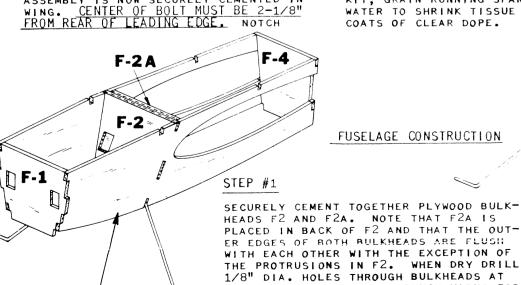


PRE-GLUE EDGES OF TRAILING EDGES WHERE THEY JOIN TOGETHER IN CENTER. NOTE THAT NOTCH FOR CENTER RIB IS CUT HALF WAY INTO BOTH TRAILING EDGE SECTIONS. CEMENT REAR OF RIBS INTO NOTCHES FOR SAME IN TRAILING EDGE SECTION. DO SAME WITH OTHER SIDE. BEING CERTAIN THAT BUTT JOINT BETWEEN BOTH TRAILING EDGE SECTIONS HAS AN ADDITIONAL COAT OF CEMENT. USE PINS TO HOLD TRAILING EDGES TIGHTLY TO-GETHER. CEMENT TIP RIBS #10 IN PLACE INTO NOTCHES IN LEADING AND TRAILING EDGES. SIGHT ALONG REAR OF WING TO CHECK FOR ANY WARPS THAT MIGHT HAVE OCCURED. IF ASSEMBLY IS WARP-FREE. ALLOW TO DRY THOROUGHLY. WHEN DRY, AN ADDITIONAL COAT OF CEMENT IS PLACED AROUND ALL RIB AND SPAR JOINTS AS WELL AS LEADING AND TRAILING EDGE RIB JOINTS. CHECK AGAIN FOR WARPAGE. IF ASSEMBLY IS WARP-FREE, SET ASIDE TO DRY THOROUGHLY. IF NOT, WING MAY BE HELD WITH WEIGHTS AND ALLOWED TO DRY TO INSURE A WARP-FREE STRUCTURE. NOTE THAT ALL RIBS HAVE SQUARE CUT-OUTS IN SECTION BETWEEN LEADING EDGE AND SPAR. THESE SHOULD BE PUSH-ED OUT SO THAT SQUARE HOLES ARE LEFT IN RIBS TO ALLOW CLEARANCE FOR WIRES RUNNING THROUGH WING INTO BELL CRANK. AS SHOWN ON FINISHED SIDE AND TOP VIEW DRAWINGS. CEMENT WING TIPS IN PLACE. BOTTOM ONLY OF CENTER SEC-TION (3 CENTER RIBS) IS COVERED WITH 1/16" SHEET BALSA PROVIDED, GRAIN RUNNING SPANWISE. ALLOW TO DRY. ASSEMBLE PLATFORM FOR CONTROL UNIT BY CEMENTING BOTH PLYWOOD C2'S AND C1 TOGETHER AS SHOWN. THE ASSEMBLY IS CLEARLY SHOWN IN THE CONTROL DE-TAIL DRAWINGS AND NOTE. FLAT EDGES OF ALL PIECES ARE LINED UP WHICH AUTO-MATICALLY WILL ALIGN PUNCH MARKS. WHEN DRY. PUNCH MARK IS DRILLED TO RECEIVE BOLT HOLDING BELL CRANK AS-SEMBLY AS SHOWN IN CONTROL DETAIL. NO CONTROL EQUIPMENT IS PROVIDED WITH THIS KIT. IT MAY BE PURCHASED AS A COMPLETE UNIT OR IN PARTS AT YOUR HOBBY DEALER. SLIP WASHER OVER BOLT FOR BELL CRANK AND INSERT SAME THROUGH BOTTOM OF ASSEMBLED PLYWOOD PLATFORM AS SHOWN AND DESCRIBED IN CONTROL DETAIL. CONTROL PLATFORM ASSEMBLY IS NOW SECURELY CEMENTED IN



1/8" DIA. HOLES THROUGH BULKHEADS AT LOCATIONS INDICATED BY PUNCH MARKS FOR LANDING GEAR LUGS PROVIDED IN KIT. MOUNT LANDING GEAR IN PLACE ON BULK-HEAD AS DESCRIBED IN DETAIL, BEING CER-TAIN THAT CENTER POINT OF LANDING GEAR IS DIRECTLY UNDER CENTER TOP LANDING GEAR ANCHOR LUG AS SHOWN. ASSEMBLE INNER FRONT FUSELAGE SIDES FRONT FUSELAGE SECTION BY CEMENTING AND BULKHEAD F4 INTO NOTCHES FOR SAME IN INNER FRONT FUSELAGE SIDES AS SHOWN

LEADING EDGE & SPAR ASSEMBLY DETAIL GUSSET *B * ACROSS JOINT TO REAR OF LEADING EDGE AND ALLOW TO DRY. USE AT LEAST 2 COATS OF CEMENT ON THIS STEP. PRE-GLUE THE BUTTING EDGES AND REAR OF SPAR AND ALLOW TO DRY. ASSEMBLE BY CEMENTING PLYWOOD GUS-SET 'C' ACROSS BUTTING JOINT AS SHOWN. PLACE ON FLAT SURFACE WITH WEIGHTS AND ALLOW TO DRY THOROUGH-LY. USE AT LEAST 2 COATS OF CEMENT ON THIS STEP.

