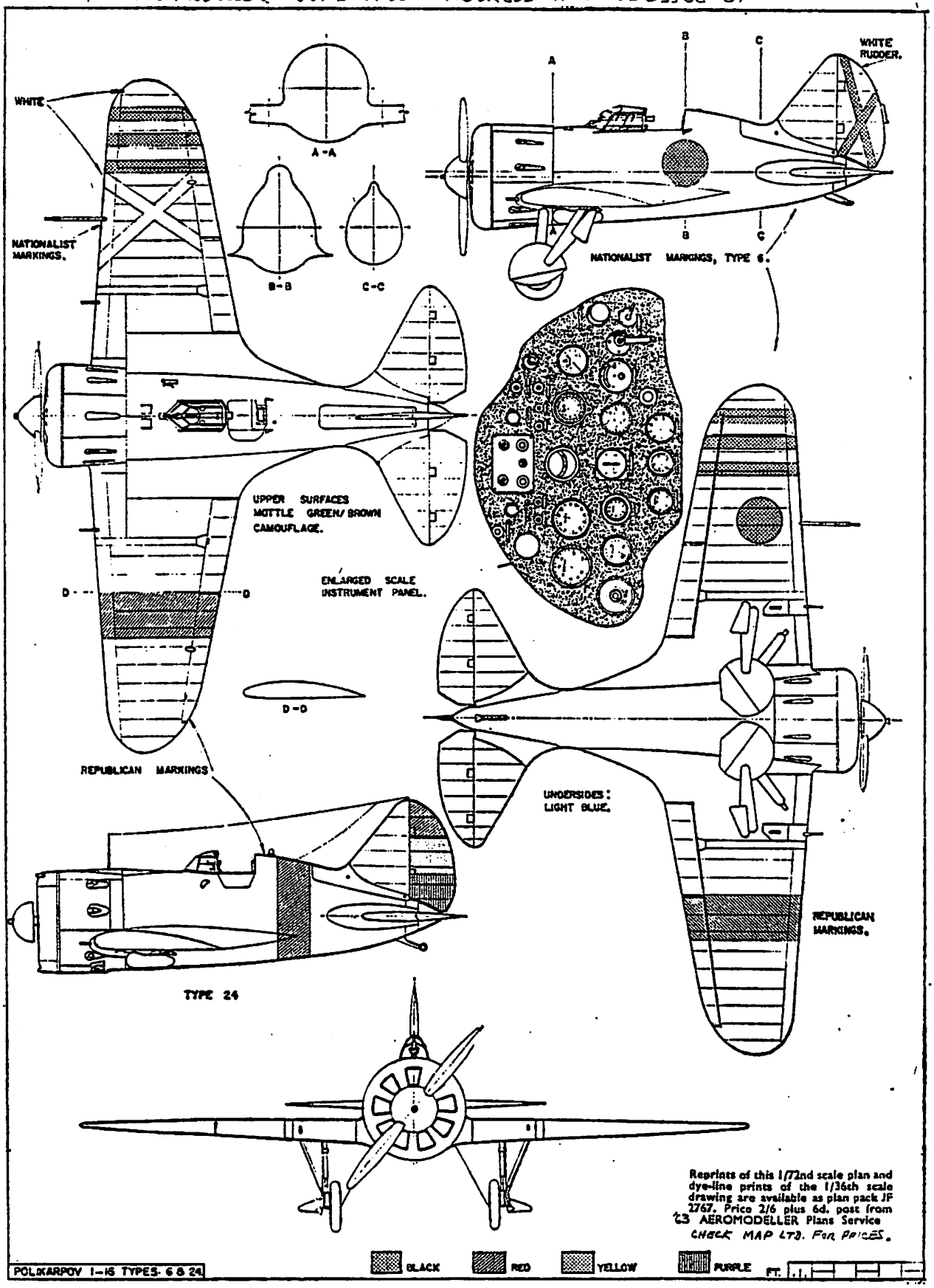
The plans listed below have all (except as noted) been enlarged from a smaller size plan. All have been published in model magazines or kitted at one time or another. Since these are enlarged from a smaller plan, you will have to keep this in mind while building. Any dimensions, wood sizes, dihedral, etc noted on the plan will of course refer to the original smaller model. Most plans are of scale models and any non scale model will be noted in the description. All plans are sent folded in a large envelope via third class mail. On orders of $5 and under please add 50¢ postage. On orders over $5 add 10%. If you wish the plans sent first class mail, add 20%. No C.O.D.'s. Please be sure to give both the name of the model and the wing span.

Don Belote
1834 Brame Place
Toledo, Ohio 43613

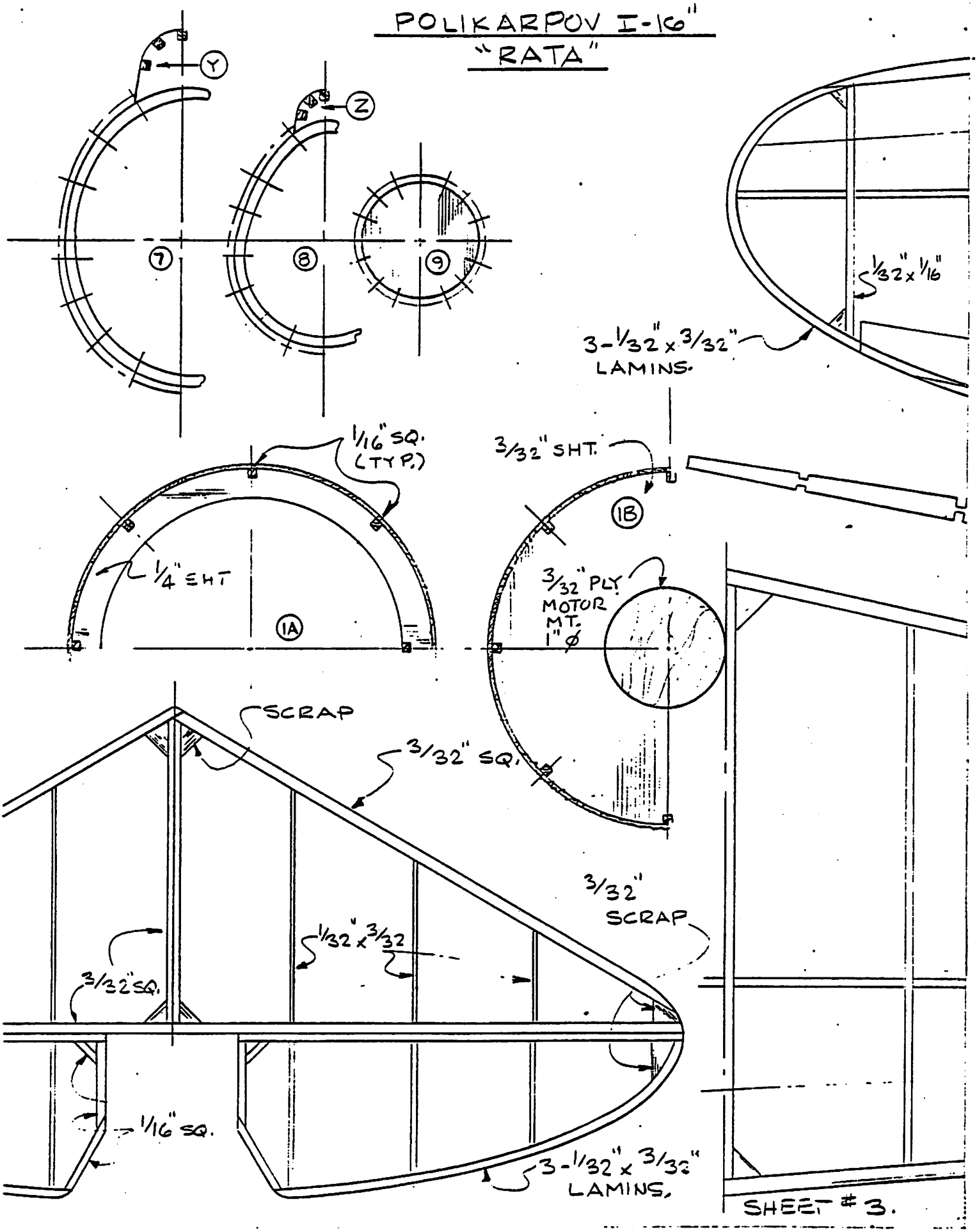
Russian Mosca I-16 WW 2 low wing fighter. 23½" span. ---------- $1.75
Russian Mosca I-16 WW 2 low wing fighter. 31" span. ---------- 2.00
Dornier Do 335. German WW 2 push pull fighter. 38" span. ---------- 3.25
Dornier Do 335. German WW 2 push pull fighter. 29" span. ---------- 2.75
Curtiss XP-55 Ascender. WW 2 pusher canard fighter. 20" span ---------- 1.50
Curtiss XP-55 Ascender " " " " " 27" span ---------- 1.50
Curtiss XP-55 Ascender " " " " " 32" span ---------- 2.00
Curtiss XP-55 Ascender " " " " " 44" span ---------- 2.50
Vultee XP-54 WW 2 twin boom pusher fighter. 39" span. ---------- 3.00
Douglas XB-42 WW 2 pusher bomber. 37" span. ---------- 2.25
Douglas XB-42 " " " " 29" span. ---------- 2.00
Mitsubishi S-00 WW 2 Jap floatplane fighter. 29" span. two sheets. ------- 2.00
Mitsubishi S-00 " " " " " 39" span. " " -------- 2.50
Globe Swift 38½" span. ---------- 2.00
Globe Swift 29" span. ---------- 1.50
Curtiss Robin 30" span. Reduced from a larger plan. ---------- 1.50
Vultee Vanguard WW 2 fighter 24" span. ---------- 1.00
Taylor Cub Nice plan of the E-2 Cub. Original size, not enlarged. 20" span - 1.50
Taylor Cub Same as above but enlarged to 30" span. ---------- 2.00
Albatross DV WW I German fighter. 32" span. ---------- 2.50
Peerless Red Flash stick endurance model. 28" span, not a scale model -------- 1.00
Peerless Blackhawk Jr. 23" span. Early gas type cabin, not scale. --------- 1.00
Peerless Mayfly helicopter. Not scale, similiar to the old Walker ceiling walker - 1.00
Peerless Rearwin Speedster 24" span ---------- 1.00
Peerless Heath Midwing 24" span. ---------- 1.00
Peerless Stinson Taperwing 24" span. ---------- 1.00
Peerless Ryan SC 30" span ---------- 1.00
Peerless Bellanca Jr. 30" span. ---------- 1.00

Note: All of the Peerless plans are the original size and have not been enlarged.
1982 JUMBO FAC is > 36" W/S MONOPLANES OR 30" BIPLANES. JUMBO WW II COMBAT is > 30".

