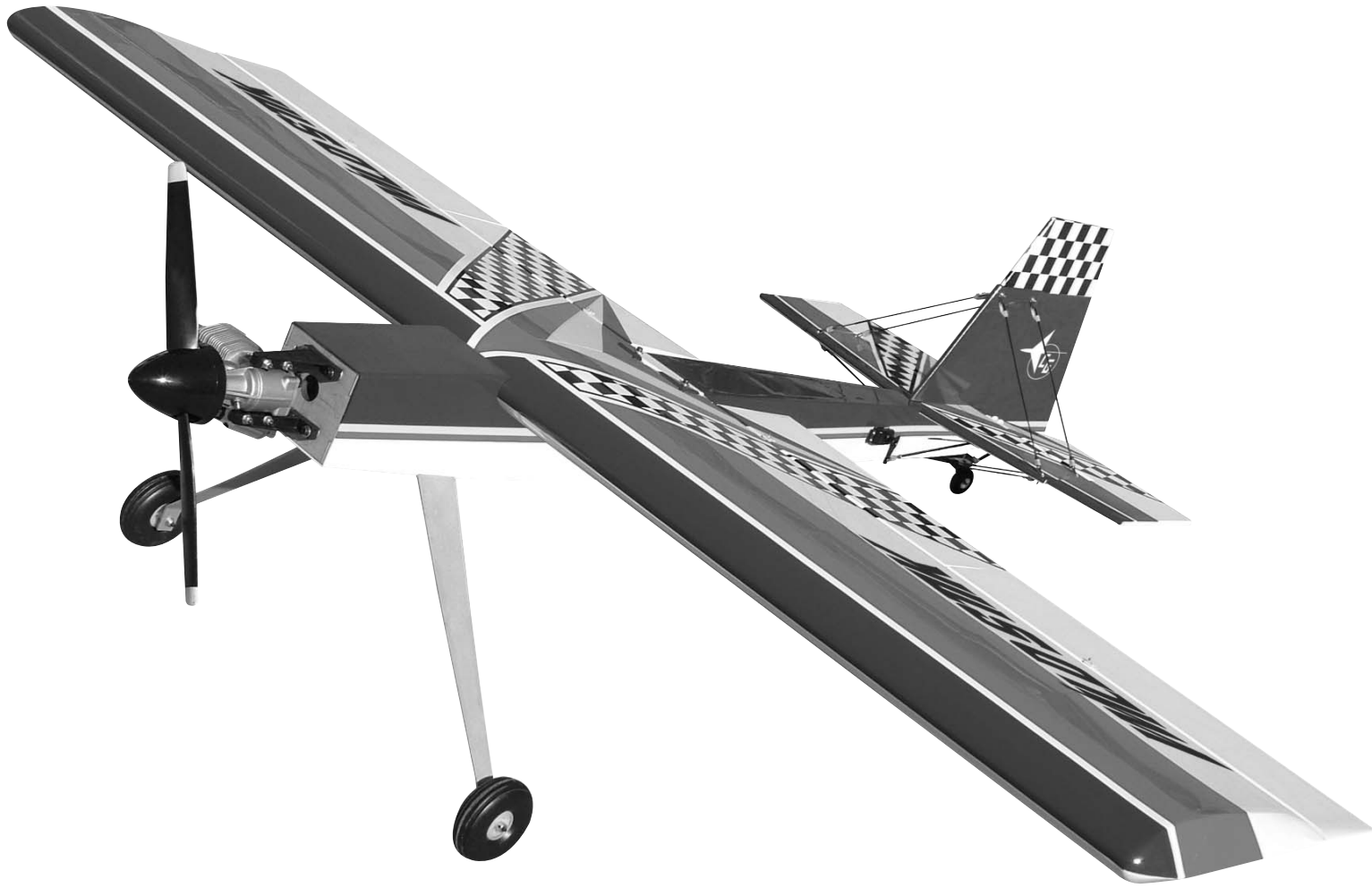


WILD STICK 120



CARL GOLDBERG PRODUCTS LTD.