s, вотн #6's, вотн #7

JOINTS ARE CEMENTED ONLY AFTER LEAD-

ING AND TRAILING EDGES ARE CEMENTED

APPROXIMATE RIB LOCATION CAN BE HAD

PROVIDED IN LEADING EDGES AND ALLOW

OUT SKIN COVERING FOR WASHER AND HEAD

SKIN COVERING WITH FLAT END OF CONTROL

HEAVY COATS OF CEMENT ON THIS STEP, AL-

LOWING EACH COAT TO DRY THOROUGHLY BE-

OF WING TIPS TO SMOOTH CONTOUR. DRILL

OUT CABLES PASS THROUGH AT LOCATION OF

CERTAIN HOLES RUN PARALLEL TO LEADING

SQUARE CUT-OUTS IN OUTER RIB #10. BE

EDGE AND SPAR WHEN VIEWED FROM TOP.

SIDE AND TOP VIEW DRAWING OF FINISHED

PER RINGMASTER SHOW HOW CABLES PASS

HROUGH WING AND TIP. INSERT AND SE-

curely cement a length of 1/8" metal

TO ACT AS BEARING SURFACE FOR CONTROL

CABLES. A PORTION OF THE CONTROL SYS-

IT HAS BEEN OMITTED FROM THIS DRAWING

SHOULD BE LARGE ENOUGH TO ALLOW BELL

SECURE BY WRAPPING WITH SOFT WIRE AND

SOLDERING SECURELY AS SHOWN IN DETAIL

FREEDOM OF MOVEMENT AFTER LOOPS HAVE

BOLT FOR SAME IN CONTROL PLATFORM.

BEEN MADE SECURE. PLACE BELL CRANK ON

FASTEN BELL CRANK IN NEUTRA! POSITION

AS SHOWN ON TOP VIEW DRAWING BY TEM-

PORARILY FASTENING SAME WITH NUT. (NUT

IS LATER REMOVED AND INSTALLATION IS

IN SAME MANNER AS ATTACHING CABLES TO

BALSA IN SAME MANNER AS BOTTOM. A

BELL CRANK. LOOPS SHOULD BE APPROXI-

MATELY 2" FROM WING TIP. CABLES SHOULD

COMPLETED AFTER WING IS MOUNTED IN FU-

SELAGE AS DESCRIBED IN FUSELAGE STEP #2)

MAKE LOOPS IN ENDS OF THE LEAD-OUT CABLES

KEPT TO SAME LENGTH. TOP OF CENTER

SECTION IS NOW COVERED WITH 1/16" SHEET

SECTION IS LATER CUT OUT OF SKIN COVER-

ING TO COMPLETE HOOK-UP FROM BELL CRANK

CEMENT TO OUTER RIB AS SHOWN TO COUNTER-

TO CONTROL ROD AS WELL AS COMPLETION

OF BELL CRANK INSTALLATION. COIL UP

APPROXIMATELY ONE OUNCE OF SOLDER AND

COATS OF CLEAR DOPE.

FUSELAGE CONSTRUCTION

ABOVE. SIDES MAY BE HELD IN PLACE

WITH PINS OR RUBBER BANDS UNTIL CEMENT

BALANCE WEIGHT OF LINES. THIS ADDS IM-

SKETCH AND NOTE. CHECK BELL CRANK FOR

CRANK TO MOVE FREELY. LOOP IS MADE

TEM IS NOW INSTALLED AS DESCRIBED.

FOR CLARITY. LEAD-OUT CABLES WHICH

EXTEND THROUGH WING FROM BELL CRANK

HOLES IN ENDS OF BELL CRANK. LOOPS

PAST WING TIP ARE LOOPED THROUGH

TUBING THROUGH EACH HOLE IN WING TI:

'8" HOLES THROUGH WING TIP THAT LEAD

FORE APPLYING NEXT COAT. ROUND EDGES

UNIT AGAINST CENTER RIB. USE THREE

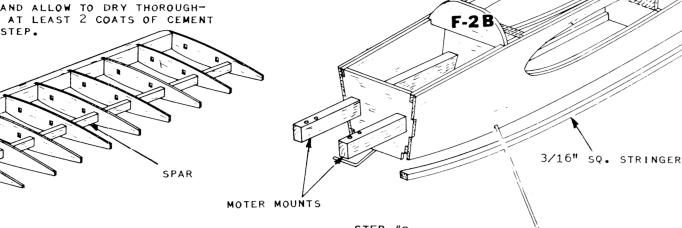
F BOLT SO THAT PLATFORM RESTS AGAINST

TRAILING EDGE

BY LAYING LEADING EDGE ALONG SPAR.

CEMENT FRONT OF RIBS INTO NOTCHES

IN PLACE TO ALLOW RIBS TO LINE UP.



F-7 VERTICAL POST DETAIL

REMOVE F-7 FROM DIE CUT SHEET, THEN SHAPE TO WEDGE AS SHOWN IN DRAWINGS ABOVE. WHEN

F-3 F-4

FINISHED IT IS READY TO BE INSTALLED AS

DESCRIBED IN FUSELAGE STEP #2.