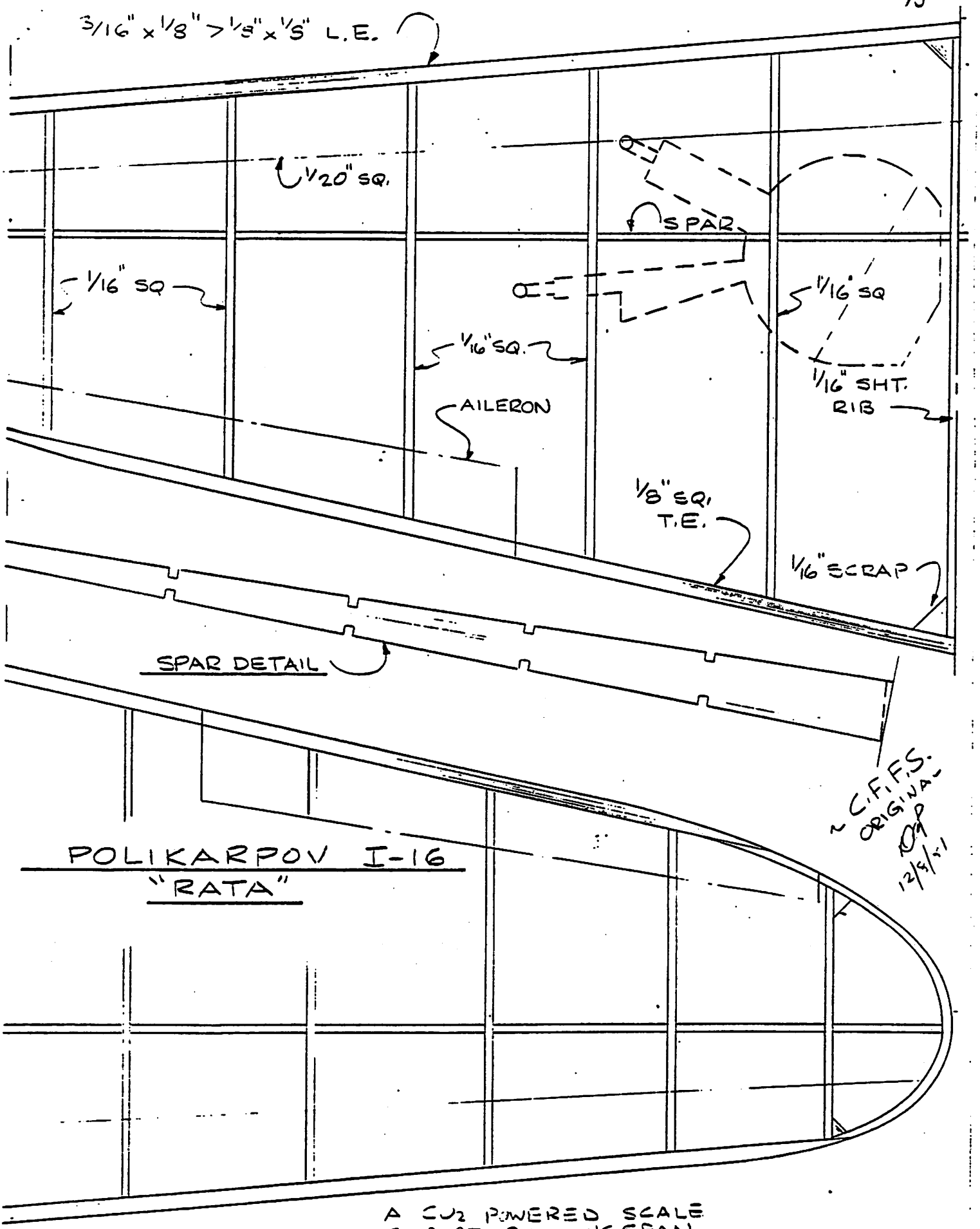
Courtesy Aero Modeller June 1963 Address X-Winds Issue 61



POLIKARPOV I-16"
"RATA"



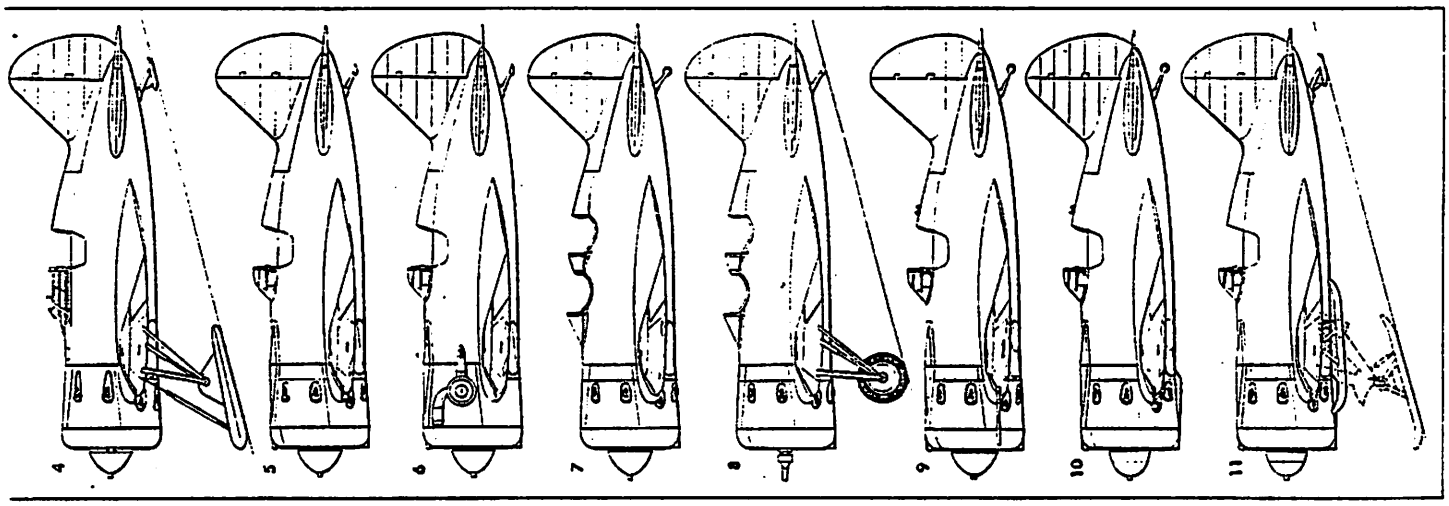
SHEET #3.



~ C.F.F.S. ORIGINAL COPY 12/5/11

POLIKARPOV I-16
"RATA"

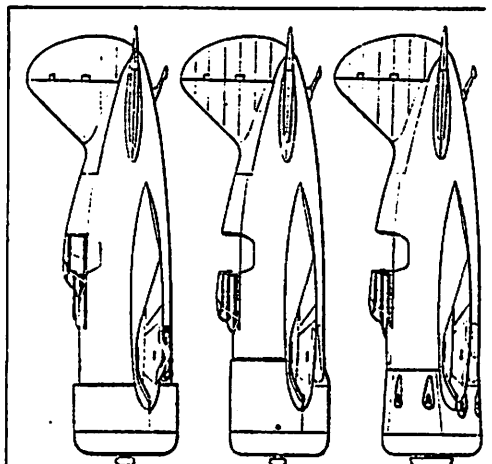
A CO_2 POWERED SCALE CHIP OF 19" WING SPAN



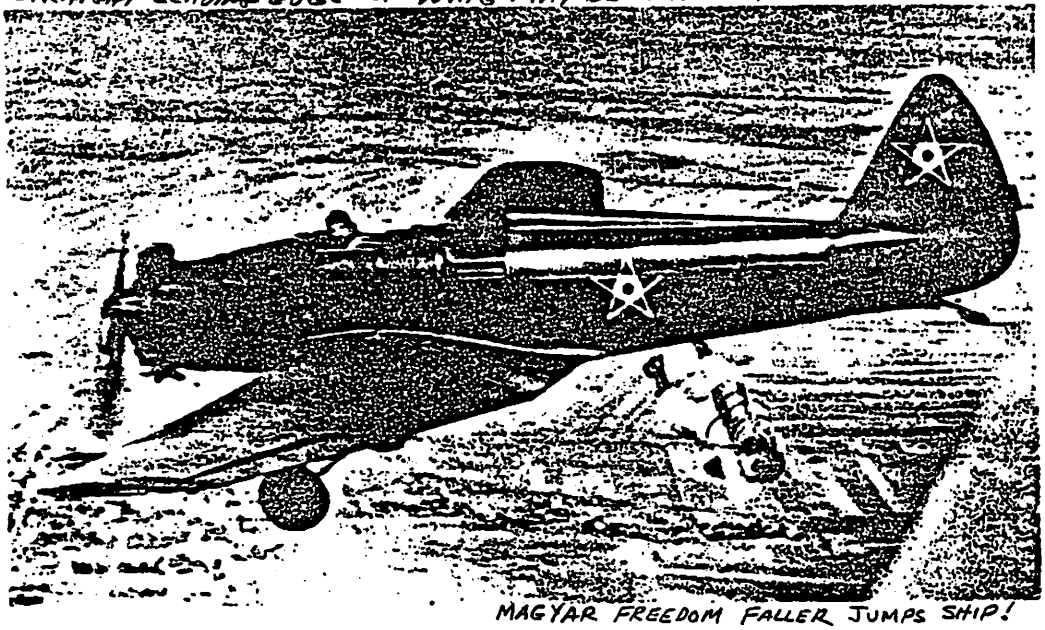
STRUCTURE AND SPECIFICATION
Polikarpov I-16 Type 24 B

Low-wing cantilever monoplane with radial engine. Fuselage of wooden monocoque construction, of glued cross-braced birch strips. Open cockpit with stiffened windshield. (Prior to Type 10, flat-topped perspex canopy and windshield built in one piece, the whole sliding forward in runners). Wings of all-metal construction, built on two chrome steel spars with duralumin ribs and leading edge and duralumin skinning. (Prior to Type 18, wings of two-spar wooden construction, fabric-skinned). The wings were built in three sections, centre-section integral with fuselage and outer sections with ailerons. Tail unit of metal construction, fabric-skinned. All control surfaces unbalanced. Main undercarriage legs, with oleo-pneumatic shock absorbers and wheel brakes, retractable by hand crank and cable. Retractable ski undercarriage often fitted, but seldom retracted in service. Fixed tail wheel or tail-skid. Armament mounted in wings immediately outboard of undercarriage, and in upper fuselage decking, firing through engine cowling and airscrew disc. Main fuel tank in forward fuselage aft of engine firewall. Provision for two under-wing drop tanks.

