

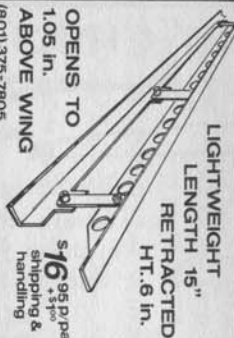
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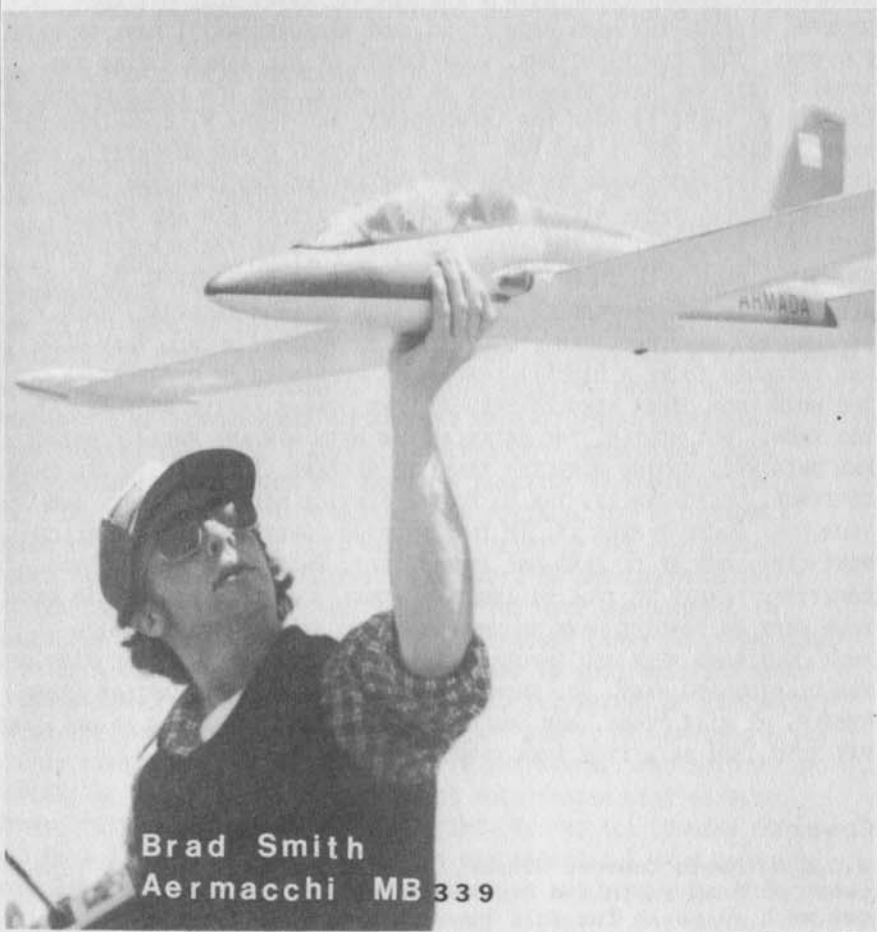
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Vol. 3 No. 12 DECEMBER 1986



Brad Smith  
Aermacchi MB339

JOHN DVORAK

## SEASONS GREETINGS

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HI START

THIS ISSUE MARKS THE END OF THREE YEARS OF PUBLICATION - 36 ISSUES OF RCSD - WITHOUT A MISSED DEADLINE, AND REMARKABLY FREE OF STRIFE. ONLY TWO OF OUR READERS, SINCE THE BEGINNING, HAVE EVER ASKED FOR THEIR MONEY BACK: ONE BECAUSE HE COULDN'T READ THE FINE PRINT, AND THE OTHER BECAUSE HE WAS BASICALLY NOT A GLIDER PERSON...PREFERING POWERED AIRCRAFT. THE MONEY WAS GLADLY REFUNDED TO BOTH WITH NO QUARREL. AT THE MOMENT, RCSD HAS OVER 700 SUBSCRIBERS, BUT WE HAVE HAD A TOTAL OF ABOUT 1000 IF YOU CONSIDER EVERYONE WHO HAS EVER SUBSCRIBED. SOME HAVE BEEN WITH US SINCE THE BEGINNING, WHILE OTHERS HAVE DROPPED OUT AFTER A YEAR...SOMETIMES COMING BACK AFTER THE 2ND YEAR, OR EVEN THE 3RD! OUR RENEWAL RATE IS THE HIGHEST OF ANY MAGAZINE THAT I KNOW - RUNNING ABOUT 90%, WHICH IS PHENOMENAL. MOST PUBLISHERS ARE VERY PLEASED WITH A 70% RENEWAL RATE. RCSD HAS BEEN SUCCESSFUL BECAUSE YOU HAVE MADE IT SO, NOT BECAUSE WHAT I HAVE OR HAVE NOT DONE. YOUR CONTRIBUTIONS, YOUR INPUTS OF ALL KINDS - EVEN THE (FEW) CRITICISMS HAVE BEEN RIGHT ON THE MARK, AND I'M PROUD OF YOU. CERTAINLY, THERE IS ROOM FOR IMPROVEMENT, AND THERE WILL BE IMPROVEMENT, BECAUSE RCSD IS GROWING. IT IS A LIVING, CHANGING ENTITY, AND IT WILL LIVE AND CHANGE AS EVEN YOU ARE LIVING AND CHANGING. IN FUTURE ISSUES, THERE WILL BE AN EFFORT TO PRESENT NEW AND PERHAPS DIFFERENT SUBJECTS, AS THE NEEDS AND INTERESTS OF THE READERS KEEP CHANGING. RCSD WILL CHANGE TO MEET THEM, TO BE RESPONSIVE. MOST OF ALL, RCSD IS FUN TO PRODUCE. I NEVER SEEM TO LACK MATERIAL, MAINLY BECAUSE YOU HAVE PROVIDED IT. ORIGINALLY, YOU MAY RECALL THAT RCSD WAS INTENDED TO BE A DIGEST; THAT IS, A REPRINTER OR REPUBLISHER OF THE WORK FROM OTHER NEWSLETTERS. WE HAVE DONE A LITTLE OF THAT, AS YOU KNOW...BUT MOSTLY, THE MATERIAL HAS BEEN NEW AND FRESH - UNIQUE AND ORIGINAL, COMING DIRECTLY FROM THE READERS. I'D LIKE TO SEE THAT CONTINUE. OCCASIONALLY, THE US POSTAL SERVICE MAKES AN ERROR, AND YOUR COPY DOESN'T MAKE IT. IF THAT HAPPENS, JUST ASK FOR A REPLACEMENT COPY, AND WE'LL SEND ONE IMMEDIATELY. ON THE OTHER HAND, YOU SOMETIMES FORGET TO TELL US ABOUT AN ADDRESS CHANGE...SHAME! TO GET YOUR COPY ON TIME WE HAVE TO KNOW WHERE TO SEND IT, RIGHT? WITH YOUR CONTINUED HELP AND INPUTS, RCSD WILL CONTINUE TO BE THE KIND OF PUBLICATION YOU WANT. SO, FROM ALL OF US HERE AT HEADQUARTERS (READ MYSELF, MY WIFE PEGGY, AND BOB RONDEAU) SEASONS GREETINGS TO ALL, AND MAY YOUR 1987 BE BETTER THAN EVER. HAPPY SOARING.

**Cover:**

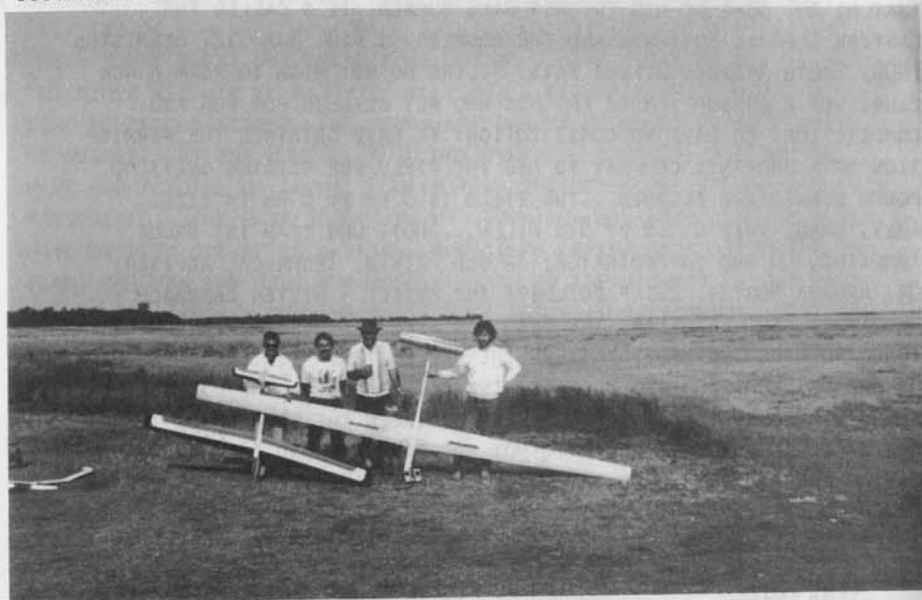
**R.C.S.D. Photo Contest** Winner, John Dvorak sent in this fine photo of Brad Smith and his Aermacchi MB339 sloper. We didn't get much response for this contest- too many rules?? If you missed the deadline or your waiting to finish that roll of film , not to worry...send em along and if their good photos we will put them on the cover! we may even put your name on it. As for glamour and prizes...Hay...You had your chance.