CEMENT F3A FLUSH WITH TOP, AND TO FRONT OF BULKHEAD F3 AS SHOWN. SECUP ENT TOGETHER BULKHEADS F5 & F54 EDGES OF BOTH BULKHEADS ARE FLUSH WITH THE EXCEPTION OF PROTRUSIONS IN F5 WHICH FIT TO FUSELAGE SIDES. NOTE THAT GRAIN IN BULKHEADS RUN OPPOSITE TO EACH OTHER FOR MAXIMUM STRENGTH. VERTICAL POST F7 IS NOW SHAPED AS SHOWN ON DETAIL SKETCH. SECURELY CEMENT OUTER FULL LENGTH FUSE-LAGE SIDES TO EITHER SIDE OF INNER FRONT FUSELAGE SIDES. OUTER FULL LENGTH FUSE-LAGE SIDE IS FLUSH WITH TOP OF INNER FRONT FUSELAGE SIDES AND FLUSH WITH FRONT OF F1. CUT OUT FOR WINGIS LIKEWISE FLUSH. APPLY GLUE TO SIDES OF ASSEMBLED BULK-HEAD F5 &F5A, F6, AND SHAPED F7. UNITS ARE ALL INSTALLED AT THE SAME TIME. SIDES ARE HELD IN PLACE WITH EITHER PINS OR RUBBER BANDS. BE CERTAIN THAT ENDS OF OUTER FULL LENGTH FUSELAGE SIDES ARE FLUSH WITH EACH OTHER AT REAR, WHEN VIEW-ED FROM SIDE. THIS WILL AUTOMATICALLY ALIGN ENTIRE FUSELAGE WHEN VIEWED FROM TOP. CEMENT INTO NOTCHES AT POSITIONS AS SHOWN ABOVE, TOP BULKHEADS F2B ASSEM-BLED BULKHEADS F3 & F3A AND F4. BULK-HEADS SHOULD BE VERTICAL. READ MOTOR IBOLT DETAIL IN PREPARATION FOR INSTAL-LATION OF SAME. CEMENT MOTOR MOUNTS SECURELY IN PLACE BY INSERTING ANGLED END OF MOUNT THROUGH BULKHEAD F1 AND INTO NOTCH FOR SAME IN PLYWOOD BULKHEAD

F2. BE CERTAIN THAT ANGLE OF MOTOR

COATS OF CEMENT ON THIS INSTALLATION FOR MAXIMUM STRENGTH. ALLOW CEMENT

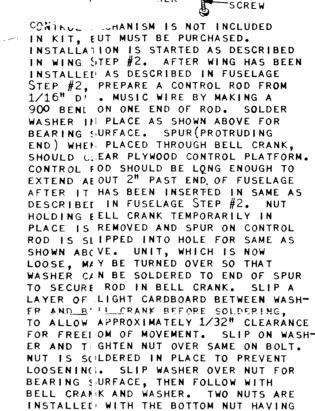
MOUNTS MATCH ANGLE OF BULKHEAD F2 AND

THAT THEY SEAT FIRMLY AGAINST BACK-UP

DRY THOROUGHLY BETWEEN COATS. 3/16 SQUARE STRINGERS ARE NOW CEMENTED IN PLACE INTO NOTCHES FOR SAME IN BOTTOM OF BULKHEADS ON INSIDE OF BOTH SIDES OF FUSELAGE. STRINGERS EXTEND FULL LENGTH OF FUSELAGE BEING CUT OFF FLUSH WITH FRONT OF BULKHEAD F1 AND TAPERED AT REAR AS SHOWN TO FIT BETWEEN OUTER SIDES. HOLD IN PLACE WITH PINS UNTIL DRY. AT THIS POINT. ALL BULKHEAD JOINTS SHOULD BE GIVEN AN ADDITIONAL COAT OF CEMENT FOR STRENGTH. WHEN BULKHEADS ARE DRY. SHADED SECTION OF BULKHEAD F4 IS RE-MOVED SO THAT WING MAY BE INSERTED IN FUSELAGE . WHEN SECTION IS REMOVED. CAREFULLY INSERT WING UNTIL IT IS CEN-TERED IN FUSELAGE. IF FIT IS TOO TIGHT, CUT-OUT SECTION IN FUSELAGE SIDES MAY