Dimensions: Length, 20 ft. 1 in. Span 29 ft. 6¼ in. Height, 8 ft. 5 in. Wing area, 161·45 sq. ft. Wing loading, 28·05 lb./sq. ft.
Weights: Empty, 3,285 lb. Loaded, 4,315 lb. Overload, max. 4,550 lb.
Powerplant: Shvetsov nine-cylinder air-cooled radial engine type M 63, with two-speed super-charger. Cylinder bore, 155·5 mm. Stroke, 174·5 mm. Working volume, 29·8 ltr. Compression ratio 7:2.
Power output: Take-off, 1,100 h.p. at 2,300 r.p.m. at 1·45 atmospheres pressure. At 5,905 ft., 1,000 h.p. At 13,770 ft., 860 h.p. At 14,763 ft., 900 h.p. at 2,200 r.p.m. at 1·24 atmos. press., with fuel consumption of 315 grammes/h.p./hour. Power loading of engine, 1·05 lb./h.p.
Fuel capacity, 55·9 Imp.gal. in main fuselage tank, plus two 22 Imp.gal. drop tanks. Fuel octane, 94.
Armament: Two 7·62 mm. Shkas machine guns in upper forward fuselage with 450 r.p.g. and two 20 mm. ShVak cannons in wings with 90 r.p.g., plus up to six 82 mm. RS-82 rockets on underwing rails.
Performance: Max. speed, 323 m.p.h. at sea level, 288 m.p.h. at 13,779 ft. Cruising speed, 185 m.p.h. Range, with drop tanks, 435 miles at 185 m.p.h. Range, on main fuel tank, 248 miles at 185 m.p.h. Ceiling, 29,530 ft. Climb to 16,400 ft., 4 mins. 48 secs. Initial climb rate, 115 ft./sec.

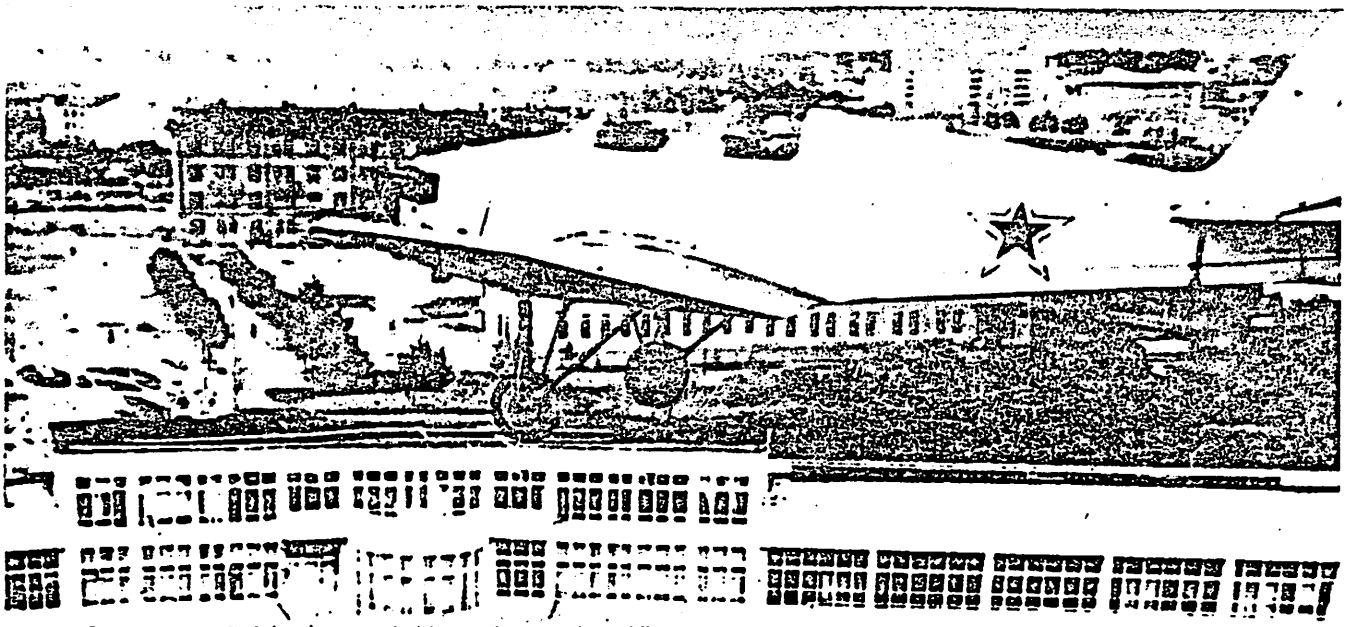


1948 YAKOLEV UT-2 PRIMARY TRAINER OF HUNGARIAN LÉGERIÖ
STRAIGHT LEADING EDGE OF WING MAYBE AN OPTICAL ILLUSION ?



MAGYAR FREEDOM FALLER JUMPS SHIP!

(1) The TsKB-12 prototype of the I-16. (2) The Cyclone-powered I-16 Type 4, initial production derivative of the TsKB-12bis. (3) The I-16 Type 5. (4) The I-16 Type 6 with fixed ski undercarriage. (5) Late production I-16 Type 10 with definitive windscreen. (6) The experimental I-16 Type 10TK fitted with two TsIAM TK-1 turbo-superchargers (7) UTI-4, fitted with solid tailwheel. (8) UTI-4 with fixed undercarriage and spinner removed. (9) I-16 Type 17. (10) I-16 Type 24. (11) I-16 Type 24 with ski undercarriage.



Central Aero-Club headquarters in Moscow is probably world's most pretentious. Club represents Soviet Union within the Federation Aeronautique Internationale.

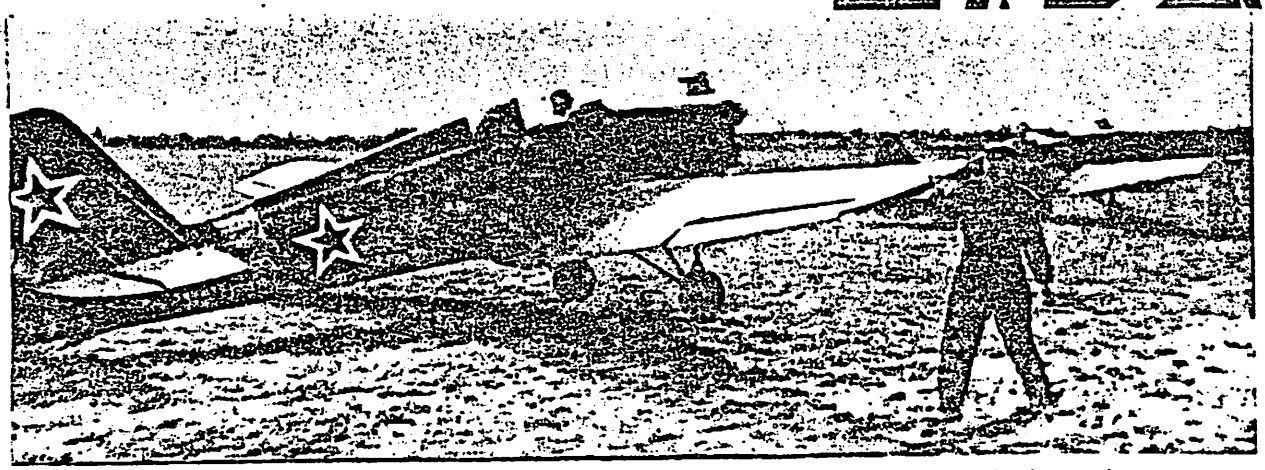
SOVIET RUSSIA is paying more attention to sports flying than ever before. Russia's "aerial sportsmen"—thousands of lightplane pilots, civilian parachutists, aircraft model builders—form an immense reservoir of semi-qualified manpower for the Red war machine.