LETTERS FROM READERS: .....SOUTH AFRICA

DIETER EBERBACH WRITES FROM SOUTH AFRICA ABOUT A NEW CONTEST CLUB THAT HE AND SOME OF HIS FRIENDS HAVE FORMED. IT'S CALLED THE EASTERN THERMAL BUSTERS, AND THE ADDRESS IS P.O. Box 612, GERMISTON 1400, SOUTH AFRICA. DIETER SAYS: "...WE DO NOT WISH TO FORM A NEW CLUB, BUT A CONSORTIUM OF FRIENDS WHO FLY GLIDERS FOR FUN AND COMPETITION. WE HAVE NO CONSTITUTION! WE HAVE OBTAINED THE PERMISSION OF A PROPERTY COMPANY TO USE THE FIELD FOR GLIDING ONLY; NO POWER PLANES ARE ALLOWED...THE FIELD IS 3 KM BY 6 KM IN SIZE. (HEY, GANG, THAT'S 1.8 BY 3.6 MILES...JHG). OUR TEAM IS: BRUCE TOMPKINS, CD AND CO-ORDINATOR; ARNOLD PAIKIN, TECHNICAL ADVISER; DR. ANDREA NORTJE, CHIEF BUILDER; AND MYSELF - DIETER EBERBACH - SECRETARY AND REGISTRAR. THE TEAM HAS BEEN TAKING PART IN COMPETITIONS AND USES THE NAME "EASTERN THERMAL BUSTERS" FOR F3B AND F3H. AS CAN BE SEEN FROM THE POSTALS, THE NATIONALS, OR THE F3H THE TEAM IS A FORCE TO BE RECKONED WITH. BETWEEN THE FOUR OF US THERE ARE 27 GLIDERS AND 16 RADIOS...NOT TOO BAD. DOC AND ARNOLD ARE GIVING THE F3B BOYS A TOUGH TIME - ARNOLD BEING THE NEW LEADER. BRUCE AND MYSELF ARE INTO THE F3H, BRUCE HAVING WON A COMPETITION THIS LAST WEEKEND (AUGUST 9TH AND 10TH) FLYING A 34 KM TRIANGLE. WE WON MOSTLY BY LUCK AS HE FLEW 9.1 KMS WHEN THE WIND STARTED BLOWING AT 30 KNOTS, LEAVING US ALL ON THE GROUND - UNLESS YOU COULD FLY BACKWARDS! I TRIED MY GENTRON, BUT HAD TO PUT THE STICK TO FULL DOWN TO GET BACK TO THE SPOT. ARNOLD FLEW THE MONSTER LAST WEEKEND FOR THE SFVSF POSTALS IN VERY GOOD WEATHER. WE HAVE HAD A WILD WINTER HERE (REMEMBER IT'S OUR SUMMER ... JHG). WELL, HE BROKE THE S.A. RECKORD! I'VE PLAYED MORE THE SUPPORT ROLE AS VEHICLE DRIVER, WINCH CONSTRUCTOR (YES, I BUILT 3 WINCHES OF 7 HORSEPOWER EACH, WITH DIFFERENT SIZE DRUMS FOR WHATEVER FUNCTION WE WANTED; I.E., F3B, F3H, ETC.). I DID VERY WELL AT THE POSTALS, BUT WITH SUMMER COMING UP, I REALLY WANT TO MAKE AN ATTEMPT AT THE FAI DISTANCE RECORD, ALTHOUGH IT ISN'T GOING TO BE EASY. WE ARE CONSTRUCTING A 6-METER (SPAN) GLIDER FOR THAT TASK. BY THE WAY, OUR AIRFOIL IS CALLED THE "TOM SELICK - OR 'MAGNUM'" ALTHOUGH LARRY JOLLY RECKONED IT TO BE A QUABECK. QUITE CLOSE! IN ANSWER TO YOUR QUESTION ABOUT FLYING DISTANCE HERE, AILERON/RUDDER MIXED FLY BETTER UP HERE WITH A WIDE TIP CHORD. WINGLETS HELP, BUT FLAPS DON'T. MY FLAMINGO FLIES WELL IN STRONG WIND WITH MINI SERVOS IN THE WINGS...AND SO DOES MY GOBBLER. WE FOUND THAT MINI-SERVOS ARE MUCH FASTER WITH NO SLOP. ANYWAY, THAT ABOUT DOES IT FOR THIS TIME. WE ARE ALL LOOKING FORWARD TO A GOOD FLYING SEASON. NOTE MY NEW ADDRESS: I HAVE FINALLY MOVED INTO MY NEW HOUSE AFTER THREE YEARS OF BUILDING - BUT IT'S STILL NOT COMPLETE! ALL THE BEST (SIGNED) DIETER. P.S.: EXCUSE THE HANDWRITING - HOPE YOU CAN READ ALL THIS - MY 'TYPIST' IS IN GERMANY AT THE MOMENT BEING A MOTHER!"

IT'S GREAT TO HEAR FROM YOU AGAIN, DIETER, AND WE'LL ALL BE LOOKING FORWARD TO HEARING ABOUT YOUR NEW DISTANCE RECORD ATTEMPTS

WITH THAT 6-METER MACHINE. IN CASE ANYONE WOULD LIKE TO CORRESPOND WITH DIETER, HIS ADDRESS IS 49 HIGHVELD ROAD, KEMPTON PARK 1620, SOUTH AFRICA.



SOURCES:

EARLIER THIS YEAR, JIM PORTER (LSF LEVEL V) FROM HUDSON, IOWA, SENT ME A PAIR OF PLUGS AND RECEPTACLES FOR BATTERY CHARGING AND ON-OFF SWITCHING OF YOUR FLIGHT PACK. THIS WAS IN DIRECT RESPONSE TO THE ARTICLE BY TYSON SAWYER IN THE DECEMBER 1985 ISSUE OF RCSD. THE ADVANTAGE OF THE PLUGS AND SOCKETS SENT BY JIM IS THAT THERE IS A MUCH REDUCED CHANCE OF THEM SHORTING OUT, AS HE SAID IN HIS NOTE TO ME: "THESE ARE AVAILABLE FROM RADIO SHACK AS PART #s 274-1565 (JACK) AND 274-1567 (PLUG). WITH THIS STYLE OF PLUG ACCIDENTAL SHORTS ARE NEARLY IMPOSSIBLE, AND IF PROPERLY HOOKED UP, IN-FLIGHT FAILURES ARE ELIMINATED. DO NOT USE THE OPTION OF BREAKING THE CIRCUIT FOR CHARGING, AS THE CONTACTS CAN BE FOULED WITH DIRT AND FAIL TO CLOSE, BETTER?" THANKS, JIM, FOR GIVING US THIS GOOD INFORMATION. I'D LIKE TO COMMENT THAT WHILE IT IS POSSIBLE, OF COURSE, TO HAVE THE CONTACTS FOULED BY DIRT, THE CONVENIENCE OF USING THIS SYSTEM FOR CHARGING OUTWEIGHS THE DISADVANTAGE YOU POINT OUT. I THINK IT WOULD BE EASY TO DETERMINE IF THE CONTACTS WERE DIRTY OR NOT, AND CLEAN THEM APPROPRIATELY BEFORE CHARGING THE ON-BOARD FLIGHT PACK...JHG.

NEW ADDRESS: .....DODGSON DESIGNS  
BY NOW, ALMOST EVERYONE HAS HEARD THAT BOB DODGSON HAS MOVED TO 21230 DAMSON ROAD, BOTHELL, WA 98021. IN CASE YOU HAVEN'T HEARD, HERE'S THE INFO. I KNOW BOB WILL BE GLAD TO HEAR FROM YOU AND TO GET YOUR ORDERS FOR A NEW SAILPLANE KIT.

MORE LETTERS: .....CONTEST ORGANISATION  
JEFF TROY, WHO IS NOW PUBLIC RELATIONS ASSISTANT AT AMA HEADQUARTERS WORKING WITH GEOFF STYLES, HAS WRITTEN TO TELL ME ABOUT HIS PARTICIPATION IN A PANEL DISCUSSION WITH BOB SEALY AND CAL POSTHUMA AT THE M.A.R.C.S. SYMPOSIUM ON NOVEMBER 1ST AND 2ND. HE SAYS: "CARL MOHS HAS KINDLY ASKED ME TO CHAIR A PANEL DISCUSSION ON CONTEST ORGANISATION. IN READING MY PRESENTATION OVER, IT COMES TO ME THAT OUR READERS MIGHT LIKE TO HAVE AN OUTLINE LIKE THIS ONE (A COPY WAS SENT TO ME...JHG). IF YOU THINK SO AS WELL, THEN PLEASE HAVE AT IT! IF NOT, THEN YOU CAN SPREAD IT OUT ON THE LAWN, HAVE THE FAMILY STAND AROUND, AND START A RELIGION!" (SIGNED) JEFF.

YEAH, JEFF, I'M GONNA HAVE AT IT, AS YOU SUGGEST. IT'S A REALLY HELPFUL THREE PAGES OF EXCELLENT INFORMATION IN OUTLINE FORM, BROKEN DOWN INTO THE FOLLOWING HEADINGS: INITIAL PLAN OF ACTION; PRE-CONTEST PAPERWORK; ORGANIZE YOUR CREW; ARRANGE FOR EQUIPMENT; CONTEST TIME; THE AWARDS CEREMONY; POST-CONTEST PAPERWORK; AND LETTER OF THANKS TO CONTEST WORKERS.

IF ANY OF THE RCSD READERS WOULD LIKE A COPY OF THIS PAPER, PLEASE CONTACT ME OR JEFF TROY. YOU CAN REACH JEFF AT AMA HEADQUARTERS, 1810 SAMUEL MORSE DRIVE, RESTON, VA 22090...OR CALL HIM AT (703) 435-0750. IF YOU PREFER TO SEND ME A DOLLAR FOR COPYING COSTS AND POSTAGE, I WILL SEND YOU A COPY OF JEFF'S PAPER.

CORRECTION TO "LETTERS AND SOURCES" - NOVEMBER 1986 RCSD:

LAST MONTH, I MADE A TERRIBLE MISTAKE AND CALLED MY GOOD FRIEND OZZIE O'BRIEN OF METAIRIE, LOUISIANA, "OZZIE OLSEN". HEY, OZ: FORGIVE ME, WILLYA? TROUBLE IS, I KNEW AN OZZIE OLSEN...AND THEN THERE WAS OZZIE NELSON...SO MAYBE I CAN GET AWAY WITH THIS MISTAKE BY WEASELING OUT OF IT...NO? AW, SHUCKS, OZ; I OWE YA ONE. READERS, IT WAS OZZIE O'BRIEN ALL ALONG WHO SENT IN THAT GOOD INFO.  
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AILERON VERSION OF THE PTERON, A SAILPLANE FROM ALOHA, OREGON.

ERIC JACKSON WHO TOLD US ABOUT THE SUNRISE LAST ISSUE, SENT IN SOME PHOTOS OF HIS OWN DESIGN - THE PTERON - WHICH LOOKS TO ME LIKE A REAL CLEAN MACHINE. HE SAYS: "ENCLOSED PIC IS THE ONE OF MY AILERON PTERON I'VE BEEN THREATENING TO SEND YOU. PAINTED FUSE, MONOKOTE ON THE WINGS AND FEATHERS (OF COURSE). A LITTLE HEAVY, 52 OUNCES, VERDICT ISN'T IN YET, BUT IT IS FAST AND SMOOTH. FORGIVING STALL AND -SURPRISE - IT WILL FLOAT...NO DOUBT DUE TO THE E214. GLIDE IS FAST, FLAT AND FOREVER (THE THREE F'S OF SOARING). I'LL PROBABLY KEEP IT FOR SLOPING AND AS A TRIBUTE TO STUPIDITY WITH MONOKOTE. PLANE KINDA GETS NOTICED... CAN'T FIGURE IT OUT. MUST BE THE LONG BOOM, HUH? WILL LET YOU KNOW HOW IT PROGRESSES ONCE I GET IT SORTED OUT. OFF-SEASON PROJECT.