P.O. Box 818, Oakwood, GA 30566 • 678-450-0085 • Fax: 770-532-2163 • www.carlgoldbergproducts.com

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WARNING! THIS IS NOT A TOY!
THIS IS NOT A BEGINNERS AIRPLANE

THIS R/C KIT AND THE MODEL YOU WILL BUILD FROM IT IS NOT A TOY! IT IS CAPABLE OF SERIOUS BODILY HARM AND PROPERTY DAMAGE. IT IS YOUR RESPONSIBILITY, AND YOURS ALONE - TO BUILD THIS KIT CORRECTLY, PROPERLY INSTALL ALL R/C COMPONENTS AND FLYING GEAR (ENGINE, TANK, RADIO, PUSHRODS, ETC. AND TO TEST THE MODEL AND FLY IT ONLY WITH EXPERIENCED, COMPETENT HELP, USING COMMON SENSE AND IN ACCORDANCE WITH ALL SAFETY STANDARDS AS SET FORTH IN THE ACADEMY OF MODEL AERONAUTICS SAFETY CODE. IT IS SUGGESTED THAT YOU JOIN THE AMA AND BECOME PROPERLY INSURED BEFORE ATTEMPTING TO FLY THIS MODEL. IF YOU ARE JUST STARTING R/C MODELING, CONSULT YOUR LOCAL HOBBY DEALER OR WRITE TO THE ACADEMY OF MODEL AERONAUTICS TO FIND AN EXPERIENCED INSTRUCTOR IN YOUR AREA.

WRITE TO: ACADEMY OF MODEL AERONAUTICS, 5151 MEMORIAL DR. MUNCIE, IN 47302

LIMITED WARRANTY

CARL GOLDBERG PRODUCTS IS PROUD OF THE CARE AND ATTENTION THAT GOES INTO THE MANUFACTURE OF PARTS FOR ITS MODEL KITS. THE COMPANY WARRANTS THAT FOR A PERIOD OF 90 DAYS, IT WILL REPLACE, AT THE BUYERS REQUEST, ANY PART OR MATERIAL SHOWN TO THE COMPANY'S SATISFACTION TO HAVE BEEN DEFECTIVE IN WORKMANSHIP OR MATERIAL AT THE TIME OF PURCHASE.

NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS MADE WITH RESPECT TO THE MERCHANDISE SOLD BY THE COMPANY. THE BUYER ACKNOWLEDGES AND UNDERSTANDS THAT HE IS PURCHASING ONLY A COMPONENT KIT FROM WHICH THE BUYER WILL HIMSELF CONSTRUCT A FINISHED FLYING MODEL AIRPLANE. THE COMPANY IS NEITHER THE MANUFACTURER OF SUCH A FLYING MODEL AIRPLANE, NOR A SELLER OF IT. THE BUYER HEREBY ASSUMES THE RISK AND ALL LIABILITY FOR PERSONAL OR PROPERTY DAMAGE OR INJURY ARISING OUT OF THE BUYERS USE OF THE COMPONENTS OR THE FINISHED FLYING MODEL AIRPLANE, WHENEVER ANY SUCH DAMAGE OR INJURY SHALL OCCUR.

ANY ACTION BROUGHT FORTH AGAINST THE COMPANY, BASED ON THE BREACH OF THE CONTRACT OF SALE TO THE BUYER, OR ON ANY ALLEGED WARRANTY THERE UNDER, MUST BE BROUGHT WITHIN ONE YEAR OF THE DATE OF SUCH SALE, OR THERE AFTER BE BARRED. THIS ONE-YEAR LIMITATION IS IMPOSED BY AGREEMENT OF THE PARTIES AS PERMITTED BY THE LAWS OF THE STATE OF GEORGIA.