In Russia, aviation is not only the national sport but also is strictly a *nationalized* sport. That's the fundamental difference between private flying in the Western countries and sporting flying in the Soviet Union. In the West, anyone who isn't a congenital invalid or imbecile can take out a private flying license if he has the necessary small change. In Russia, you don't have to pay any money but you must have the qualifications for a soldier. In the West, a private pilot wearing glasses ~~(Continued on page 60)~~



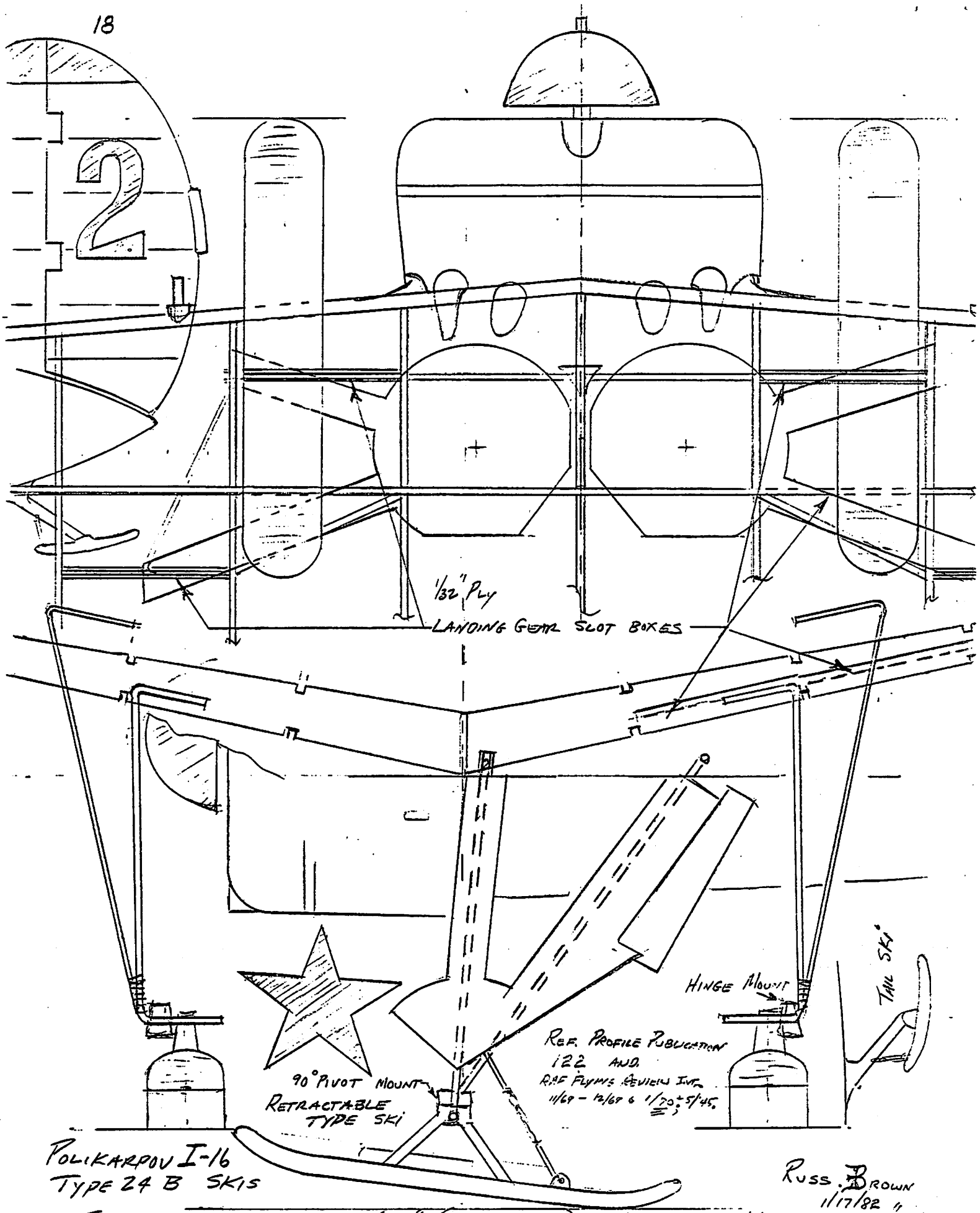
19 8 MAY BE RED, EDGED IN WHITE ON OLIVE GRN

Best-known sporting pilot in Russia is Vasili Pavlov, who takes part in every Air Display at Moscow on Soviet Aviation Day.



Flying's free in Russia—if you're good military material. Yak-12 trainers taxi to runway at Moscow's Central Aero-Club, where college students and workers train daily.

UT-2 PRIMARY TRAINER WITH LIGHT FUSELAGE BAND AND BIG 2 R BY STAR UNDER WING RED STARS OUTLINED IN WHITE ON LT BLUE, ON COVER PAGE.



POLIKARPOV I-16
TYPE 24 B SKIS

RUSS. BROWN
11/17/82

SCALE: WINGSPAN = 29'-6" (354 INCHES) APPROXIMATE 1/18TH ≅ 19.67 W/S.

FLYING ACES

RUBBER SCALE CONTEST

Sunday Feb. 28, 1982 8:30AM – 2:30 P.M

38th Ave. & Pinnacle Pk. Rd., Phoenix, Az.

Russ, Please include in your next newsletter thanks Dave Smith Southwest Sector F.A.C.

EVENTS

1. EMBRYO ENDURANCE
2. NO-CAL SCALE
3. GHQ PEANUT SCALE
4. FLYING ACES SCALE
5. WWI MASS LAUNCH >13" ≤ 29" SPAN BIPES FIGHTERS
6. WWII MASS LAUNCH "

Only events with 3 or more contestants will be held.

NO AMA LICENSE REQ

ENTRY FEE $1.00/event $3.00 MAX JUNIORS FREE

AWARDS 1st, 2nd, & 3rd events 1-4, 1st events 5 & 6

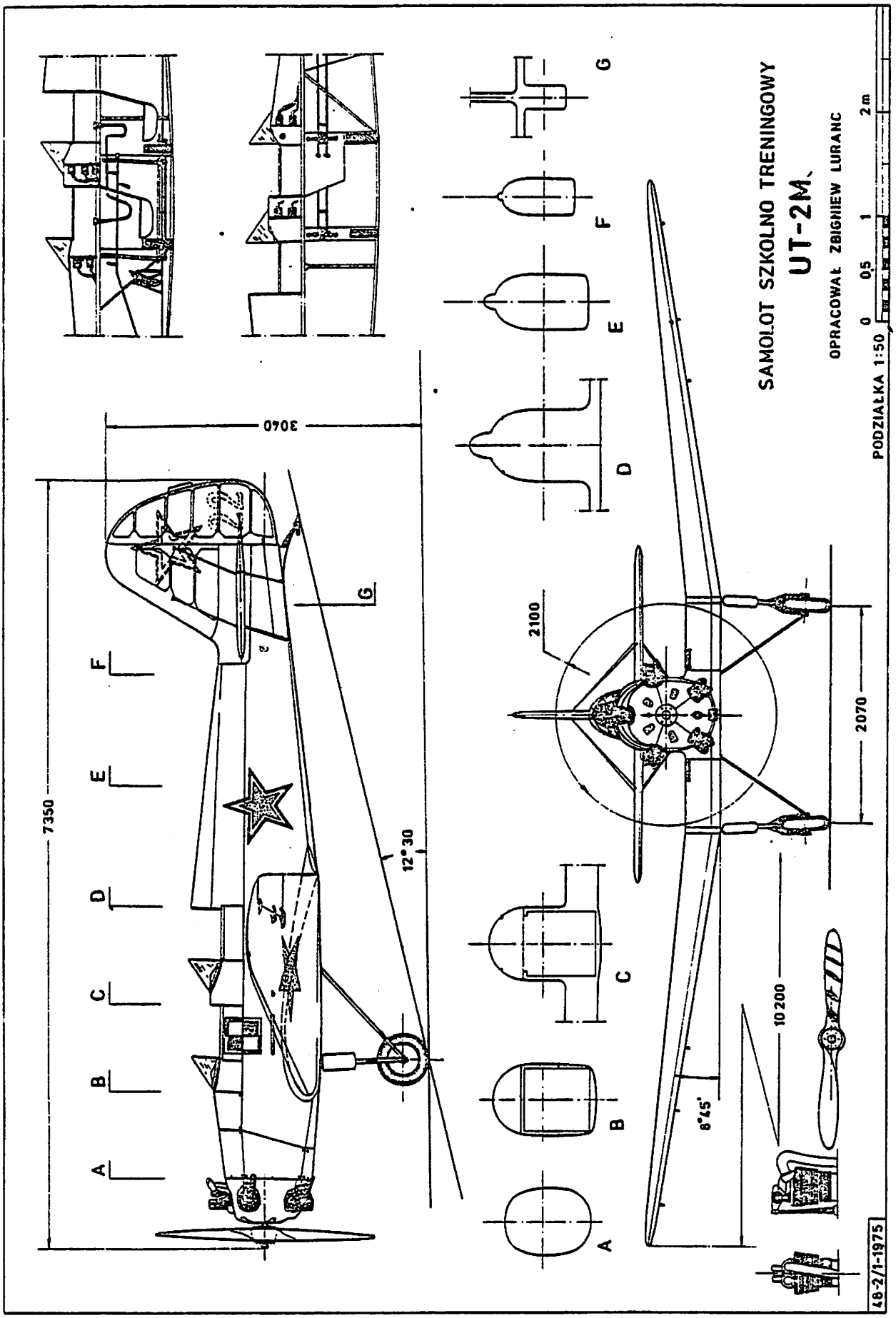
SPECIAL JUNIOR AWARDS HIGHEST FLIGHT TIME
HIGHEST SCALE SCORE

RULES FAC RULES (see FAC Rules Sheet)