OUR CLUB HOSTED THE FIRST ANNUAL INW CROSS-COUNTRY RACE IN SEPTEMBER. GOOD SUCCESS IN SPITE OF SMALL TURNOUT. SIX TEAMS FLEW -- LOTS OF FUN. HAD A 12.1 MILE COURSE. SATURDAY WAS REAL WINDY AND NOBODY GOT REAL FAR...UNDER 3 MILES. SUNDAY WAS GREAT SOARING WEATHER. LOTS OF GREAT FLIGHTS. I HAD THE LUCK OF GOING THE FARTHEST: 10.6 MILES...MORE

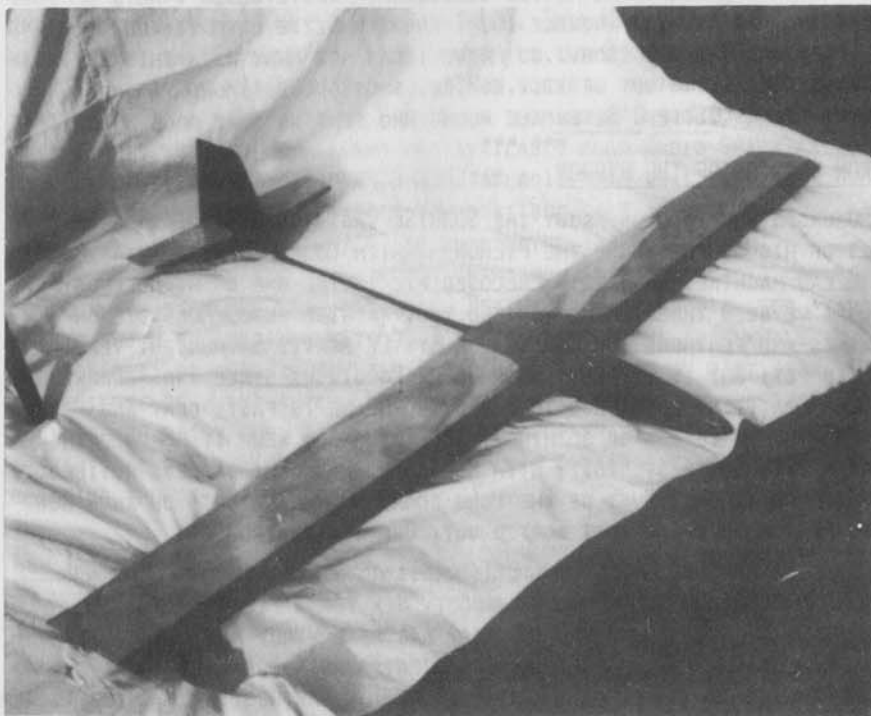


PTERON CONTINUED.....JACKSON

SO I GOT TO TAKE HOME THE BEST FLIGHT TROPHY...ONE OF THE VERY FEW I'VE GOT THIS YEAR. OUR TEAM ALSO WON FIRST PLACE: DAVE JOHNSON, MYSELF AND DON DEWAAR. DON HOLDS THE OREGON X-C RECORD OF 230+ MILES IN FULL-SCALE SAILPLANES. WE FLEW DAVE'S AND MY WINDSONGS...A GOOD DISTANCE PLANE, BUT A LITTLE SMALL FOR X-C WORK, SO...THAT BRINGS ME TO MY NEXT BIT OF NEWS: MY PROJECT FOR NEXT YEAR'S X-C MEET; IT WILL BE A 1/3 SCALE HP-18. HERE'S SOME NUMBERS TO WET YOUR WHISTLE: SPAN - 196-3/4"; FUSELAGE LENGTH - 92-3/4" WITH 8" WIDTH AND 9" DEPTH. HAS A VEE TAIL AND AN ASPECT RATIO OF 22.5:1. WINGS WILL Balsa OVER FOAM, THEN GLASSED, FUSE WILL BE HOMEBREW GLASS. PRELIMINARY DESIGN WORK IS DONE, AND I'M NOW GATHERING PARTS, MATERIAL AND COURAGE. OBVIOUSLY I'LL KEEP YOU POSTED. STILL ENJOYING RCSD; BEST SOARING INFO ANYWHERE. LOOK FORWARD TO IT EVERY MONTH. BYE FOR NOW AND GOOD LIFT. (SIGNED) ERIC."

(GOSH, ERIC, PEOPLE WILL THINK THAT'S A PAID ADVERTISEMENT, AND I'VE BEEN TRYING TO KEEP THAT QUIET! THANKS FOR THE NICE 'PLUG' FOR RCSD. WE'LL ALL BE INTERESTED TO SEE YOUR 1/3 SCALE HP-18. I HAVE SEEN A COUPLE OF EXAMPLES OF THE REAL THING, AND MUST SAY THEY ARE REALLY BEAUTIFUL SAILPLANES. THE MOST RECENT ONE I SAW WAS AT A FLY-IN AT ORANGE, MASSACHUSETTS...BUILT BY A FELLOW FROM VERMONT. WHAT A MASTERPIECE OF CONSTRUCTION! IT WAS FOR SALE, AND I WOULD HAVE REALLY LIKED TO HAVE HAD THE MONEY TO BUY IT. THE PRICE WAS REASONABLE, TOO. OH WELL, MAYBE NEXT TIME...JHG)

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MORE ERIC JACKSON.....DODGSON DESIGNS' PIVOT ET AL

"...CAN'T REMEMBER IF I SAID WE HAVE A PIVOT. TREMENDOUS FLIER! OURS IS HEAVY AT 23 OUNCES, BUT IT DOESN'T SEEM TO MATTER. I AM USUALLY ABLE TO DO 8+ MINUTES OFF THE WINCH...YES, WE WINCH IT! MOST FLIGHTS ARE OVER 10 MINUTES, BUT SPOT LANDINGS ARE A LITTLE TOUGH AS THE PLANE WANTS TO KEEP ON FLYING..."

WELL, ERIC, I'M SURE YOU'RE NOT THE FIRST TO FIND THAT HEAVIER IS BETTER. FOR ONE THING, THE HEAVIER IT IS, THE FASTER IT WILL GLIDE AT THE SAME L/D...WHICH MEANS THAT PENETRATION IS BETTER, A BIG ADVANTAGE IN WIND. NOT ONLY THAT, THE REYNOLDS NUMBER IS IMPROVED DUE TO THE FASTER SPEED, WHICH MEANS THAT THE DRAG CO-EFFICIENT IS LOWER AND THE GLIDE ANGLE IMPROVED. NOT BAD, EH? I THINK THAT RECENT DESIGNS SHOW THAT HEAVIER WING LOADINGS ARE OF BENEFIT. IN THE USA, TYPICAL THERMAL DESIGNS HAVE USED WING LOADINGS OF BETWEEN ABOUT 8 AND 10 OUNCES PER SQUARE FOOT, WHEREAS IN EUROPE, TYPICAL DESIGNS FOR SLOPE AND THERMAL HAVE USED SOMETHING BETWEEN 10 AND 16 OUNCES PER SQUARE FOOT WING LOADING. THERE IS AN ARGUMENT THAT SAYS HEAVIER WING LOADINGS DON'T STAY UP AS WELL IN LIGHT AIR, BUT THE OTHER SIDE OF THE ARGUMENT IS THAT GREATER PENETRATION INCREASES YOUR SEARCHING CAPABILITY, HENCE A BETTER CHANCE TO FIND THERMALS. I'D LIKE TO HEAR FROM SOME OF YOU OUT THERE ABOUT THE PRO'S AND CON'S OF HEAVIER WING LOADINGS, AND JUST HOW HEAVY IS HEAVY?

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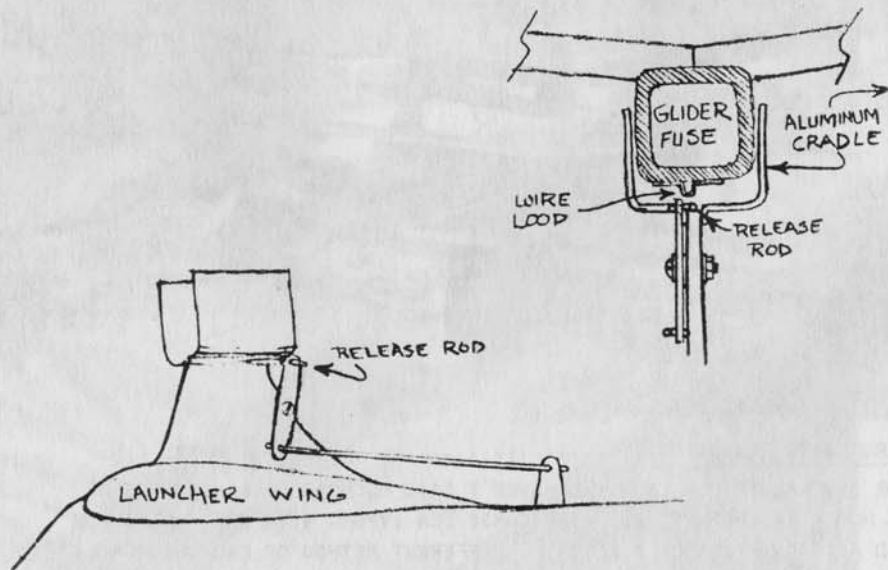


AEROTOWING REVISITED.....DON TYPOND

FOR SEVERAL ISSUES, NOW, WE HAVEN'T SAID MUCH ABOUT AEROTOWING OF RC MODEL SAILPLANES, BUT HERE COMES DON TYPOND WITH SOME GREAT PIX AND A DESCRIPTION OF A SLIGHTLY DIFFERENT METHOD OF LAUNCHING A SAILPLANE...NOT YOUR USUAL METHOD BY ANY MEANS, BUT NOT REALLY "NEW" EITHER, AS IT WAS DONE DURING WWII BY GERMANY, ALTHOUGH NOT WITH A SAILPLANE AS "PASSENGER". HERE'S DON:



"...THOUGHT YOU'D LIKE TO SEE THE GLIDER LAUNCHER BUILT BY DAVE JAGGIE, PRESIDENT OF OUR OLD TIME EAGLES CLUB. IT'S AN ORIGINAL DESIGN OF RATHER UNIQUE APPEARANCE, ABOUT TWO-METER SPAN, WITH AN OS 90 FOUR-STROKE SWINGING A GRAUPNER GLASS-FILLED NYLON THREE-BLADER. IT'S GOT RUDDER, ELEVATOR, FLAPS, THROTTLE, AND GLIDER RELEASE. IT GOES STRAIGHT UP WITH THAT 90 UP FRONT! THE GLIDER IS A SENSOAR, BUILT BY KEITH GROTE. HE FLIES IT WITH A COX TD, OR FROM AN AIRBORNE LAUNCH AS A GLIDER. THE GLIDER IS EQUIPPED WITH A TRANSVERSE WIRE 'LOOP' THAT PROTRUDES FROM BELOW THE BELLY THUSLY:



A SERVO-ACTUATED ROD ON THE LAUNCH PLANE ENGAGES THE LOOP. IT'S VERY SIMPLE AND WORKS VERY WELL. THE CRADLE IS A SIMPLE 'U' MADE OF ...MORE...