OUTER FULL LENGTH FUSELAGE SIDES

MANUE THAT BALSA COVERED CEN-IER SECTION EXTENDS AN EQUAL AMOUNT FROM EITHER SIDE OF FUSELAGE. THREE HEAVY COATS OF CEMENT ARE NOW APPLIED WHERE WING AND FUSELAGE STRUCTURE COME IN CON-TACT WITH EACH OTHER. A - SW GLUE TO DRY THOROUGHLY BETWEEN COATS. TOP WING CENTER SECTION BALSA COVERING IS NOW CUT AWAY IN ORDER TO COMPLETE INSTAL-LATION OF CONTROL ROD AND BELL CRANK. ENTIRE SECTION FROM CENTER RIB TO SIDE OF FUSELAGE OVER BELL CRANK, FROM LEAD-ING TO TRAILING EDGE, IS REMOVED. BE CAREFUL NOT TO CUT INTO SPAR. PREPARE CONTROL ROD FOR INSTALLATION AS DESCRI-BED IN CONTROL DETAIL. LOCATE AND CUT SLOT IN REAR OF FUSELAGE SIDE TO ALLOW CONTROL ROD TO EMERGE FROM FUSELAGE AS SHOWN AND DESCRIBED IN FULL SIZE DRAW-ING AND DETAIL NOTE. INSERT REAR END CONTROL ROD THROUGH FUSELAGE UNDER F3 AND PAST F4. SLIP CONTROL-ROD-GUIDE ON ROD. ROD CONTINUES THROUGH FUSELAGE AND COMES OUT OF SAME AT SLOT CUT OUT OF FUSELAGE SIDE. ENGAGE ROD IN HOLE IN BELL CRANK AND COMPLETE INSTALLATION AS DESCRIBED IN CONTROL DETAIL. BELL CRANK INSTALLATION IS NOW COMPLETE. PUSH PRONGS OF CONTROL-ROD-GUIDE INTO BULKHEAD F5 SO THAT CONTROL ROD RIDES FREELY AND EASILY THROUGH LOOP IN GUIDE WHEN ROD IS HELD IN ASSEMBLED POSITION. (IN ELEVATOR CONTROL HORN) WHICH IS 1/2" FROM CENTER OF FUSELAGE REAR WHEN VIEW-ED FROM TOP. CHECK FOR SMOOTHNESS OF OPERATION BY PULLING ON LINES COMING OUT OF WING.



FREENESS OF OPERATION BY PULLING ON

WASHER

LEAD-O

FUSELAGE SIDE VIEW

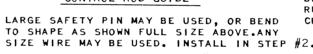
CONTROL ROD SLOT DETAIL

DRAWIIG ABOVE IS FULL SIZE AND MAY BE USED AS A PATTERN TO

LOCAT: AND CUT OUT SLOT IN SIDE OF FUSELAGE WHERE CONTROL

ROD CIMES THROUGH AS DESCRIBED IN FUSELAGE STEP #2.

CONTROL-ROD-GUIDE ABOUT 1/12" CLEARANCE FROM TOP WASH-ER. NUTS ARE SECURELY TIGHTENED AGAINST ONE ANOTHER AND SOLDERED TO BOLT TO PREVENT LOOSENING. BELL CRANK MUST SPIN FREELY AND EASILY AROUND BOLT. INSTALL LEAD-OUT CABLE AS DESCRIBED IN WING SITEP #2. CHECK SYSTEM FOR



S RUBBED IN WITH THE FINGER TIPS. MODEL

CONTROL ROD GUIDE

LINES EMERGING FROM WING TIP. CON-

TROL SYSTEM HOOK-UP IS COMPLETED AS

DESCRIBED IN FUSELAGE STEP #4 FINAL

ASSEMBLY. AFTER TAIL SURFACES ARE

SECURELY CEMENTED IN PLACE AS DES-

CRIBED, ALL CONTROLS SHOULD BE TEM-

PORARILY FASTENED (PINS WILL DO) IN

AND TOP VIEWS OF SUPER RINGMASTER.

CONTROL ROD IS NOW BENT AT A RIGHT

ANGLE AT THE EXACT LENGTH WHERE HOLE

IN CONTROL HORN IS LOCATED. SOLDER

HOLE IN PLYWOOD CONTROL HORN ON ELE-

VATOR AND SECURE WITH WASHER IN SAME

MANNER AS SPUR IN BELL CRANK. CUT

WASHER. REMOVE PINS HOLDING SYSTEM

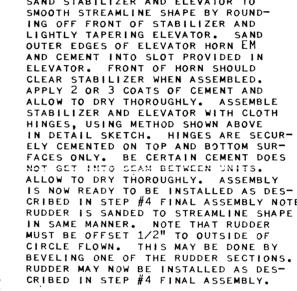
OFF SPUR APPROXIMATELY 1/8" PAST

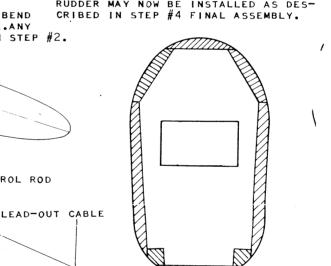
IN NEUTRAL POSITION AND CHECK FOR

CELLULOID WINDSHIELD

WASHER IN PLACE AS SHOWN, SLIP THROUGH

NEUTRAL POSITION AS SHOWN ON SIDE



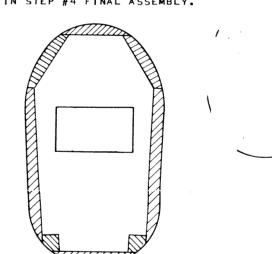


TYPICAL FUSELAGE CROSS-SECTION

FULL SIZE DRAWING ABOVE SHOWS CROSS SEC-TION OF FUSELAGE AT BULKHEAD F-5. NOTE LOCATION OF LOWER STRINGERS AS INSTALLED IN FUSELAGE STEP #2. CORNERS OF SKIN COV-ERING ARE ROUNDED OFF TO FORM AN ALMOST ELLIPTICAL SHAPE AS DESCRIBED IN STEP #4

STABILIZER & ELEVATOR ASSEMBLY NOTE SAND STABILIZER AND ELEVATOR TO

IS NOW READY TO BE INSTALLED AS DES-CRIBED IN STEP #4 FINAL ASSEMBLY NOTE.