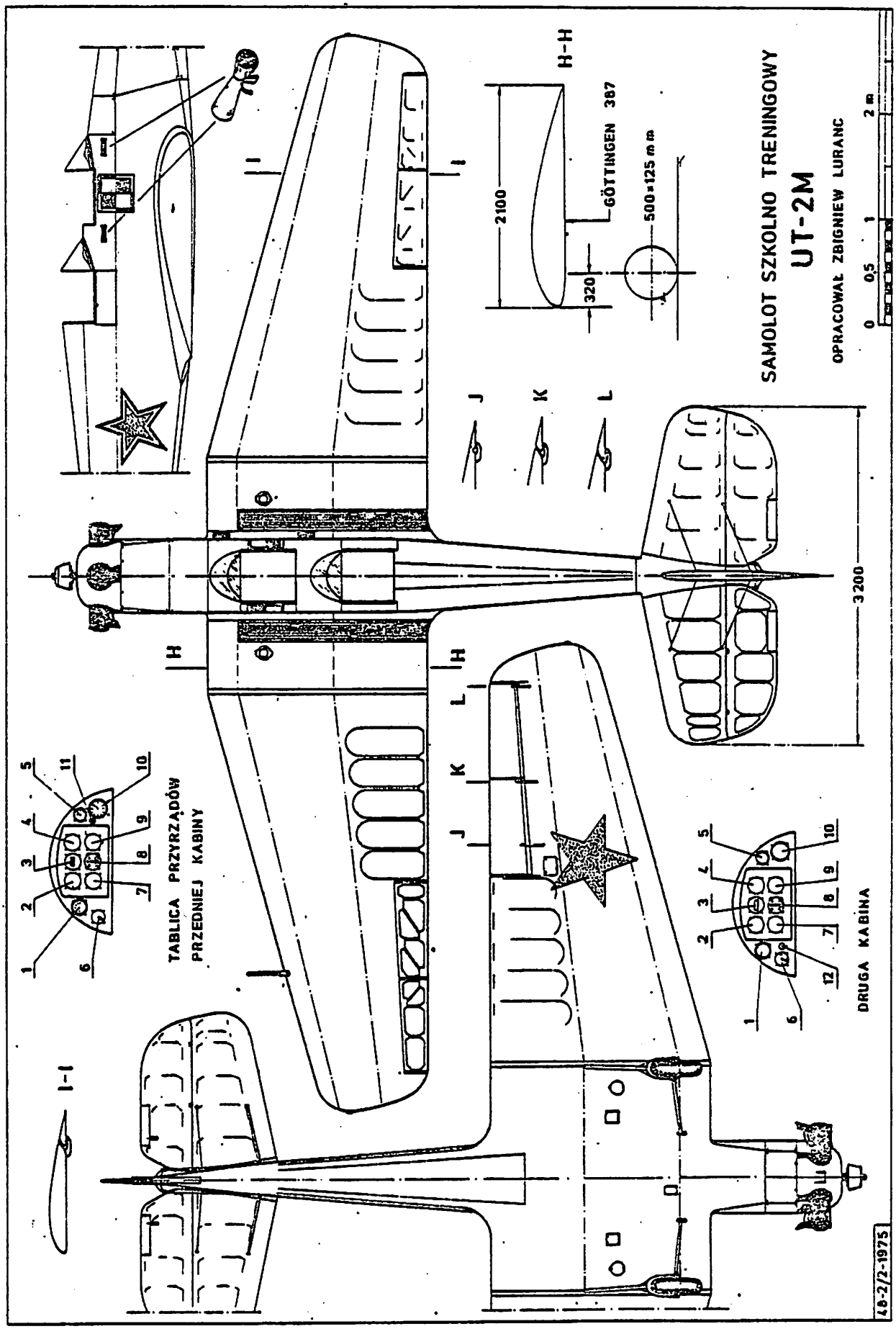
QUESTIONS?

CD DAVE SMITH
3813 N 33RD St
Phoenix, Az 85018

Phone # 602-955-1856



COURTESY
MARCH 1979 MODEL BUILDER



COURTESY MODEL BUILDER 3/77

GREATER STORKVILLE AND DETROITENGESCHWADER FAC RHUBARB AT WPAFB, DAYTON OH 9/20/'81

F.A.C. Flying Scale - 15 Entries			Scale Points	Flight	Total
1.	Gordon Roberts	Chamber Maid	58	67½	125½
2.	Prez Bruening	Hawker Fury	77	48	125
3.	Jack Moses	Chamber Maid	56	62	118
4.	Ralph Kuenz	Fokker D-7	71	45	116
5.	Bob Heywood	Mr. Mulligan	51	59	110
6.	Chuck Schobloher	Beechcraft G-17	63	45	108
7.	Russ Brown	Kingcobra	63	42	105
8.	Lloyd Wood	Dayton-Wright	57	48	105
9.	Lloyd Wood	Waco Sre	67	35	102
10.	Les Byrd	Tigermoth	66	35	101
11.	Lin Reigher	Huntington	58	34	97
12.	Les Byrd	Velie Monocoupe	57	21	78
13.	Dick Meixel	Mr. Smoothie	62	--	--
14.	Lin Reichel	Taylor Cub	47	--	--
15.	Dick Dunmire	Fiesler Storch	43	--	--

F.A.C. GHQ Original P-Nut - 10 Entries			Scale Pts X26	3 Flights	Total
1.	Ralph Kuenz	SK-2	312	266	578
2.	Fred Wunsche	Druine Turbulent	390	101	491
3.	Dick Sunmire	Fairchild F24R	312	155	467
4.	Tad Jones (S)	Lacey M-10	312	128	440
5.	Lin Reichel	Chambermaid	312	121	433
6.	Jack Moses	SK-2	312	120	432
7.	Jim Hyka	Texan	312	100	412
8.	Juanita Reichel	Cougar	234	137	371
9.	Jim Hyka	YAK-3	312	44	356
10.	Gordon Roberts	Fike-E	312	25	337

Embryo Endurance - 10 Entries		Bonus Pts.	3 Flights	Total
1.	Gordon Roberts	+9	307	316
2.	Chris Rubrich	+5	295	300
3.	Jack Moses	+9	280	289
4.	Walter Van Goerder	+9	233	242
5.	Chuck Schobloher	+9	207	216
6.	Tad Jones	+9	204	213
7.	Fred Wunsche	+6	166	172
8.	Prez Bruening	+9	114	123
9.	Bill Brewer	+8	106	109
10.	Roger Wathen	+3	36	39

Shell Speed Dash - 4 Entries		Scale Pts.	Flight	Total
1. Ralph Kuenz	SK-2	--	266	266
2. Bob Heywood	Mr. Mulligan	--	163	163
3. Jack Moses	Chambermaid	--	152	152
4. Lin Reichel	Chambermaid	--	32	32

Multi-Moter F.A.C. Rubber Scale - 3 Entries		Scale Pts.	Flight	Total
1. Prez Bruening	B-26	82	--	130
2. Lloyd Wood	F-82 Twin'Stang	80	22	102
3. Ralph Kuenz	A-26	78	24	102

F.A.C. Power Scale - 3 Entries		Scale Pts.	Flight	Total
1. Butch Kluiber	Burgess-Dunne	90	82½	172½
2. Chuck Schobloher	Jeep	57	82½	139½
3. Ralph Kuenz	Waterman	65	44	109

Jumbo Scale - 3 Entries		Scale Pts.	Flight	Total
1. Jack Moses	P-51B	60	60	120
2. Gordon Roberts	Devastator	53	58	111
3. Ralph Kuenz	A-26	78	15	93

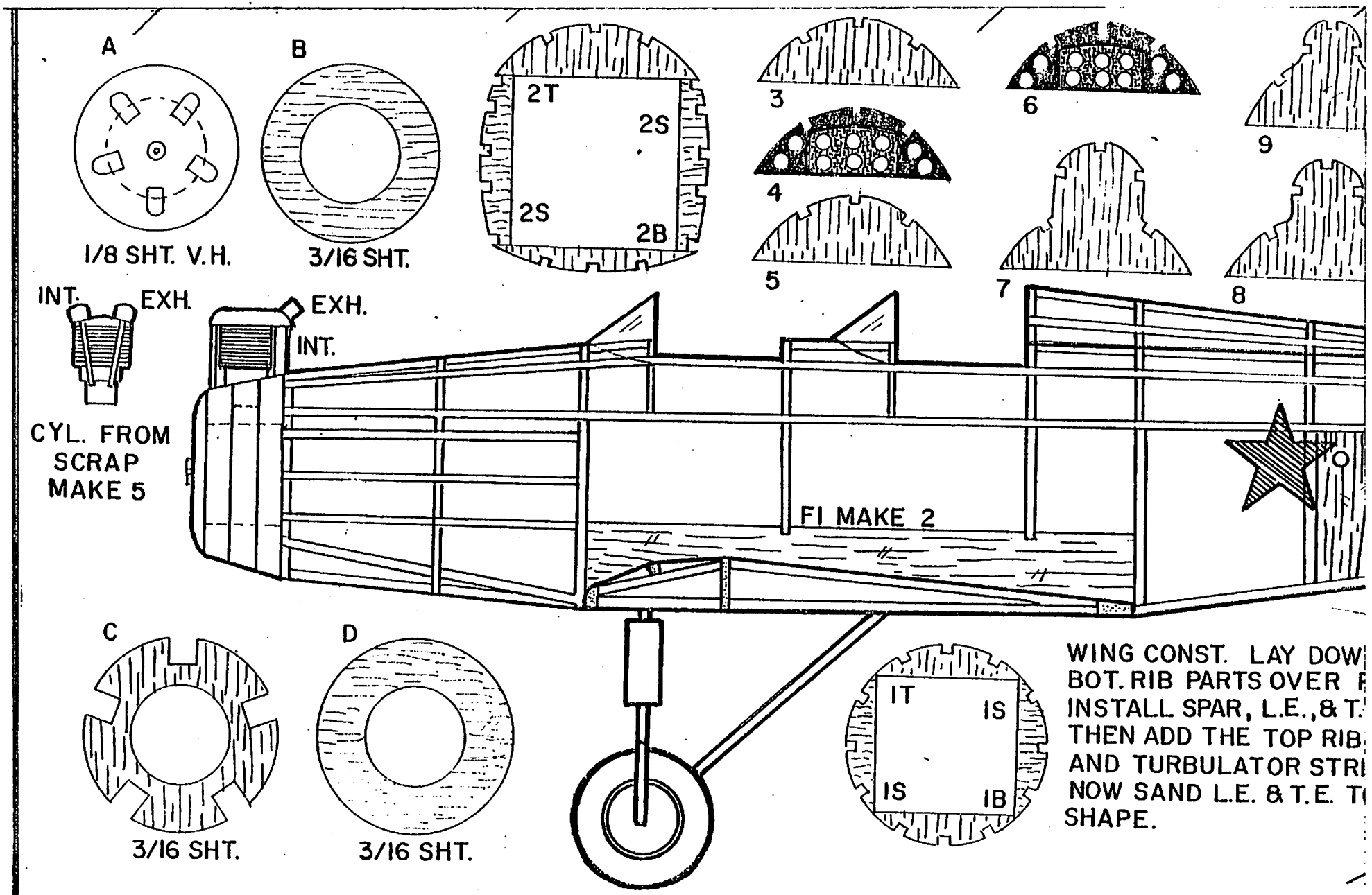
WWI Combat	
1. Chuck Schobloher	Fokker D VII
2. Ralph Kuenz	Fokker D VII