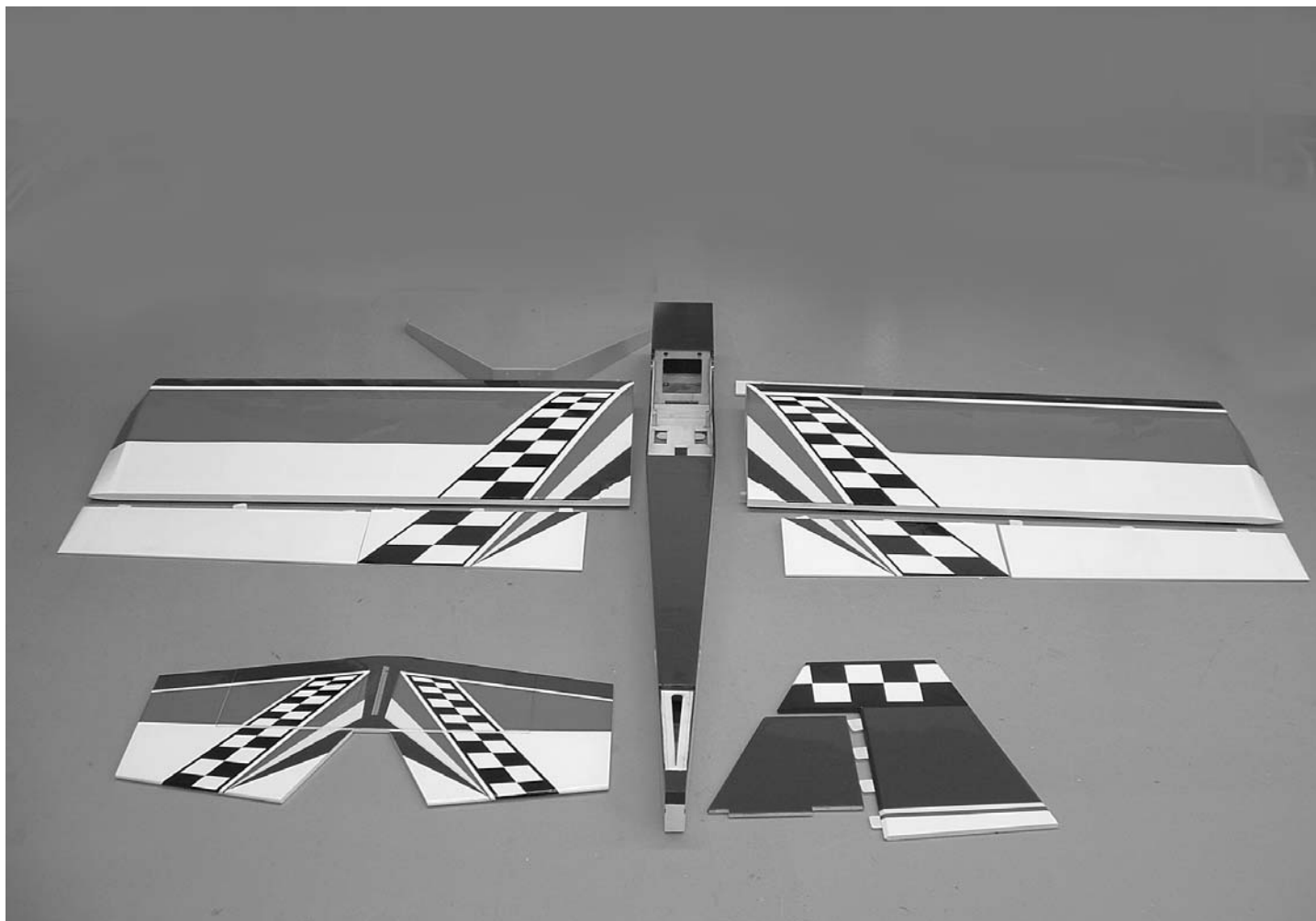
IMPORTANT INFORMATION

COVERING COMING LOOSE IS NOT COVERED UNDER WARRANTY. DUE TO TEMPERATURE CHANGES THE PLANE MAY DEVELOP SOME WRINKLES IN THE COVERING THAT YOU WILL NEED TO REMOVE WITH AN IRON. BE SURE TO SEAL THE EDGES DOWN FIRST SO THAT YOU DO NOT CAUSE THE COVERING TO SHRINK AND LEAVE EXPOSED AREAS OF WOOD. PLEASE INSPECT THE PLANE BEFORE BEGINNING TO ASSEMBLE TO MAKE SURE YOU ARE HAPPY WITH IT. AFTER ASSEMBLY HAS BEGUN YOU CANNOT RETURN THE KIT. IF YOU FIND A PROBLEM BEFORE BEGINNING TO ASSEMBLE THE PLANE YOU MUST CONTACT US, PLEASE DO NOT RETURN IT TO THE DEALER.