TYPOND (CONTINUED).....LAUNCHING DEVICE

ALUMINUM SHEET; THE AFT CRADLE IS MADE UP OF BRASS TUBING. WING SUPPORTS ARE BRASS ROD PLUGGED INTO SOCKETS ATOP THE LAUNCHER'S WINGS. SLIGHT 'UP' TRIM ON THE GLIDER ENSURES SOLID CONTACT WITH THE REAR CRADLE AND KEEPS THE GLIDER FIRMLY IN PLACE UNTIL RELEASE. THAT'S ALL THERE IS TO IT. ON THE LEFT SIDE OF THE GLIDER SUPPORT CRADLE THERE IS A BELLCRANK, ONE ARM OF WHICH IS ATTACHED TO THE SERVO PUSHROD, AND THE OTHER ARM ATTACHED TO THE RELEASE ROD. THE SERVO PUSHROD PROTRUDES THROUGH THE TOP OF THE LAUNCHER FUSELAGE JUST AFT OF THE WING, VIA ANOTHER BELLCRANK. ACTUALLY, IT'S NOT THE PUSHROD THAT PROTRUDES, IT'S THE ARM OF THE OTHER BELLCRANK THAT PROTRUDES. ANYWAY, YOU KNOW WHAT I MEAN, AND YOU CAN SEE IT IN THE PHOTOS. THE CENTRAL FIN ON THE LAUNCH PLANE RESTRICTS THE LENGTH OF THE GLIDER THAT CAN BE CARRIED, BUT WILL ACCEPT MOST TWO-METER DESIGNS. RUDDER CONTROL IS POSITIVE, WITH NO APPARENT PROBLEMS FROM TURBULANCE OFF THE GLIDER. THE LAUNCHER WAS ORIGINALLY BUILT AS A SPORT FLIER, AND AS A TEST BED FOR STOL IDEAS. THE GLIDER-LAUNCHING ROLE WAS AN AFTERTHOUGHT, BUT WORKS VERY WELL. (SIGNED) DON."

DON, THAT'S A REALLY NEAT IDEA. OUR CONGRATULATIONS TO BOTH DAVE AND KEITH FOR AN INGENIOUS SOLUTION TO THE LAUNCHING PROBLEM. I'D LOVE TO SEE SOME PIX OF THAT COMBO IN THE AIR -- BEFORE, DURING, AND AFTER LAUNCH. COULD DO, MAYBE? OUR READERS WILL LOVE TO SEE 'EM, TOO, JHG

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BRUCE ABELL WRITES FROM AUSTRALIA ..... ABOUT TAIL MOMENTS

THIS REFERS TO A SERIES OF LETTERS AND COMMENTS BY AND FROM VARIOUS READERS OVER THE PAST YEAR REGARDING THE SUBJECT OF FLIGHT STABILITY, TRIMMING, C.G. LOCATION, AND CENTER OF PRESSURE LOCATION. AMONG THE CONTRIBUTORS HAVE BEEN MAX CHERNOFF, DAVE FRASER, ERNIE CURRINGTON, AND OTHERS (SEE INDEX IN NOVEMBER ISSUE). NOW, BRUCE ABELL, A FREQUENT CORRESPONDENT FROM CESSNOCK, NEW SOUTH WALES, ADDS HIS EXPERIENCE AND INPUT ON THE SUBJECT. HERE'S BRUCE:

"I AGREE WHOLEHEARTEDLY WITH HIM (MAX CHERNOFF) WHEN HE SAYS MOST OF OUR CURRENT CROP OF R/C GLIDERS HAVE TOO SHORT A TAIL MOMENT! ANYONE WHO DOESN'T BELIEVE THIS SHOULD BALLAST THEIR SHORT-COUPLED BIRD UP TO AROUND 15 OZ. PER SQ. FT. AND DO AN F3B-TYPE SPEED RUN TO FIND JUST HOW UNSTABLE IT IS! I RAN INTO THIS PROBLEM HEAD-ON A FEW YEARS AGO IN THE EARLY STAGES OF DEVELOPING MY 2-METER 'WINDSONG' DESIGN (YEP, ANOTHER WINDSONG, FOLKS). IT PROVED TO BE SO 'SQUIRRELLY' AT SPEED THAT IT WAS ALMOST UNFLYABLE! I REDESIGNED THE FUSE, MAKING IT 2 1/2" LONGER AND COMPLETELY CURED THE PROBLEM. HOWEVER, AS PRINTED IN AN EARLIER ISSUE OF RCSD, A LESSER AMOUNT OF LONGITUDINAL STABILITY CAN BE AN ASSET. FOR EXAMPLE, THE NEARER THE MODEL IS TO A CONDITION OF NEUTRAL STABILITY, THE MORE EASILY IT CAN BE UPSET FROM ITS FLIGHT PATH BY CHANGES IN THE AIR CONDITIONS (THERMALS, ETC.). THUS, THE CLOSER OUR 'STABLE' MODEL IS TO NEUTRAL STABILITY, THE MORE VISUAL SIGNALS IT WILL TRANSMIT FOR ITS PILOT'S INTERPRETATION...AND THIS

APPLIES TO BOTH LATERAL AND LONGITUDINAL STABILITY. WHAT HAS TO BE CAREFULLY CONSIDERED, THOUGH, IS WHETHER IT IS HIGH-OR LOW-SPEED STABILITY WE REQUIRE FOR OUR BIRD...AND I'M FIRMLY OF THE OPINION THAT MOST 'GLIDER-GUIDERS' FLY THEIR BIRDS FAR TOO SLOWLY, AND AT FAR TOO LOW A WING LOADING. MY PERSONAL OBSERVATIONS OVER MANY YEARS HAVE LED ME TO THE CONCLUSION THAT A WING LOADING OF 9 TO 10 OUNCES PER SQUARE FOOT, COUPLED WITH FLYING SPEEDS OF AROUND 20 TO 25 M.P.H., ARE CLOSE TO THE OPTIMUM FOR ALL BUT EXTREMELY LIGHT (BELOW 5 M.P.H.) BREEZES AND POOR LIFT, OR EXTREMELY HEAVY (ABOVE 25 M.P.H. AND SEVERE TURBULENCE) CONDITIONS. LET'S FACE IT: OVER 80% OF OUR CONTESTS ARE FLOWN IN CONDITIONS BETWEEN THESE TWO EXTREMES, AND IT IS POINTLESS TO HAVE TWO SEPARATE BIRDS TO HANDLE LIGHT-TO-MEDIUM AND MEDIUM-TO-HEAVY CONDITIONS, AS THE PILOT CAN ONLY BE HIGHLY COMPETITIVE BY FLYING JUST ONE MODEL UNDER ALL CONDITIONS, THEREBY BEING ABLE TO EXTRACT MAXIMUM PERFORMANCE FROM BOTH HIMSELF AND HIS MODEL DUE TO COMPLETE FAMILIARITY WITH HIS MODEL. THUS, THE OPTIMUM MODEL FOR THERMAL CONTESTS WOULD SEEM TO BE RUDDER/ELEVATOR/SPOILER CONTROL; FAIRLY SHALLOW DIHEDRAL (FOR LATERAL SENSITIVITY); MODERATE TAIL MOMENT (FOR LONGITUDINAL SENSITIVITY); AND A WING LOADING OF AROUND 9 - 10 OZ. PER SQ. FT. I HAVE FOUND THAT A GOOD RUL OF THUMB FOR THE TAIL MOMENT OF A THERMAL GLIDER IS WING ROOT CHORD X 2. (NOTE: TAIL MOMENT ARM IS GENERALLY CONSIDERED TO BE FROM THE QUARTER-CHORD LOCATION ON THE WING TO THE QUARTER-CHORD LOCATION ON THE HORIZONTAL TAIL...JHG). THIS IS MEASURED FROM THE TRAILING EDGE OF THE WING TO THE LEADING EDGE OF THE TAILPLANE. (HERE, WE NOTE A SLIGHT DIFFERENCE OF INTERPRETATION, BUT THAT CAN BE EXPECTED. SOME DESIGNERS CONSIDER THE TAIL MOMENT ARM TO EXTEND FROM THE C.G. TO THE LEADING EDGE OF THE TAILPLANE...JHG). BUT, AS YOU SO CORRECTLY POINT OUT, A CROSS-COUNTRY BIRD IS AN ENTIRELY DIFFERENT KETTLE OF FISH (UNLESS IT'S AN ALBATROSS, BRUCE, IF YOU MUST MIX METAPHORS...HHHAAAwwwwww). FOR THE CROSS-COUNTRY TASK STABILITY IS OF GREATER IMPORTANCE, AND THE ABILITY TO FLY 'HANDS OFF' FOR PERIODS OF TIME WHILE THE SAILPLANE IS OUT OF SIGHT OF THE PILOT (DUE TO TREES AND OTHER OBSTRUCTIONS, ETC.) IS WORTHWHILE. IT ALLOWS THE BIRD TO BE 'PARKED' JUST BY SETTING THE TRIMS. THE OTHER SIDE OF THE COIN IS THAT OUR LONG TAIL MOMENT BIRD IS MUCH SLOWER IN RECOVERING FROM A DIVE, ONCE THE DIVE IS INSTITUTED. COMPROMISE, COMPROMISE -- ALWAYS BLOODY COMPROMISE, EH WAL? (NOTE: HERE, BRUCE CALLS ME 'WAL', AFTER WALLACE FOOTROT OF THE CARTOON FOOTROT FLATS, POPULAR IN AUSTRALIA AND NEW ZEALAND)."

OKAY, BRUCE, NOW WE SHALL HEAR IT FOR THE SHORTER TAIL MOMENT ARMS, AS EXPOUNDED BY FERDINANDO GALE FROM ITALY. HE IS WORKING UP AN ARTICLE FOR US ABOUT THE CROCCE METHOD OF CALCULATING OPTIMUM TAIL MOMENTS FOR ALL KINDS OF AIRCRAFT, AND HAS PROMISED TO SEND IT FAIRLY SOON...JHG.