WW II Combat	
1. Gordon Roberts	Defiant
2. Jim Hyka	YAK - 3
3. Dick Dunmire	Zero

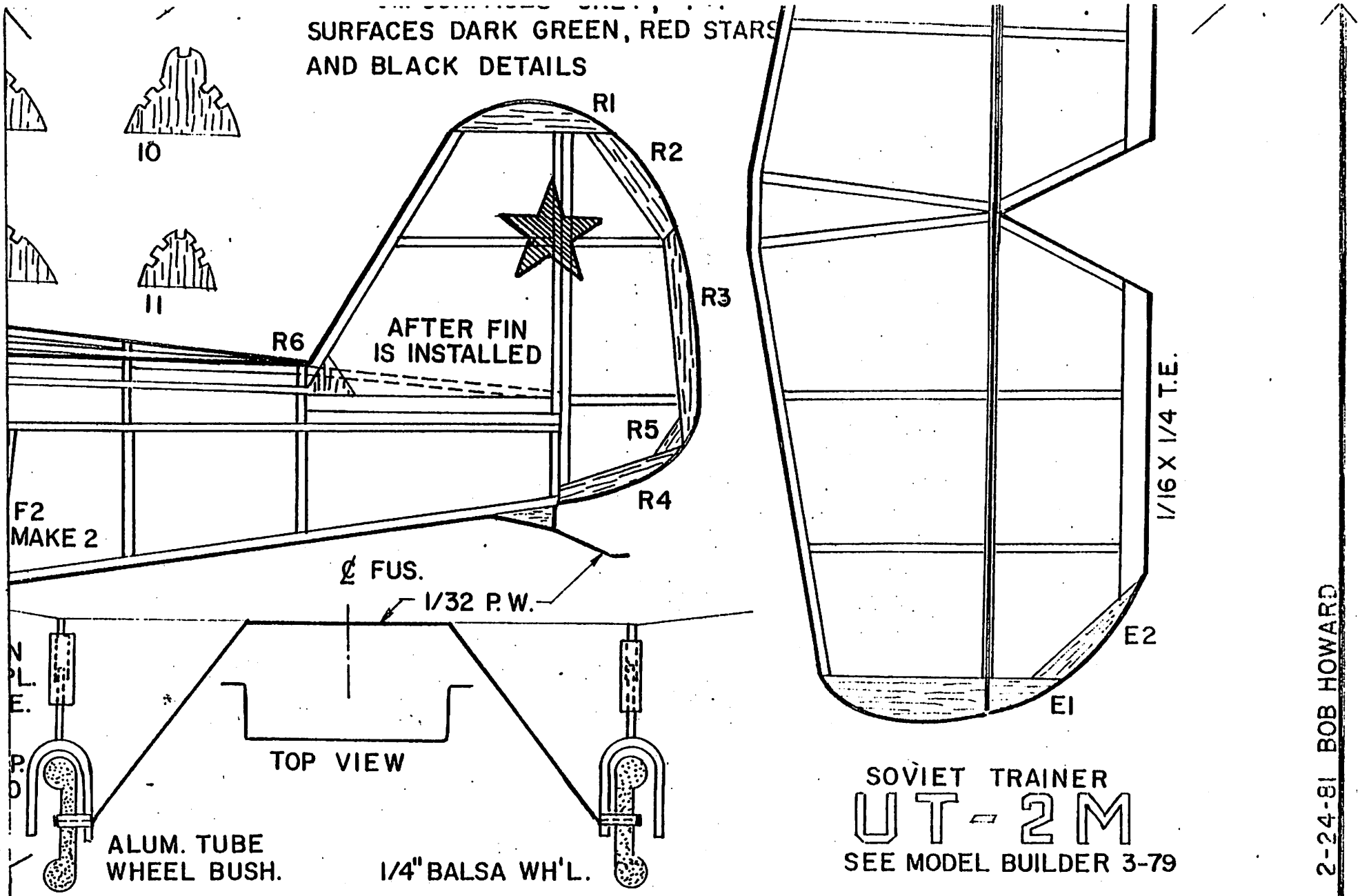
Combined Thompson/Greve	
1. Gordon Roberts	Chambermaid
2. Ralph Kuenz	SK-2
3. Jack Moses	Chambermaid
4. Lin Reichel	Chambermaid
5. Bob Heywood	Mr. Mulligan

1982 CALENDAR
FEB 26 CFFS Indoor Meeting/Flt. Engle Rd. 7:30-10:30
MAR 7 ERIE Indoor at Edinboro S.T.
3/12-14 CAS Randall Mall Show
MAR 28 CFFS Frigid FF at Warrensv'l
4/2-4 TOLEDO W.S. Trade show
APR 22 CFFS Dart Class Green Val'
MAY 16 NOFFA Date?
MAY 23 CFFS at LCCC FAC
MAY 30 DAYTON FAC at WPAFB ? *1
JUN 6 TORONTO Date?
JUN 13 ERIE Pa. Date?
JUN 20 CFFS FAC at WPAFB ? *1
6/12-19 AMA, SNART, 24Hr, Ind. W. Baden In.
JUL 3 CFFS Calm Air & Water R.O.W.

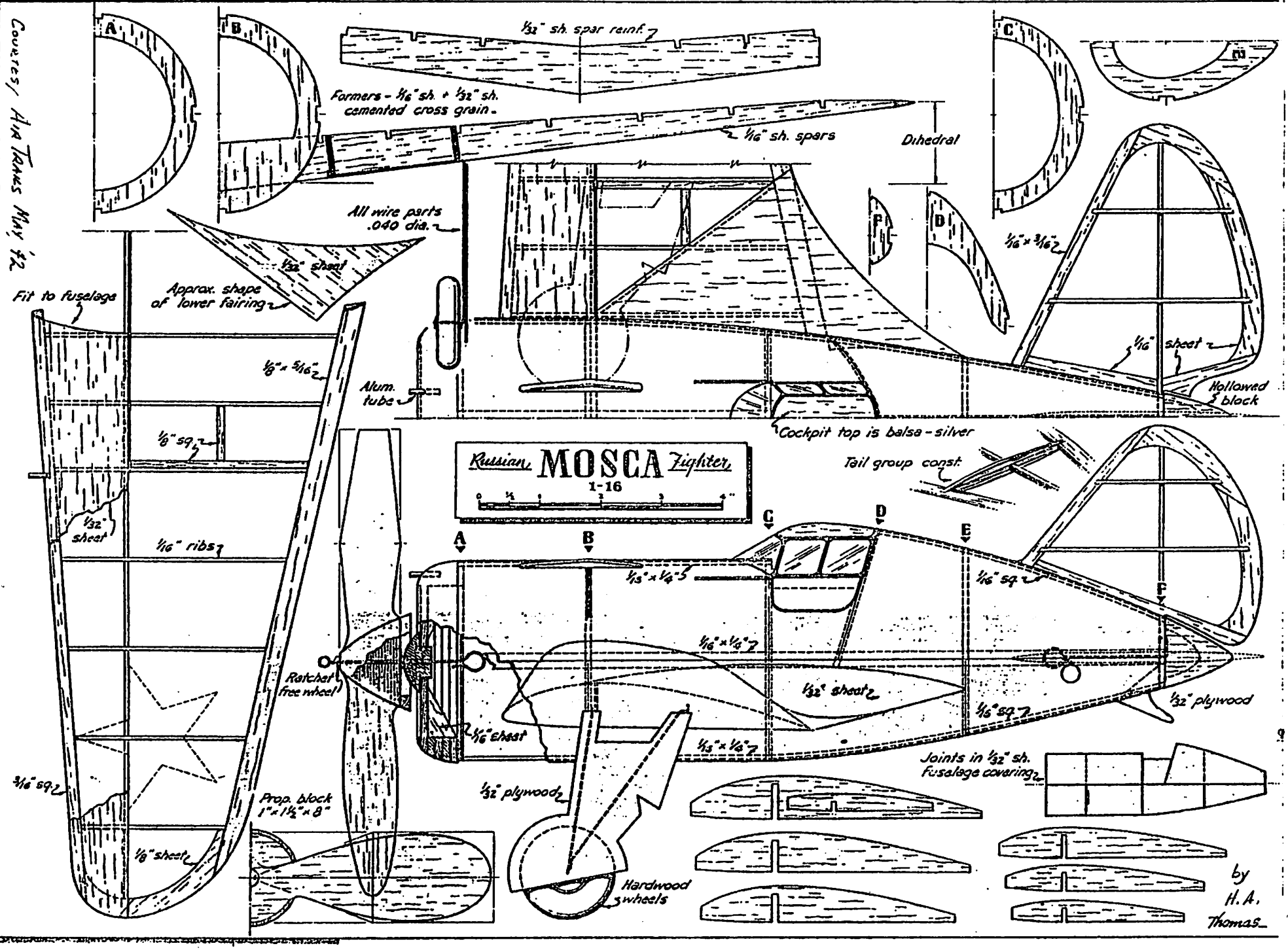
*1 EARLY WARNING ALERT: WPAFB DATES ARE NOT APPROVED. USE MAY BE RESTRICTED.


A
1/8 SHT. V.H.
B
3/16 SHT.
2T
2S
2S
2B
3
4
5
6
7
8
9
INT.
EXH.
CYL. FROM SCRAP MAKE 5
EXH.
INT.
F1 MAKE 2
C
3/16 SHT.
D
3/16 SHT.
IT
IS
IS
IB
WING CONST. LAY DOW
BOT. RIB PARTS OVER
INSTALL SPAR, L.E., & T.
THEN ADD THE TOP RIB
AND TURBULATOR STRI
NOW SAND L.E. & T.E. T
SHAPE.

SH2



SH. 1 APPROX. 1/20TH SCALE : WINGSPAN (20"±) = 33FT-5.61IN. (401.5¼IN.)