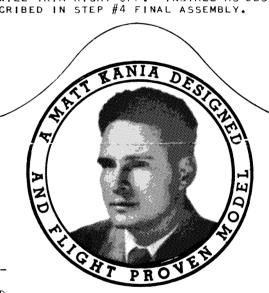
CLOTH MATERIAL PROVIDED IN KIT. CEMENT IN POSITION AS SHOWN ON STABILIZER SKETCH

USING METHOD SHOWN ABOVE AND DESCRIBED IN STAB NOTE.



NOTE 1/2" OFFSET IN RUDDER

THIS PATTERN IS FULL SIZE. LAY CEL-LULOID OVER PATTERN. HOLD IN PLACE WITH TAPE OR PINS. USING KNIFE OR RAZOR CUT LIGHTLY INTO CELLULOID FOLLOWING OUTLINE. REMOVE CELLULOID FROM PLAN, FOLD AT CUT MARKS AND IT WILL TRIM RIGHT OFF. INSTALL AS DES-CRIBED IN STEP #4 FINAL ASSEMBLY.



LEAD OUT CABLE LOOP DETAIL

FORM LOOP IN END OF CABLE AND WRAP WITH SOFT COPPER WIRE AS SHOWN IN FIG. #1. ALLOW ENOUGH CABLE TO FOLD BACK AND WRAP WITH WIRE AS SHOWN IN FIG.#2. SOLDER SECURELY AS SHOWN IN FIG.#3.

GAS TANK CONSTRUCTION NOTE

GAS TANK MAY BE CONSTRUCTED AS SHOWN

TO BUILD TANK, USE APPROXIMATELY .010"

OR A SIMILAR TYPE MAY BE PURCHASED.

THICK SHEET BRASS OR MATERIAL FROM

TIN CAN. CUT OUT MAIN SECTION AND

ENDS OF TANK AS PER DIMENSIONS. BEND

MAIN BODY ON DASHED LINES AND SOLDER

TOGETHER. CUT 1/8" DIA. BRASS TUBING

TO LENGTH FOR FILLER AND OVERFLOW TUBES

AND SOLDER TO INSIDE OF BODY AS SHOWN.

CUT LENGTH OF TUBING FOR FEED TUBE,

BEND AT ANGLE AND SOLDER IN POSITION

TANK IS FINISHED, TEST FOR TIGHTNESS

AND BLOWING SMOKE INTO FEED TUBE.

IF ANY SMOKE APPEARS THROUGH JOINTS

INSTALLED WITH WOOD SCREWS ON MOTOR

CRIBED IN STEP #4 FINAL ASSEMBLY.

BY PLUGGING OVERFLOW AND FILLER TUBES

SEAL WITH HOT SOLDERING IRON. TANK IS

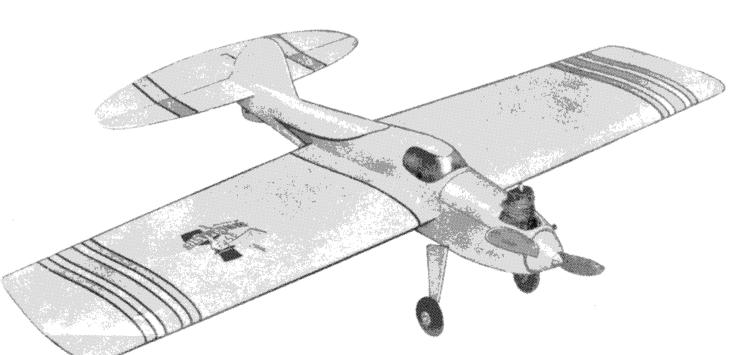
MOUNTS, DIRECTLY BEHIND ENGINE AS DES-

BODY. MAKE MOUNTING BRACKETS AS SHOWN AND SOLDER TO EACH END OF TANK. WHEN

SHOWN. SOLDER BOTH ENDS OF TANK TO

SUPER RINGMASTER

FOR CLASS B AND C ENGINES



Designed and Flight Tested For Stunt Flying

MATT KANIA SAYS: "Fellows—this is the best stunt model I have designed to date. Not only will it do everything in the book—but will probably outfly anything! We at STERLING back this statement up with the finest material and workmanship.