#### QUESTIONS & (HOPEFULLY) ANSWERS:

SOME TIME AGO, I RECEIVED SEVERAL REQUESTS FOR A Q & A COLUMN IN RCSD. THE FIRST PERSON TO REALLY RESPOND TO THIS REQUEST WAS (WATCH IT, JIM) OZZIE O'BRIEN. (WHEW, GOT IT RIGHT THIS TIME). OZ ASKS:

"SOME WORK THAT I DID THIS PAST WEEKEND RAISED A PROBLEM FOR ME THAT SOMEONE MAY HAVE SOLVED. I COVERED AN OLD TIME QUAKER WING WITH SOME DACRON POLYESTER BOUGHT FROM A FABRIC STORE. HERE'S MY QUESTION: I APPLIED THE FABRIC USING BALSARITE (A COVERITE PRODUCT) PAINTED ONTO THE WING OUTLINE; NORMAL PROCEDURE - BOTTOM OF THE WING FIRST AND THEN THE TOP. THE PROBLEM CAME UP AFTER GETTING THE TOP COVERING ON AND ADHERED ALL AROUND. EVERYTHING LOOKED GREAT UP TO THIS POINT. IT WAS IMPOSSIBLE TO TRIM OFF THE EXCESS FABRIC IN A STRAIGHT LINE! THE METHOD I USED WAS TO HOLD THE OVERLAPPING FABRIC IN ONE HAND WHILE I CUT, CLOSE TO THE POINT WHERE THE BALSARITE ENDED ON THE OVERLAPPING FABRIC, WITH A NEW, SHARP BLADE. THE RESULT IS THAT THE OVERLAPPING PART OF THE TOP FABRIC HAS SOMEWHAT JAGGED EDGES AND DOESN'T GIVE A NEAT STRAIGHT EDGE THAT I'D LIKE TO HAVE. I THINK THE PROBLEM MAY COME FROM THE FACT THAT THE FABRIC STRETCHES WHEN IT'S PULLED, BUT THAT THE TENSION VARIES ALONG THE LENGTH OF THE SECTION BEING PULLED -- RESULTING IN THE RAZOR CUTTING AN UNEVEN LINE. I'VE GIVEN THOUGHT TO A COUPLE OF POSSIBLE SOLUTIONS; ONE BEING TO MAKE UP SOME KIND OF A CLAMP ABOUT 12 INCHES LONG WITH WHICH YOU COULD HOLD THE FABRIC...PROVIDING AN EVEN TENSION AND ALLOWING YOU TO CUT A STRAIGHT LINE. THE OTHER WOULD BE TO APPLY SOME MASKING TAPE, OR SOMETHING SIMILAR, ON WHICH THE FABRIC COULD BE LAYED, AND THEN CUT WITH A RAZOR. HOWEVER, THIS SCARES ME DUE TO THE POSSIBILITY OF CUTTING THROUGH THE TAPE (OH BOY, I'VE DONE THAT...JHG) AND THROUGH THE COVERING ON THE BOTTOM OF THE WING. MAYBE THE SOLUTION IS TO GO BACK TO MONOKOTE, THE THOUGHT OF WHICH IS AS APPEALING TO ME AS CHROME PLATING A GENUINE BUNTLINE SPECIAL. I HATE ALL THE 'PLASTIC' COVERINGS BECAUSE THEY ARE TOO PLASTIC LOOKING FOR OLD-TIME MODELS WHICH OUGHT TO HAVE THAT FABRIC TEXTURED COVERING LOOK. I SUPPOSE THIS IS BECAUSE I'M A THROWBACK TO THE 'GOLDEN AGE' OF AVIATION WHEN I WAS REARED. (SAME WITH ME, OZ...JHG). ANYWAY, IF YOU THINK MY QUESTION IS TYPICAL ENOUGH TO PRINT, I'D SURE LIKE TO HAVE ANY SOLUTIONS YOUR READERS MAY HAVE."

OKAY, READERS, HOW ABOUT IT? YOU MAY SEND THEM DIRECTLY TO OZ, OR IN CARE OF HIM AT RCSD...AND I'LL PRINT THEM. HIS ADDRESS IS P.O. BOX 7153, METAIRIE, LA 70010. THE REST OF HIS LETTER IS ALSO VERY PERTINENT, SO HE CONTINUES:

"THE GIANT SCALE GUYS HAVE BEEN USING POLYESTER COAT LINING FABRIC FOR SOME TIME. I WAS PROMPTED TO GIVE IT A TRY ON MY 84" SPAN QUAKER WHEN I WENT TO THE HOBBY SHOP FOR SILRON AND FOUND THAT A FIVE-YARD PACK WOULD COST OVER 20 BUCKS! THE POLYESTER I BOUGHT COST ONLY \$1.48 PER YARD, AND IS 56" WIDE. IT COMES IN SOME VERY NICE COLORS, TOO. I USED A BRIGHT RED THAT LOOKS EXACTLY LIKE SUPER



COVERITE, BUT WITHOUT THE ADHESIVE BACKING. THE STUFF COMES IN AT LEAST TWO WEIGHTS, AND I GOT THE LIGHTEST -- ABOUT 1.5 OZ. PER SQ. YARD. I'M GOING TO RECOVER MY MIRAGE WING WITH THIS MATERIAL, BUT NOT DOPED AS I DID ON THE QUAKER. INCIDENTALLY, THIS STUFF TAKES DOPE EXTREMELY WELL, WITH NO TENDENCY FOR THE DOPE TO FORM IN DROPLETS ON THE INSIDE OF THE COVERING. ON MY MIRAGE WING, I'M GOING TO USE THE DOPE TO ADHERE THE POLYESTER CLOTH TO THE WING AS IN THE STYLE OF COVERING WITH SILK OR SILRON. DICK PHILLIPS, PRESIDENT OF THE IMAA USES A METHOD LIKE THAT USED BY THE FULL-SCALE BUILDERS: HE USES A SEWED SLEEVE MADE UP ONLY SLIGHTLY LARGER THAN THE OBJECT BEING COVERED. HIS WIFE MUST SEW! THE SLEEVE IS HEAT SHRUNK ONCE IT IS PULLED ONTO THE WING AND ADHERED TO THE SURFACES. IF I CAN SOLVE THE PROBLEM I JUST MENTIONED, I'LL BE VERY MUCH PLEASED TO USE THE POLYESTER MATERIAL FOR COVERING THE REST OF MY FUTURE PROJECTS. THERE MIGHT EVEN BE A STILL LIGHTER WEIGHT FABRIC AVAILABLE, SO IF YOU OR YOUR READERS KNOW ABOUT ONE, PLEASE TELL ME. I ALSO BUILD SMALL R/C POWERED MODELS, AND THE 1.5 OZ. PER YARD STUFF IS JUST TOO HEAVY FOR 'SCHOOLYARD SCALE' MODELS."

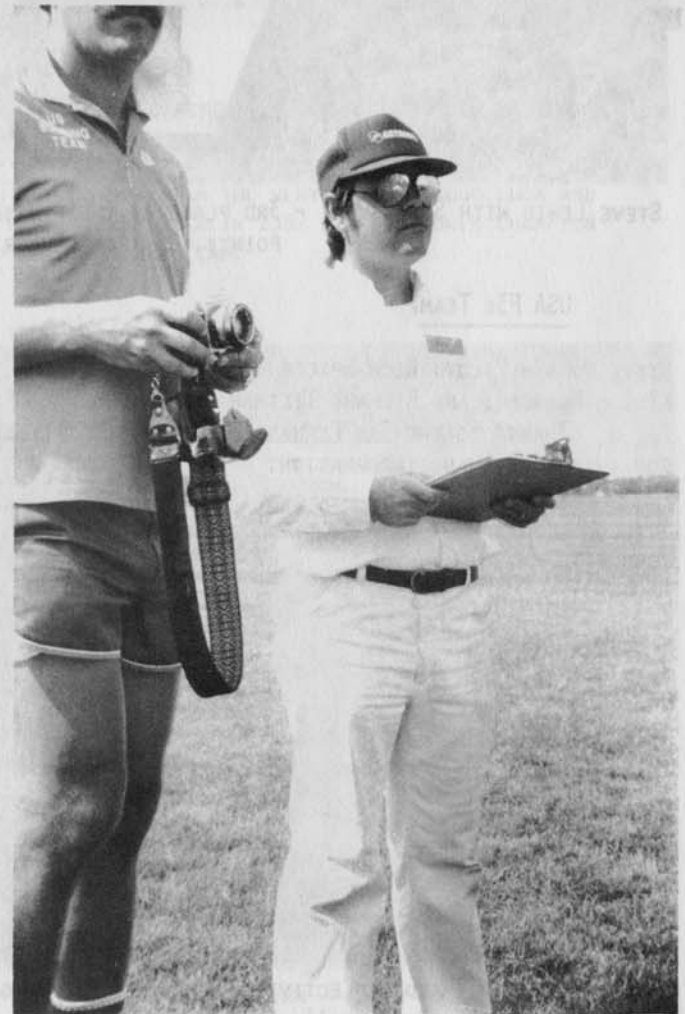
WELL, OZ, YOU CAN GET LIGHTER STUFF, BUT THERE COULD BE A FEW PROBLEMS: NOT HEAT SHRINKABLE, AND VERY EXPENSIVE. I THINK YOU'D LIKE SOME OF THE SAME MATERIAL, I.E. POLYESTER, IN A LIGHTER WEIGHT...AND THAT'S WHERE RCSD READERS COULD ALSO BE OF HELP. HOW ABOUT IT, GANG? INCIDENTALLY, MY O.F.B. AND I COVERED A COUPLE OF WINGS WITH POLYESTER COAT LINING MATERIAL AND FOUND OUT THAT THERE IS NOT ANY STRUCTURAL STRENGTH TO IT. IT IS 'SOFT' AND DOES NOT HAVE THE STIFFNESS OF MONOKOTE, FOR EXAMPLE. THEREFORE, THE STRUCTURE YOU PLAN TO COVER BETTER BE ADEQUATELY STIFF AND STRONG WITHOUT THE COVERING. ALSO, WHEN YOU USE ENOUGH DOPE TO FILL THE WEAVE, AS IN REGULAR AIRCRAFT PRACTICE, YOU FIND THAT YOU HAVE ADDED A LOT OF EXTRA WEIGHT -- OKAY IF YOU CAN AFFORD IT...JHG.