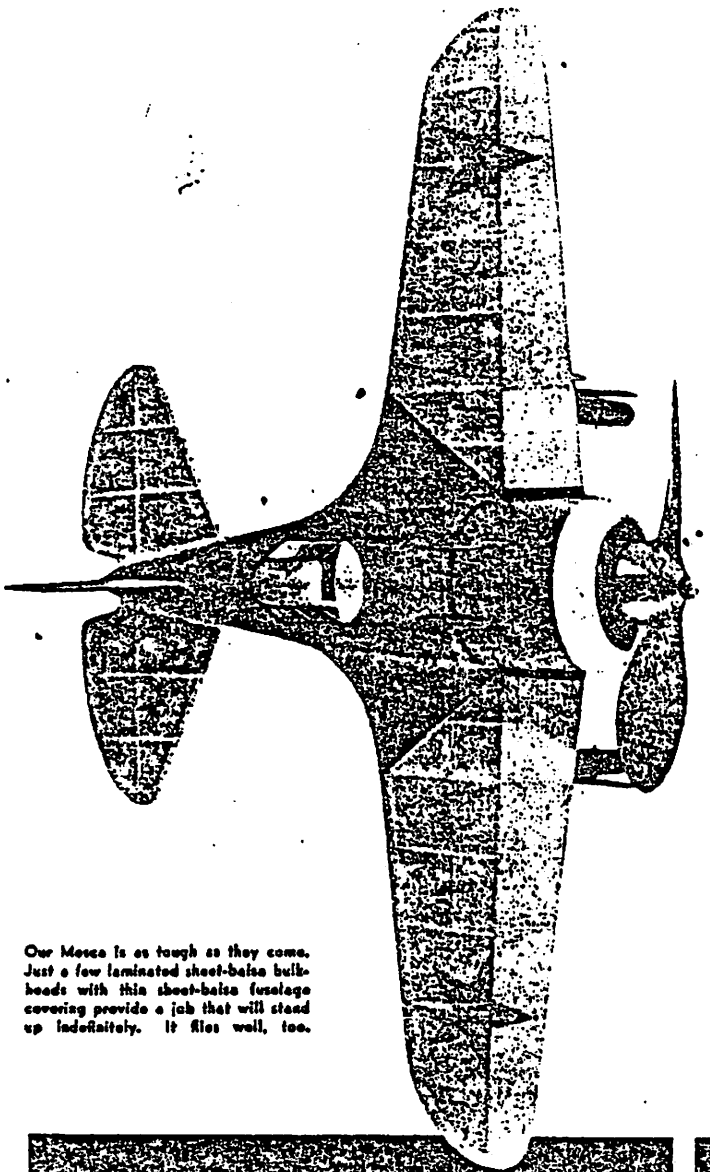

Courtesy Air Trails May '42
A
B
1/32" sh. spar reinf.
Formers - 1/16" sh. + 1/32" sh. cemented cross grain.
1/16" sh. spars
Dihedral
C
D
E
All wire parts .040 dia.
1/32" sheet
Approx. shape of lower fairing
Fit to fuselage
1/8" x 5/16"
1/8" sq.
1/32" sheet
1/16" ribs
3/16" sq.
1/8" sheet
Alum. tube
1/16" x 3/16"
1/16" sheet
Hollowed block
Cockpit top is balsa - silver
Russian MOSCA Fighter
1-16
Tail group const.
1/16" x 1/4"
1/16" sq.
F
1/16" x 1/4"
Ratchet free wheel
1/32" sheet
1/16" sheet
1/32" plywood
1/16" sq.
1/16" x 1/4"
Joints in 1/32" sh. fuselage covering
Prop. block 1" x 1 1/2" x 8"
1/32" plywood
Hardwood wheels
by H. A. Thomas

23 May 42 A.T.

Mosca Flying Scale

BY H. A. THOMAS

A veteran of Spanish, Chinese, and Russian fronts, this stubby I-16 fighter makes an unusual flying-scale job.



Our Mosca is as tough as they come. Just a few laminated sheet-balsa bulkheads with thin sheet-balsa fuselage covering provide a job that will stand up indefinitely. It flies well, too.

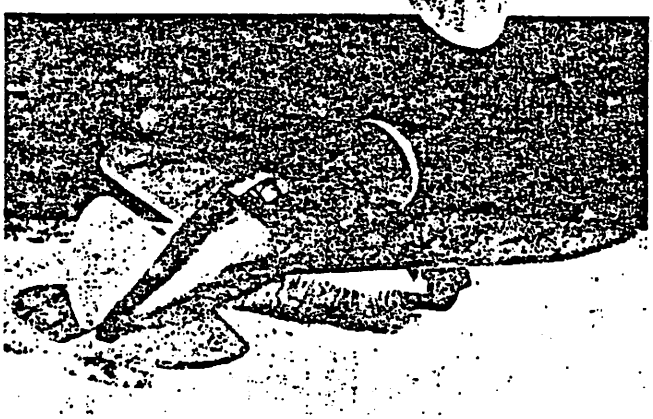
HAVING seen actual service on several war fronts, including the Spanish civil war, the doughty little Russian Mosca I-16 fighter is indeed a veteran. Reports have largely been favorable as to its performance, even though the blunt, stubby lines and the small dimensions contrast sharply with the sleek proportions of other pursuit craft. A big 700 h. p. Cyclone engine of American design and Russian manufacture is responsible for the huge cowl. Top speed is reported to be around 300 m. p. h., and the landing speed of 95 m. p. h. is not surprising for a plane of such limited wing area and span.

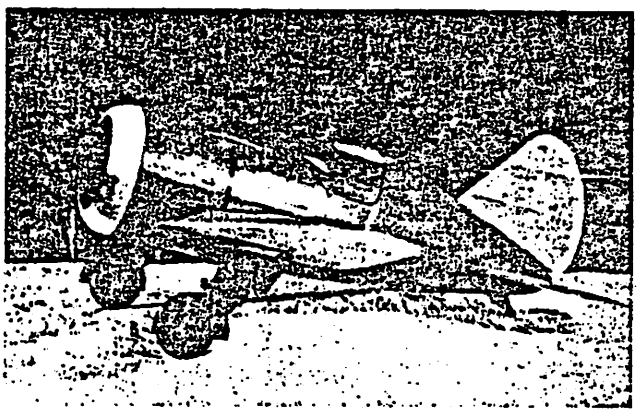
From the standpoint of flying ability as a scale model, the Mosca is not the very best selection, but for realism it is all that could be desired. The model is sturdily built, the fuselage being entirely sheet-balsa-covered. The large-size tail surfaces of the original permit the use of true scale proportions, the only deviations being increased dihedral and propeller dimensions.

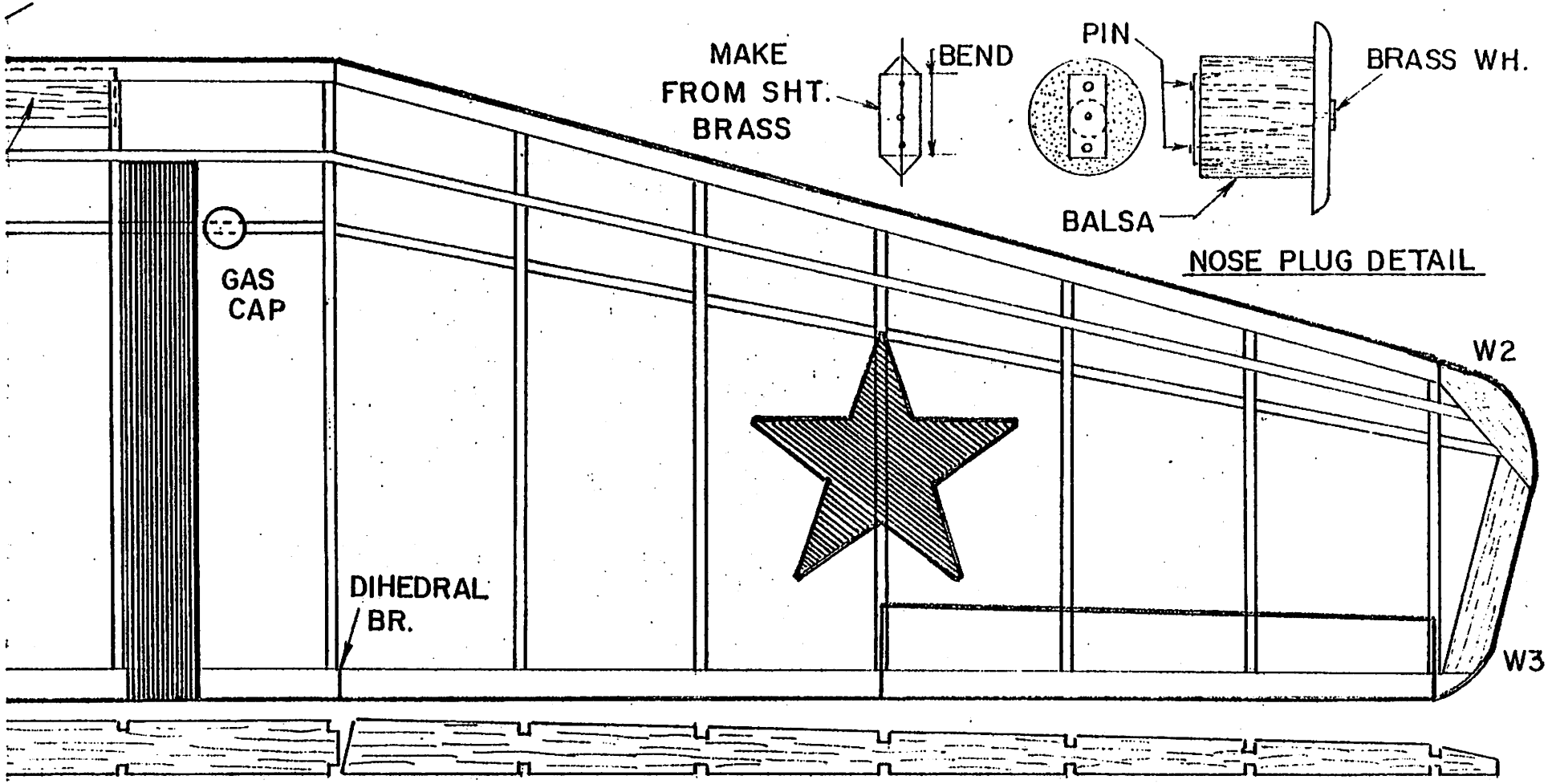
The fuselage formers are cut from laminated balsa consisting of soft 1/16" sheet cemented to soft 1/32" sheet with the grain crossed. Spars are joined by cementing the 1/32" sheet reinforcement in place, and the complete spar is then cemented to the rear of Former B. Formers are assembled by means of the four stringers, and the soft 1/32" sheet covering is applied in sections. Cowl front is formed of layers of soft 1/8" sheet, the rear fuselage tip is a hollowed balsa block, and the cockpit top is also shaped of balsa. Dope fuselage and sandpaper lightly.