HORIZONTAL WHEN VIEWED FROM FRONT IN ORDER TO ACHIEVE THIS. IT IS NECESSARY TO SAND BOTTOM OF SKINS

CONTROL SYSTEM MANUFACTURED BY

/ICTOR STANZEL & CO., SCHULENBERG,

TEXAS; HAS ALSO BEEN TESTED AND

AND STRINGERS SO THAT THE BOTTOM SKIN MAY BE APPLIED FLAT WITHOUT BEING CEMENTED TO ANY HIGH SPOTS OR AT CORNERS. THIS CAN EASILY BE FUSELAGE SO THAT BOTH SIDES MAY BE HEAD F1. AGAINST LOWER NOSE BLOCK AND IT EXTENDS TO THE VERY END OF THE FUSELAGE. HOLD IN PLACE WITH PINS UNTIL DRY. USING CEMENT LI-BERALLY, CEMENT PLYWOOD TAIL SKID AS SHOWN. TOP SKINS ARE NOW IN-STALLED. TOP SKIN SECTION T1 IS CEMENTED IN PLACE BETWEEN THE SIDE SHOWN. NOTE THAT SIDES FIT INTO NOTCH IN II WHICH IS ROUNDED TO RESTS ON F3A. T2 IS NOW CEMENTED IN PLACE DIRECTLY BEHIND TO AND IS PLACED <u>OVER SIDE SKINS</u>. FRONT RESTS AGAINST T1 AND ON F3. LONG REAR SECTION T3 IS CEMENTED IN PLACE IN SAME MANNER AS T2. SEAM CENTER OF F4A TO PROVIDE GLUEING SURFACE. IT EXTENDS BACK TO REAR OF FUSELAGE. WHERE IT OVERHANGS SECTION BETWEEN BULKHEADS F6 AND IN THE NEXT STEP THE STAB-ILIZER IS CEMENTED INTO THIS OPEN HELD IN PLACE WITH SNAP FASTENERS AS SHOWN AND PROVIDED IN KIT. COWL AND SECURELY CEMENT SNAP FAS-TENERS IN PLACE. MALE PORTION IS CEMENTED TO REMOVABLE COWL, FEMALE PORTION IS CEMENTED ON FUSELAGE AT LOCATIONS SHOWN. IT WILL BE NECES-SARY TO CUT AWAY SOME OF THE WOOD AT THAT POINT ON BOTH COWLING AND REST ON FUSELAGE. USE THREE HEAVY COATS OF CEMENT WHEN INSTALLING SNAP FASTENERS, BUT BE CERTAIN NOT TO GET ANY CEMENT INTO OPENINGS IN FEMALE UNIT. THIS WILL CLOG AND RE-

ENTIRE FUSELAGE IS NOW SANDED AS SHOWN AND DESCRIBED IN FULL-SIZE TYPICAL-CROSS SECTION DRAWING AND NOTE. NOTICE THAT ALL CORNERS OF SKIN COVERING ARE ROUNDED UNTIL FUSELAGE IS ALMOST AN ELLIPTICAL SHAPE CROSS-SECTION. DO NOT ROUND OFF REAR SECTION OF T3 UPON WHICH RESTS TH RUDDER AS SHOWN ABOVE. THIS IS DONE AFTER RUDDER AND STABILIZER ARE INSTAL LED. TOP AND BOTTOM COWL BLOCKS ARE PROVIDED CARVED TO FINISHED SHAPE. IT IS ONLY NECESSARY TO TRIM AND SAND SIDE PIECES F'S TO FLOW SMOOTHLY INTO THEM. NOSE FRONT IS NOW SANDED TO A SLIGHT RADIUS ASPUNOWN ON SIDE VIEW DRAWING OF FINISHED MODEL. FINAL SANDING SHOULD BE WITH FINE SAND-PAPER FOR SMOOTH FIN-ISH. REMOVE TOP COWLING AND TEMPORARILLY INSTALL ENGINE. LOCATE AND CUT OUT HOLE FOR ENGINE IN COWLING AS SHOWN IN SHADED AREA ABOVE. HOLE IN COWL SHOULD CLEAR ENGINE BY APPROXIMATELY 1/4" AROUND SAME. WHEN COWL HAS BEEN FITTED REMOVE ENGINE. RUDDER AND STABILIZER ARE NOW CONSTRUCT-ED AS DESCRIBED IN STABILIZER DETAIL DRAWING AND NOTE. DRAW CENTER LINE ON STABILIZER. STABILIZER PORTION ONLY IS CEMENTED SECURELY TO REAR OF FUSELAGE IN POCKET FORMED BY T3 AND TOP OF SIDE SKINS. ELEVATOR PORTION (WITH CONTROL HORN) EXTENDS BEYOND FUSELAGE AS SHOWN ON SIDE Y EW AND SHOULD MOVE UP AND DOWN FREELY. BE CERTAIN THAT HINGE LINE FORMED BY STABILIZER AND ELEVATOR IS AT RIGHT ANGLES TO FUSELAGE AS SHOWN ON TOP VIEW. CEMENT FINISHED RUDDER SEC-URELY INTO NOTCH FOR SAME IN REAR OF 3. USE THREE HEAVY COATS OF CEMENT ON RUDDER AND STABILIZER INSTALLATION. WHILE DRYING CHECK THAT RUDDER IS VER-TICAL AND THAT STABILIZER IS HORIZONTAL ALLOW TO PRY THOROUGHLY, THEN INSTALL SMALL BLOCKS OF BALSA TO FILL IN SPACE BETWEEN TOP OF STABILIZER AND T3. WHEN DRY SAND SMOOTH TO MATCH FUSELAGE CON-TOUR. PROTRUDING END OF CONTROL ROD IS NOW BENT AT RIGHT ANGLE AND ENGAGED IN ELEVATOR HORN AS DESCRIBED IN CONTROL DETAIL DRAWING AND NOTE. CONTROL SYSTEM SHOULD NOW BE CHECKED FOR SMOOTHNESS OF OPERATION. LANDING GEAR BALSA STRUTS LG ARE PREPARED FOR INSTALLATION BY SAND-

ING TO A TRIANGULAR CROSS SECTION. FRONT IS SLIGHTLY NOTCHED OUT SO THAT THE STRUTS MAY BE CEMENTED AGAINST REAR OF WIRE LAND-