\*\*\* \*\*

R/C REPORT - A NEW 'TABLOID'-FORM NEWSLETTER YOU OUGHT TO GET. GORDON BANKS, P.O. BOX 1706, HUNTSVILLE, AL 35807 IS EDITING AND PUBLISHING A BRANDY-NEW NEWSLETTER COVERING ALL PHASES OF R/C FLYING, DESIGNING, BUILDING -- AND CRASHING -- MODEL AIRCRAFT. YOU WILL FIND THIS 28-PAGE MAGNUM OPUS FULL OF FUN, INTEREST, TIPS, HINTS, REVIEWS, ADS AND ALL THE OTHER GOOD THINGS YOU WANT. GORDON'S ZANY HUMOR AND OBVIOUS WRITING SKILL PROVIDE A DOWN-TO-EARTH, HONEST, AND NO-HOLDS-BARRLED APPROACH TO THE SUBJECT. HE'S NOT AFRAID TO CALL 'EM LIKE HE SEES 'EM, AND THAT'S NEWS! SO FAR, THERE'S NOT A SOARING COLUMN, BUT THERE WILL BE. YOU MIGHT JUST AS WELL WRITE OR CALL GOOD OL' GORDO AND ORDER A SUBSCRIPTION (AT THE VERY LEAST A SAMPLE COPY) AND FIND OUT WHAT THE WORLD HAS NEEDED, AND WHAT YOU HAVE BEEN MISSING ALL THESE MONTHS. IF YOU REALLY WANT TO SEE HIM SMOKE, TELL HIM YOU READ ABOUT IT IN RCSD! HIS 'PHONE IS: (205) 539-3031. CALL!

## USA F3B TEAM SELECTION

" THE TEAM SELECTION FINALS WERE HELD IN MINNEAPOLIS, MN OVER LABOR DAY WEEKEND WITH 17 PILOTS COMPETING FROM ILLINOIS, NEW MEXICO, AND CALIFORNIA. BOB SEALY, PRESIDENT OF THE MRCSS (MINNESOTA R/C SOARING SOCIETY) WAS THE CONTEST DIRECTOR, AND THE MRCSS PROVIDED THE MANPOWER TO RUN THE CONTEST. FIVE CREW MEMBERS WERE PERMITTED ON THE FIELD DURING A TASK. THE START OF EVERY TASK REQUIRED THE CREWS FOR EACH FLIGHT GROUP TO SET UP THEIR TWO WINCHES AS FAST AS POSSIBLE, WHICH MEANS THE WINCH, BATTERY, LINE AND TURNAROUND; AND THE END OF EVERY TASK FOR EACH FLIGHT GROUP MEANT THAT THIS EQUIPMENT HAD TO BE TAKEN IN AGAIN. FOR EXAMPLE, MANY OF THE CREW WALKED THE DISTANCE FROM WINCH TO TURNAROUND ABOUT 60 TIMES!



BOB SEALY, "MR. COOL" CD, RESOLVED CONFLICTS BEFORE THEY BECAME PROTESTS



STEVE LEWIS WITH SYNERGY II - 3RD PLACE AT THE FINISH WITH 13,686.5 POINTS. US TEAM MEMBER.

USA F3B TEAM:

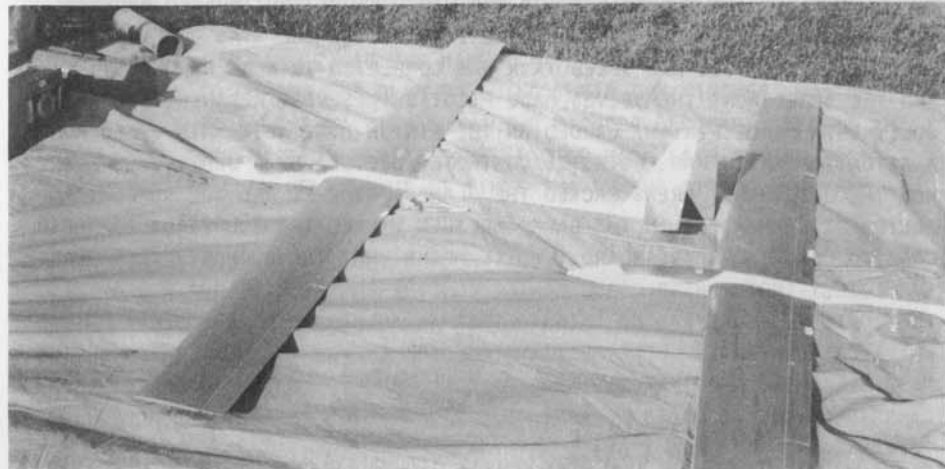
STEVE WORK - PILOT; RICH SPICER - PILOT; STEVE LEWIS - PILOT; LYNN KING - MANAGER; AND RICHARD TILTMAN - CREW.

THANKS TO THE SAN FERNANDO VALLEY SILENT FLYER NEWSLETTER FOR THIS FIRST-HAND INFORMATION.



PVC PIPE SUPPORT AND REFLECTIVE COVERS OVER THE WINGS OF THE NEW MEXICAN SAILPLANE SYNERGY II.

KINGS (EUROPEAN DESIGN) OF THE SOAR CLUB AWAIT THE CALL



SOME PHOTOS OF THE FAI F3B US SOARING TEAM SELECTION FINALS, HELD IN WISCONSIN. PHOTOS BY LEE MURRAY, APPLETON, WI.

RCSU WISHES THE US F3B TEAM THE VERY BEST OF GOOD LUCK AND MAGNIFICENT SOARING CONDITIONS IN THEIR 1987 BID FOR WORLD CHAMPION INDIVIDUAL AND WORLD CHAMPIONSHIP TEAM.



NEAT WINCHES, EASY TO SET UP AND TAKE DOWN - BUILT BY LENNY KEER OF CALIFORNIA;

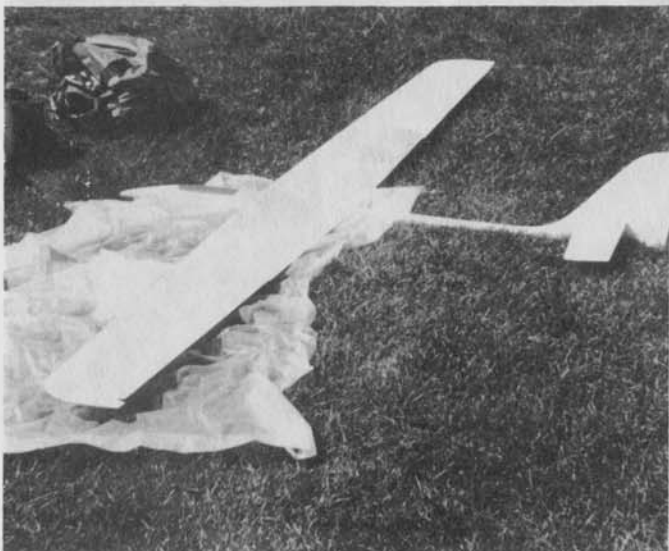


"FORTUNATELY, THERE WERE VERY FEW INCIDENCES AND ACCIDENTS TO MAR THE COMPETITION, ALTHOUGH SOME OF THE WINCH LINES CONTINUALLY BROKE, CAUSING MINOR DAMAGE IN AT LEAST ONE INSTANCE TO THE STAB OF RICK SPICERS SYNERGY II. ONE SPEED TASK WAS COMPLETED IN NEAR DARKNESS, AND THE SPEED RUNS THEMSELVES MADE PILOT SKILLS VERY APPARENT. LARRY JOLLY (4TH PLACE FINISH) LANDED ON THE FINISH LINE AFTER HIS SPEED RUN - A SITUATION WHICH WAS PROTESTED/CONTESTED/DECIDED BY A JURY...AND LARRY WON THE JUDGEMENT. CREWS PACKED THE PLANES, WINCHES AND ALL SUPPORT EQUIPMENT EACH NIGHT IN THE DARK AND THEN WALKED THE 200 YARDS TO THEIR CARS TO LOAD THE GEAR ABOARD...WHICH MEANS THAT THE SUPPORT CREWS WERE ABSOLUTELY INDISPENSABLE AND CAN BE CONSIDERED THE SINE QUA NON OF THE CONTEST. THERE WAS NO 'NIGHT LIFE' AS SUCH: PILOTS SLEPT WHILE CREWS REPAIRED EQUIPMENT AND READIED IT FOR THE NEXT DAY'S FLYING. MANY BECKER (GERMAN) RADIOS WERE EVIDENT, AND SAILPLANES FEATURED CAMBER-CHANGING DEVICES (FLAPS) IN THEIR WINGS. AERODYNAMICALLY 'CLEAN'

"PERSONALITIES PRESENT FOR THE US TEAM SELECTION FINALS WERE JOHN GRIGG, AMA PRESIDENT; BOB UNDERWOOD, AMA TECHNICAL DIRECTOR; RAY MARVIN, FORMER F3B TEAM SELECTION CHAIRMAN AND F3B WORLD CHAMPIONSHIPS CONTEST DIRECTOR.

COMPETITION RESULTS:

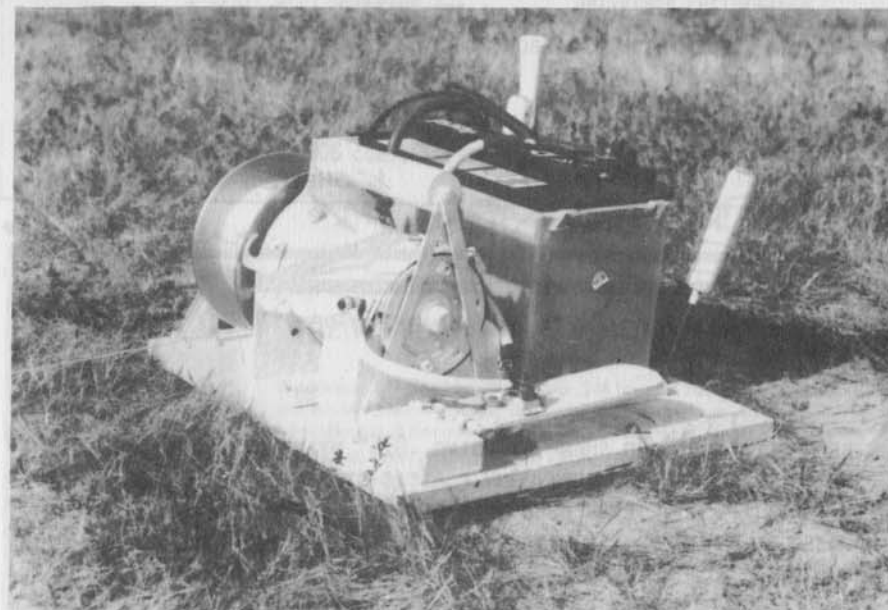
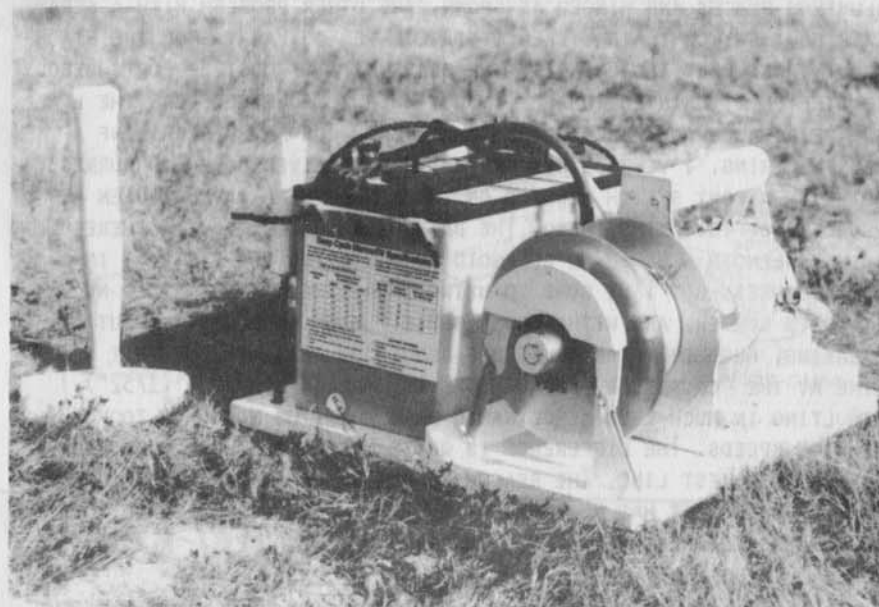
PLACE	PILOT	SAILPLANE	RADIO
1	STEVE WORK	QUATTRO	AIRTRONICS
2	RICH SPICER	SYNERGY	FUTABA
3	STEVE LEWIS	SYNERGY	FUTABA
4	LARRY JOLLY	QUATTRO	BECKER
5	SETH DAWSON	SYNERGY	FUTABA
6	DON EDBERG	SYNERGY	FUTABA



JOHN WYSS DESIGN, FLOWN BY LENNY KEER

BOB CHAMPINE ON WINCHES.....HOME MADE VARIETY MORE MONTHS AGO THAN I CARE TO ADMIT, BOB CHAMPINE WHO FLIES WITH THE TIDEWATER MODEL SOARING SOCIETY (HERK STOKELY'S HOME CLUB) SENT IN A COUPLE OF PIX OF HIS OWN WINCH, WITH SOME COMMENTS THAT COULD BE HELPFUL TO OTHERS WHO PLAN TO BUILD THEIR OWN WINCHES. GO, BOB:

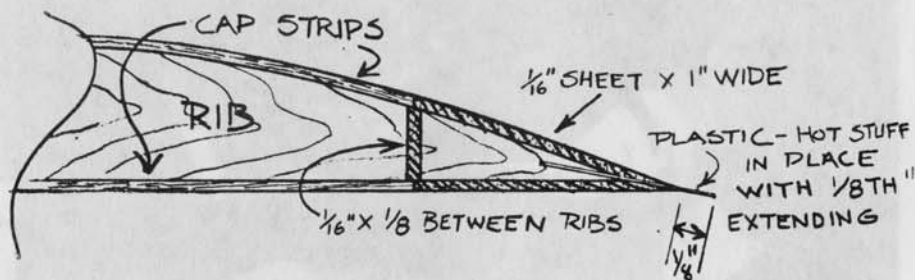
"...THE RIGHT-SIDE VIEW SHOWS THE BICYCLE SPROCKET USED AS AN OVER-RIDE FOR FRICTION DEVICE TO HELP STOP BACK LASH DURING ZOOM LAUNCHES. IT ONLY HELPS, BUT AT TIMES THE TOWING STRING CAN MAKE A



## CHAMPINE CONTINUES...

BIG MESS. WHEN A CHAIN IS SUBSTITUTED FOR THE FRICTION BRAKE, BACK-LASHING IS ELIMINATED, BUT IT MUST BE RELIEVED BEFORE THE 'CHUTE CAN BE PULLED BACK. RUBBER BANDS ADJUST THE FRICTION ON MAPLE BLOCKS. ON THE LEFT SIDE OF THE WINCH, THE MAIN FEATURE IS THE DIRECT-DRIVE FOOT SWITCH (NO SOLENOID IS USED). I USED A JEEP STARTER SWITCH OBTAINED FROM OUR LOCAL AUTO SUPPLY STORE. IT IS MOUNTED UPSIDE DOWN IN 3/16" ALUMINUM PLATES AND HINGED AS SHOWN. THE OTHER PROBLEM WITH A SEPARATE FOOT SWITCH IS THAT WHEN IT IS LOCATED OUT AWAY FROM THE WINCH ABOUT THREE FEET AND LYING IN THE GRASS, IT IS POSSIBLE FOR SOMEBODY TO STEP ON IT UNINTENTIONALLY...JUST WHEN SOMEONE ELSE HAS THE LINE IN THEIR HANDS AND PULLING THE 'CHUTE BACK, OR MAYBE REPAIRING A BROKEN STRING. I'VE HAD THIS HAPPEN, AND RECEIVED SOME BAD BURNS, BUT WITH A FOOT SWITCH MOUNTED ON THE WINCH THERE HAVEN'T BEEN ANY PROBLEMS OF THIS KIND. ALSO, THE BATTERY LASTS LONGER, AS THERE IS NO SOLENOID - HENCE NO SOLENOID CURRENT. YOU CAN'T SEE IT IN THE PICTURES, BUT I'VE GONE TO USING 180# LINE - #18 BRAIDED NYLON. IT LASTS LONGER, AND WITHSTANDS 'GEMINI' ZOOM LAUNCHES WITHOUT BREAKING. ANOTHER TRICK IS TO USE ABOUT 300 FEET OF 200# TEST KEVLAR LINE AT THE 'CHUTE END, BECAUSE OF ITS SMALLER DIAMETER (1/32") RESULTING IN MUCH LESS AERODYNAMIC DRAG WHEN THE MODEL IS ZOOMED AT HIGH SPEEDS. THE DIFFERENCE IS QUITE NOTICEABLE WHEN COMPARED TO THE 180# TEST LINE. THE REASON WE DON'T USE KEVLAR LINE ALL THE WAY IS BECAUSE IT HAS NO STRETCH, AND THE MODEL IS PULLED OUT OF YOUR HANDS BEFORE YOU CAN FEEL THE TENSION BUILD UP.

"ANOTHER ITEM THAT MIGHT BE OF INTEREST TO RCSD READERS IS THE USE OF CARBON FIBER SANDWICHED BETWEEN 1/16" THICK SPRUCE STRIPS FOR SPAR CAPS. I USE TWINN K CARBON. ALSO, THE TRAILING EDGE OF A WING

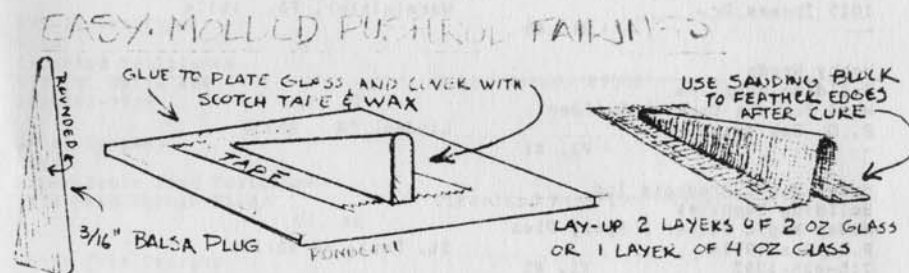


CAN BE MADE STRONG AND SHARP BY USING .015" MYLAR BETWEEN THE TOP AND BOTTOM 1/16" Balsa SHEET. ANY PLASTIC STRIP WILL DO, AS LONG AS IT IS STIFF. I'VE EVEN USED SOME PLASTIC STRAPPING TAPE OF THE KIND USED TO TIE UP BOXES WITH GOOD RESULTS. THE BLACK, 1/2" WIDE TAPE WORKS REALLY WELL. SEE SKETCH FOR DETAILS, AND REMEMBER TO LIGHTLY SAND THE PLASTIC/MYLAR SO THAT THE CA GLUE WILL BOND PROPERLY.

## MARTIN SIMONS - ON SABBATICAL TO ENGLAND:

FOR THOSE OF US WHO MAY WISH TO CORRESPOND WITH MARTIN SIMONS, PLEASE WRITE HIM AT HIS TEMPORARY ENGLISH ADDRESS (UNTIL JULY OR SO, 1987). IT IS: 14 ANSELL ROAD, LONDON SW 17 17LS, ENGLAND. HE WILL BE PLEASED TO HEAR FROM HIS FRIENDS. I OUGHT TO MENTION THAT I HAVE NOT YET RECEIVED MY COPY OF VINTAGE SAILPLANES OF THE WORLD, WRITTEN BY MARTIN SIMONS AND PUBLISHED BY KOOKABURRA IN AUSTRALIA. THIS WILL BE PERHAPS THE SINGLE MOST VALUABLE REFERENCE AVAILABLE ON OLD-TIME SAILPLANES. THE COPIES ARE EXPENSIVE, BUT ARE VERY, VERY WORTHWHILE. I CAN'T WAIT TO RECEIVE MINE!