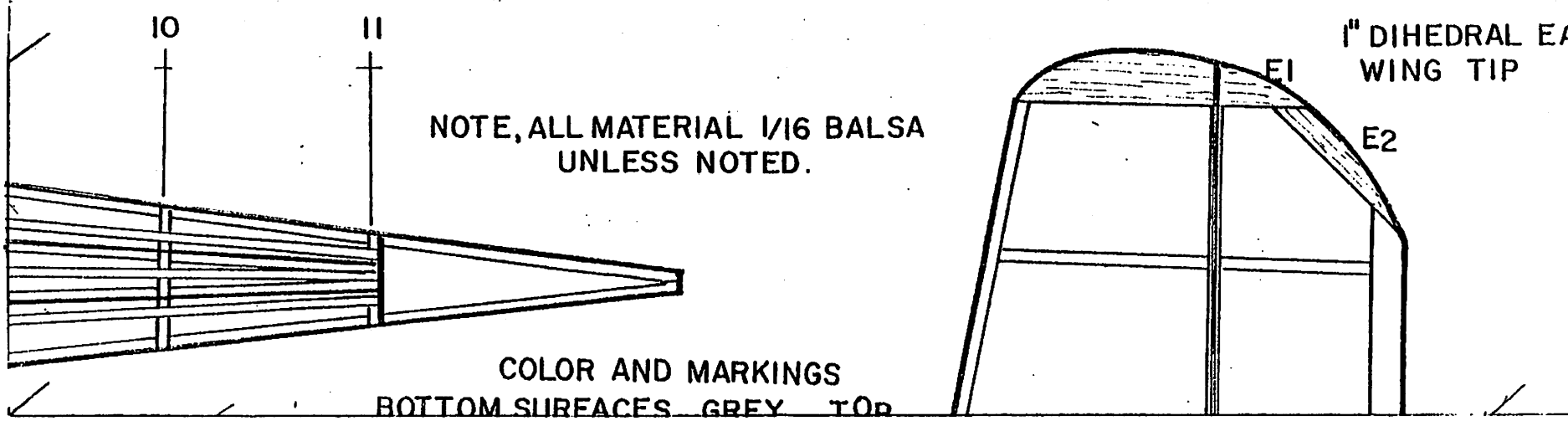
Assemble the ribs to the spars, attach the leading and trailing edges, fitting their inner edges to the fuselage sides. Attach the tips and the lower, triangular fairing pieces. Bend the landing-gear struts of .040 steel wire, and after adding the 1/8"-sq. braces to the wing frame, bind and cement the landing gear to the wing. Attach the hardwood wheels. Cover the upper leading edge to the spar with soft 1/32" sheet and sand the entire wing frames lightly. Make paper patterns of the wing fairings, trimming them until they fit perfectly. Cut the soft-balsa outlines and pin and cement them in place.

Tail surfaces are of conventional construction. They should be finished and covered with tissue before being carefully cemented to the fuselage. Wing and tail surfaces are covered with tissue, water doped, and are later given two coats of thin dope.



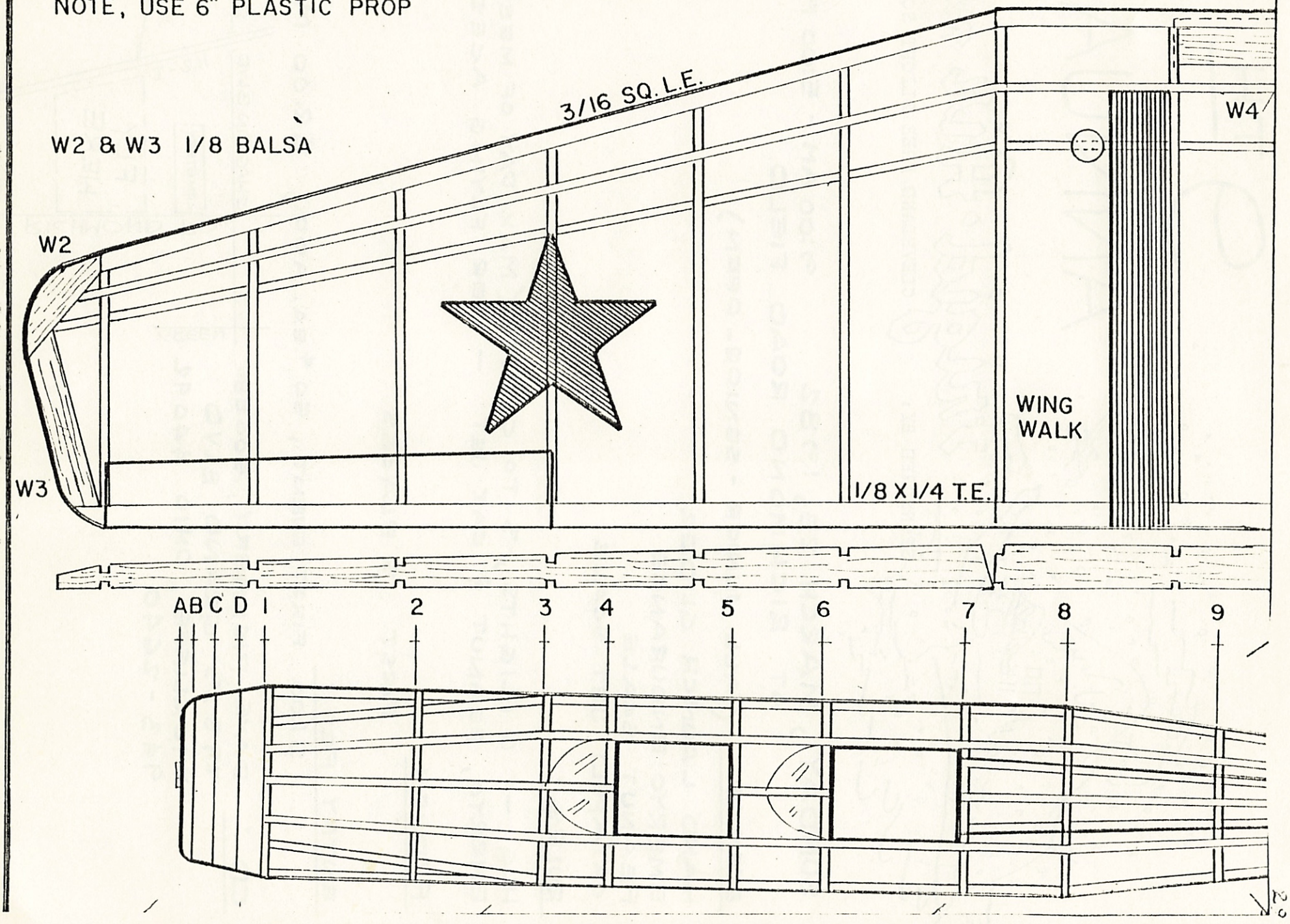


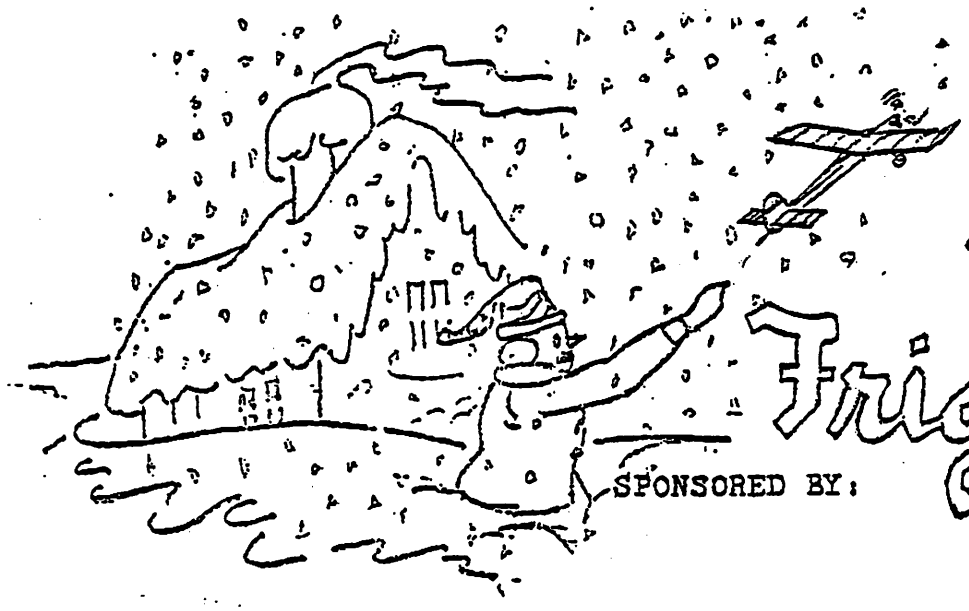

MAKE FROM SHT. BRASS
BEND
PIN
BRASS WH.
BALSA
NOSE PLUG DETAIL
GAS CAP
DIHEDRAL BR.
W2
W3


10
11
NOTE, ALL MATERIAL 1/16 BALSA UNLESS NOTED.
1" DIHEDRAL EA. WING TIP
E1
E2
COLOR AND MARKINGS
BOTTOM SURFACES GREY TOP

5114

NOTE, USE 6" PLASTIC PROP





9TH ANNUAL Frigid-Air meet

SPONSORED BY: CLEVELAND FREE FLIGHT SOCIETY

SUNDAY, MARCH 28, 1982 9:00 AM - 5:00 PM
AT RICHMOND ROAD FIELD

EVENTS: (ALL JUNIOR - SENIOR - OPEN)

HAND LAUNCH GLIDER
EMBRYO ENDURANCE
PEANUT SCALE
CATAPULT JET SCALE

RULES:

HLG - 6 FLIGHTS, 3 TO COUNT (MAX. DAY OF MEET).
EMBRYO, PEANUT & CAT JET - PER FLYING ACES.

PRIZES:

FIRST 3 PLACES

ENTRY FEE:

$1.00 FIRST EVENT, 50¢ EA. ADD., $2.00 MAX.

CD: DAVE PISHNERY, SOO88
29323 GRAND BLVD
WICKLIFFE, OHIO 44092
943-2640