IS NOW READY FOR PAINTING. ANY ROUGH SURFACES SHOULD BE SANDED SMOOTH. MODEL MAY BE FINISHED IN ANY COLOR PREEERRED BY THE MODEL BUILDER. ORIGINAL SUPER RINGMASTER WAS PAINTED WHITE WING, TAIL, AND REAR PORTION OF FUSELAGE. FRONT OF FUSELAGE AND STRIPES ON WING AND TAIL WERE PAINTED BRIGHT YELLOW. TRIM STRIP-ING IS BLACK. IT IS ADVISABLE TO USE

UNIT FOR THE NECESSARY STRENGTH. CLOTH

SHOULD THEN BY COVERED WITH CEMENT WHICH

DONE WITH SANDPAPER WRAPPED AROUND BLOCK. BLOCK SHOULD BE WIDER THAN SANDED FLAT ACROSS AT THE SAME TIME NOTE THAT BOTTOM SKIN RESTS ON BULK-S INTO NOTCH AT REAR OF LOWER SKIN SKINS AND FLUSH WITH TOP OF SAME AS BETWEEN T2 AND T3 SHOULD JOIN OVER SPACE. USE PINS TO HOLD ALL SKINS IN PLACE UNTIL THOROUGHLY DRY. UP-PER COWL BLOCK IS REMOVABLE AND IS PLACE COWL ON FUSELAGE AGAINST F2B FRONT OF COWL IS CENTERED OVER NOSE ASSEMBLY. MARK POSITION OF COWL ON

FUSELAGE SO THAT SNAP FASTENERS ARE SLIGHTLY RECESSED TO PERMIT COWL TO

MOTOR MOUNTS AS SHOWN. IT IS NEC-ESSARY TO NOTCH OUT NOSE BLOCK WHERE T CONTACTS BOLT HEADS TO ALLOW NOSE BLOCK TO BE CEMENTED AGAINST BOTTOM of motor mounts. Hold in place with form front of Cabin. Rear of ${\sf T1}$ FIRST PIECE IS CEMENTED AGAINST OUT-COWL BLOCK. AND AGAINST BULKHEAD F1. FULL THICKNESS IS ACHIEVED AS SHOWN. DRAWING AND NOTE WHICH CLEARLY SHOWS NOSE ASSEMBLY WITH PENCIL. REMOVE

SULT IN A NON-WORKING INSTALLATION. SET ASIDE FUSELAGE TO DRY THOROUGH LY BEFORE PROCEEDING WITH NEXT STEP.

ING GEAR STRUT AS SHOWN ABOVE. USE GLUE LIBERALLY AND ALLOW TO DRY. WHEN DRY. ANY CLOTH MAY BE WRAPPED AROUND ENTIRE

STEP #4 FINAL ASSEMBLY

FUEL PROOF PAINT. ALL RAW SURFACES SHOULD BE GIVEN TWO OR THREE COATS OF CLEAR DOPE BEFORE APPLYING COLORS. IF PAINT USED IS NOT FUEL PROOF, BE CERTAIN TO APPLY ONE OR TWO COATS OF CLEAR FUEL PROOF OVER FINISHED PAINT JOB. DECAL IS APPLIED BY SOAKING SAME IN WATER UNTIL IT MOVES OFF BACKING. MOISTEN WING WHERE DECAL IS TO BE APPLIED. AND CAREFULLY SLIDE IN PLACE. MOISTURE IS REMOVED FROM UNDER DECAL BY CAREFULLY SMOOTHING SAME WITH BLOTTER. INSIDE OF COWLING AND FUSELAGE NOSE SHOULD LIKEWISE BE PAINTED WITH AT LEAST THREE OR FOUR COATS OF HOT FUEL PROOF PAINT. WHEN PAINTING OPERATION IS COMPLETE. INSTALL GAS TANK DIRECTLY BEHIND EN-GINE AS SHOWN AND DESCRIBED IN GAS TANK ASSEMBLY NOTE AND DRAWING. USING PATTERN PROVIDED, CUT OUT WINDSHIELD FROM CELLULOID IN KIT AND CEMENT IN PLACE TO FUSELAGE AS SHOWN ABOVE. (USE FUEL PROOF CEMENT AND HOLD IN PLACE WITH PINS UNTIL DRY) WHEELS ARE NOT PROVIDED WITH KIT. THEY MUST BE PURCHASED SEP-ARATELY BY THE MODELER. SECURE A LIGHT WEIGHT PAIR OF RUBBER TIRED WHEELS AND MOUNT ON LANDING GEAR AXLES. THESE MAY BE HELD IN PLACE EITHER WITH WHEEL RE-

TAINERS PURCHASED AT YOUR HOBBY DEALER OR A WASHER MAY BE SOLDERED TO EITHER SIDE OF WHEEL. SECURELY INSTALL ENGINE IN PLACE AND HOOK-UP FUEL LINE FROM TANK TO ENGINE. FOR ADDED BEAUTY, MODELER MAY INSTALL A 2" DIA. SPINNER OVER PROP-ELLER. USE PROPELLER SIZE RECOMMENDED BY ENGINE OR PROPELLER MANUFACTURER DE-PENDING ON ENGINE USED. & MODEL MUST BALANCE ON FRONT LINE. (GOING THROUGH THE WING). IF NECESSARY WEIGHT SHOULD BE ADDED TO FRONT OF FUSELAGE TO ACH-IEVE THIS. YOUR SUPER RINGMASTER IS NOW COMPLETE, READY TO FLY. HOOK-UP

FLYING WIRES AND HANDLE AND THE REST IS UP TO YOU. MATT KANIA, THE DESIGNER SAYS: "THE SUPER RINGMASTER IS MY VERY BEST STUNT MODEL". WE HERE AT STERLING HAVE BACKED UP THAT STATEMENT WITH THE FINEST MATERIAL AND WORKMANSHIP. GOOD FLYING!!! GOOD LUCK!!!