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115 N. Thornwood Davenport, IA. 52822  
- V2, #2

Larry Jolly Design  
Kits  
Flinger, Pantera, Comet, Meteor Sailplanes  
5501 W. Como Santa Ana, CA 92703  
714-826-6861 V2, #2

Lindsey Micro Products  
Kits  
LMP-1000 HLG Sailplane  
160-A N. Fairview Ave., Suite 104 Goleta, CA. 93117  
805-683-2042 V2, #2

Pierce Aero  
Kits  
Gemini, Gemini MTS  
9626 Jellico Ave. Northridge, CA. 91325  
- V1, #11



Scott's Model's  
Kits  
"Tempest" 60" Sailplane  
Avenida Del Mar San Clemente, CA. 92675  
VI, #9

Soaron Sailplanes  
Kits  
Silhouette Sailplane Kit by Roy Garner (142" or 132" span)  
27 Brook Street Wolston, England  
VI, #8

Southern Sailplanes  
Kits  
Sailplane Kits  
31 Queens Parade, Burwood, Vict. 3125 Melbourne, Australia  
USA 619-292-4062 V2, #9

West Mendip Sailplanes  
Kits  
Sailplane Kits  
16 Byron Rd. Locking Weston-Sur Mare, Avon, England  
VI, #8

Jerry Slates - Viking Models  
Kits, FG Fuselages, Foam Wings  
Viking line from England, Glass Fuselages, Foam Cores  
2026 Spring Lake Dr. Martinez, CA 94553  
415-689-0766 VI, #2 (Old HI Johnson Business)

Scott's Models  
Kits, References  
Jack Chambers' airfoils, "Tempest" Sailplane  
24755 Acropolis Mission Viejo, CA. 92675  
714-531-6664 VI, #3

Cliff Charlesworth  
Kits, Soaring Supplies  
Scale Glider Kits & Parts  
41 Spring Rd. Frome, Somerset, BA112JN, England  
VI, #8

Davey Systems  
Kits, Soaring Supplies  
Kits, General Supplies, Winches, Retrievers  
One Wood Lane Malvern, Pa. 19464  
215-644-0692 VI, #2

Progressive Models  
Kits, Soaring Supplies  
Kits & Supplies  
20740 Warfield Gaithersburg, MD 20879  
VI, #2

Sailplanes of the World  
Kits, Soaring Supplies  
Imported Sailplanes & Accessories  
1501 Coffee Modesto, CA 95355  
209-577-0506 VI, #6

Alex Strojnik  
References  
Model Design Text  
2337 E. Manhattan Ave. Tempe, AZ. 85282  
VI, #3

American Aviation History Soc.  
References  
WW I Aircraft Info. & Newsletter  
2333 Otis Santa Ana, CA. 92704  
VI, #7

Country Hobby Supply  
References  
MTB Series Texts  
RR1 Dundas Ontario, Canada L9H 5P1  
519-623-2560 V3, #2

Herk Stokley  
References  
Soartech  
1504 N. Horseshoe Circle Virginia Beach, VA. 23451  
VI, #11

League of Silent Flight (LSF)  
References  
Soaring Advancement Program  
Box 647 Mundelein, IL. 60060  
VI, #3

League of Silent Flight (LSF)-Canadian Members  
References  
P.O. Box 647 Mundelein, IL. 60060  
VI, #10

Wilshire Hobbies  
References, Kits  
German Texts and Kits  
3006 Wilshire Blvd. Santa Monica, CA 90403  
VI, #12

Archaeopteryx Avion Assoc.  
Soaring Supplies  
General Supplies & Replacement Parts  
P. O. Box 120 Pottstown, PA. 19464  
VI, #2

Eastern Soaring Supplies  
Soaring Supplies  
General Soaring Supplies  
Box 437 Lemont, PA 16851  
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Goughnour, Don  
Soaring Supplies  
Wing Rods, Winches, Line, Spoilers  
PFD#2, Box 112 Red Lion, PA 17356  
VI, #2

Plaques International  
Soaring Supplies  
Award Plaques  
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305-260-9570 New owner of Dave Davidson's business

Premium Hobby Products  
Soaring Supplies  
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303-693-5858 V3, #5

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Soaring Supplies  
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921 Stubbs Ave. Provo, Utah 84601  
801-375-7805 VI, #11

Winning Image Plaques  
Soaring Supplies  
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Soaring Supplies, Electric  
NiCad Batteries  
Box 287 Bellport, NY 11713  
VI, #8

Hobby Specialties Division  
Soaring Supplies, Electronics  
Turn Around Bearing, Micro Equipment & Electric Supplies  
#3, Castle, R.F. 2 Florissant, MO. 63024  
VI, #2

Madison Area Soaring Society  
References  
MARCOS Soaring Symposium Proceedings  
5013 Dorsett Dr. Madison, WI 53710

VI, #8

Model & Allied Publns. Plan Service  
References  
Plan Service for all models in British publns.  
P. O. Box 35, Wolsey House Wolsey Road, Hemel, Hempstead Herts., HP2  
VI, #8

National Soaring Society (NSS)  
References  
Membership Information  
906 Orchard Park Dr. Gibsonia, PA. 15044  
VI, #9, #10

San Fernando Valley Silent Flyers  
References  
Technical Anthology  
1971 Glenview Ave. Simi Valley, CA. 93063  
VI, #11

Scale Model Research  
References  
Scale Documentation  
418 E. Oceanfront S. Newport Beach, CA 92561  
V2, #12

Scott Airpark  
References  
Book on Flying Wing Sailplanes (\$35)  
Scott Airpark Lovettsville, VA. 22080  
VI, #6

Sean Walbank  
References  
The White Sheet #2, Flying Wing Data  
22 The Garden, Acreman Street Dorset, DT93PD, England  
VI, #6

Soaring Society of America  
References  
Proc. of 4th Symp. on the Sci/Tech. of Low Speed & Motorless Flight  
P.O. Box 66071 Los Angeles, CA. 66071  
VI, #5

Vintage Glider Club of G.B.  
References  
White Sheet Newsletter & Tech. Bulletins  
Martin Road, Staplehurst Kent TN12 0JG, England  
V2, #4

Vintage Sailplane Association  
References  
Bungee Cord Newsletter  
Scott Airpark Lovettsville, VA 22080  
703-822-5504 VI, #5

Chuck Anderson  
Software  
Airfoil Plotting Programs for C-64 & Dot Matrix Printer  
202 Inglewood Circle Tullahoma, TN. 37389  
VI, #12

Will Jenkins  
Software  
Contest Scoring programs for Apple computers  
P. O. Box 409 Lynchburg, VA. 24505  
904-394-5964 VI, #3

LJM Associates  
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Laser Cut Airfoils and Computer Programs for Design  
1300 Bay Ridge Rd. Appleton, WI 54915  
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## KNOW YOUR SILHOUETTES

THIS UNIQUE SILHOUETTE APPEARED IN THE GREATER DETROIT SOARING AND HIKING SOCIETY NEWSLETTER. IT HAD COME FROM A GUIDE PUBLISHED AS AN EDUCATIONAL AID TO THE NEW ENGLAND HAWK WATCH STUDY, AND THE GRAPHIC WORK IS BY PAUL CARRIER. I'VE FLOWN WITH RED-TAILED HAWKS (BUTEOS), WITH PEREGRINES (FALCONS), AND EVEN WITH AN ACCIPITER...BUT NOT FOR LONG. NEXT TIME A HAWK JOINS YOU IN YOUR THERMAL (OR VICE VERSA) HONOR HIM BY IDENTIFYING HIS SILHOUETTE. HE'S A FRIEND!

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The following is a list of some organizations for the person wishing to pursue his interest in hawks. Membership and information can be obtained by writing:

Hawk Migration Association of North America  
Nancy Clayton, Membership Sec.  
95 Martha's Point Road  
Concord, Mass. 01742

Hawk Mountain Sanctuary Association  
Route 2  
Kempton, Pa. 19529

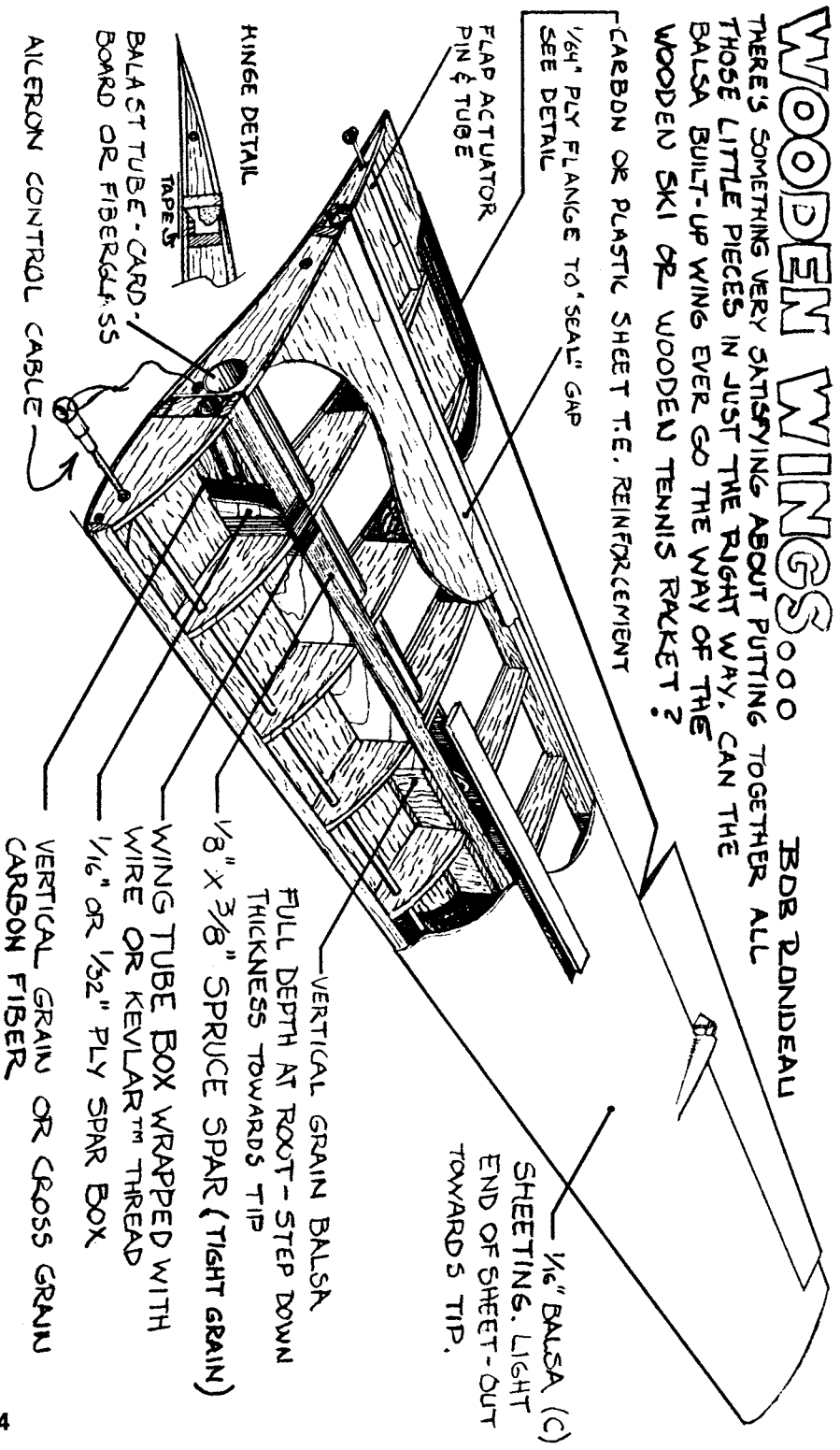
Raptor Research  
c/o Dr. Gary Duke, College of Veterinary Biology  
Un. of Minn., St. Paul, Minn. 55101

Society for the Preservation of Birds of Prey  
Box 168  
Allendale, N.J. 07401

Cape May Bird Observatory  
Cape May Point, N.J. 08212

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