WASHER A LENGTH OF 3/16 SQ. IS CEMENTED TO INSIDE OF SIDE COWL PARTS F FLUSH WITH TOP OF SAME AS SHOWN IN ABOVE DRAWING. GIVE INSIDE OF ALL PARTS AN ADDITIONAL HEAVY COAT OF CEMENT AND ALLOW TO DRY THOROUGHLY. TOP SIDE SKINS WHICH CONTAIN WINDOW CUT-OUT ARE NOW INSTALLED. IT WILL BE NECESSARY TO CHAMFER (BEVEL) TOP AND BOTTOM OF SKINS SO THAT A CLOSE-FITTING SEAM IS ACHIEVED. REFER TO FULL-SIZE TYPICAL CROSS SECTION LANDING GEAR LUG ANGLE OF CHAMFER. CHAMFER MAY BE EASILY ACHIEVED BY WRAPPING SAND-PAPER AROUND SQUARE BLOCK, THEN SANDING CORNER OF SHEET HAVE BEEN BEVELED, MOISTEN OUTSIDE OF SKIN WHERE IT WRAPS AROUND F2B. CEMENT SKINS IN PLACE AS SHOWN ABOVE

HEAD-ASSEMBLY IS NOW READY TO BE IN-

STALLED AS DESCRIBED IN FUSELAGE STEP #1.

LANDING GEAR INSTALLATION DETAIL

LANDING GEAR

USING GLUE LIBERALLY ON ALL LANDING GEAR IS MOUNTED ON ASSEMBLED FRAMEWORK CONTACTED AND HOLD IN BULKHEADS F2 AND F2A. DRILL 1/8" DIA. PLACE WITH PINS UNTIL DRY. OTHER HOLES FOR LANDING GEAR LUGS. SLIP SIDE IS APPLIED IN SAME MANNER. BOT-LUGS OVER LANDING GEAR AND SLIDE INTO TOM FUSELAGE SKIN IS NOW CEMENTED POSITION. PUSH LUGS THROUGH FACE OF IN SAME MANNER. SINCE FUSELAGE F2 AS SHOWN. SLIP LOCK WASHERS OVER SIDES ARE NOT VERTICAL BUT TOE-IN LUGS AND TIGHTEN SECURELY WITH #6 NUTS TOWARD EACH OTHER AT BOTTOM: THE PROVIDED. BE CERTAIN THAT APEX OF RESULT IS THAT THE BOTTOM OF THE BULKHEAD F1, ASSEMBLED BULKHEAD F2 & F2A LANDING GEAR IS DIRECTLY UNDER TOP SIDE SKINS AND STRINGERS ARE NOT LUG SO THAT MODEL WILL REST HORIZON-TALLY ON GROUND. APPLY TWO COATS OF CEMENT OVER NUTS. LANDING GEAR-BULK-

MEASURABLY TO THE STABILITY AND PERFORM-ANCE OF YOUR SUPER RINGMASTER. USE AT BOTTOM. SOLDER PINS LEAST TWO OR THREE COATS OF CEMENT TO PREVENT WEIGHT FROM BREAKING LOOSE. ACROSS SLOTS IN BOLT HEADS. APPLY CHECK AND SAND ENTIRE WING FOR SMOOTH 2 COATS OF CEMENT. NESS TO PREPARE FOR COVERING. COVER WITH GAS MODEL SILKSPAN PROVIDED IN KIT. GRAIN RUNNING SPANWISE. SPRAY WITH WATER TO SHRINK TISSUE AND APPLY TWO F-2 A

LOWER COWL BLOCK NOTE THAT DRAWING ABOVE SHOWS FUSE-LAGE ONLY. ALTHOUGH WING SHOULD BE INSTALLED IN YOUR MODEL AS DESCRIB-ED IN STEP #2, IT IS OMITTED FOR THE SAKE OF CLARITY. MOTOR BOLT STUDS SHOULD NOW BE IN PLACE AS DESCRIBED IN MOTOR MOUNT BOLT INSTALLATION. CEMENT SHAPED LOWER COWL BLOCK AGAINST FRONT OF F1 AND BOTTOM OF

MOTOR BOLT DETAIL INSERT BOLTS THRU MOTOR MOUNTS FROM

UPPER COWL BLOCK

SNAP FASTENER

PINS. FRONT COWL SIDES F (OF WHICH THERE ARE SIX) ARE NOW CEMENTED IN PLACE AS SHOWN. NOTE THAT THERE ARE THREE ON EACH SIDE AND THAT THE SIDE OF MOTOR MOUNT. DOWN ON LOWER SUBSEQUENT PIECES ARE ADDED UNTIL