WILD STICK 120
WILD STICK

CONGRATULATIONS ON YOUR PURCHASE OF THE LANIER WILD STICK 120. THIS IS A VERY UNIQUE AIRCRAFT, WITH GREAT 3-D CAPABILITIES. EVERY EFFORT HAS BEEN MADE TO PRODUCE A LIGHTWEIGHT, STRAIGHT, EASY TO ASSEMBLE AIRCRAFT. BECAUSE OF ITS OVERSIZE CONTROL SURFACES WHICH ARE DOUBLE BEVELED TO ALLOW FOR EXTREME THROWS, GREAT CARE MUST BE TAKEN IN THE SET-UP AND FLYING OF THIS AIRPLANE. QUALITY HARDWARE COMPONENTS HAVE BEEN PROVIDED TO ALLOW FOR 3D SET-UP WHILE MAINTAINING ADEQUATE MECHANICAL ADVANTAGE TO ELIMINATE FLUTTER. IT IS YOUR RESPONSIBILITY AS AN ADVANCED PILOT TO FLY THE AIRCRAFT IN AN INTELLIGENT MANNER. THROTTLE MANAGEMENT IS A MUST!!!!!!! WE AT LANIER HAVE PUT THE WILD STICK 120 THROUGH A VERY RIGOROUS FLIGHT-TESTING SCHEDULE AND HAVE STRESSED THE AIRFRAME BEYOND ALL PRACTICAL PARAMETERS WITHOUT A SINGLE FAILURE. LANIER WILL NOT WARRANT THE WILD STICK 120 AGAINST FLUTTER DUE TO IMPROPER SET-UP OR EXCESSIVE SPEED MANEUVERS. HAVING SAID THAT, WE BELIEVE YOU WILL FIND THE WILD STICK 120 TO BE ONE OF THE MOST RESPONSIVE, IN-THE-GROVE AIRCRAFT ON THE MARKET. THE WILD STICK 120 EXCELS AT HIGH-ALPHA MANEUVERS INCLUDING HARRIERS (BOTH UPRIGHT AND INVERTED), HIGH-ALPHA ROLLS, AND HIGH-ALPHA KNIFE EDGE. TORQUE ROLLS, WATERFALLS, KNIFE EDGE LOOPS AND ELEVATORS ARE ALL WITHIN THE PERFORMANCE PARAMETERS OF THIS UNIQUE AIRCRAFT. JUST REMEMBER TO USE COMMON SENSE WHEN FLYING THIS HIGH PERFORMANCE MACHINE.

PARTS LAYOUT



FUSELAGE	1
WING PANELS	2
AILERONS	2
FLAPS	2
STABILIZER	1
ELEVATORS	2
FIN	1
RUDDER	1
LANDING GEAR	1

COLORS	
RED	TRUE RED #866
WHITE	#870
BLACK	#874
BLUE	DEEP BLUE #873
YELLOW	BRIGHT YELLOW #872

HARDWARE LIST

LANDING GEAR	1	WING BOLTS	
4MMX12MM BOLTS	4	4MMX40MM	2
4MM WASHERS	6	4MM FLAT WASHERS	2
4MM WHEEL COLLARS	4		
4MM AXELS	2	FUEL TANK WITH HARDWARE	1
4MM LOCK NUTS	2		
3.5" WHEELS	2	TAIL WHEEL	
		TAIL WHEEL BRACKET	
MOTOR MOUNTS	2	METAL RUDDER HORN	
4MMX20MM BOLTS	4	SPRING WIRE AXEL	
4MMX25MM BOLTS	4	SPRINGS (2)	
4MM BLIND NUTS	4	WHEEL COLLAR	
4MM FLAT WASHERS	8	TILLER ARM BRACKET	
4MM LOCK NUTS	4	THREADED ROD (TILLER ARM)	
		NYLON PUSHROD ENDS (2)	
FLYING WIRES		2MM X 10MM SCREWS (5)	
1.8MMX16MM BOLTS	6	FLAT WASHERS (5)	
1.8MM NUTS	6		
1.8MM WASHERS	12		
METAL BRACKETS	12		
NYLON SWING IN KEEPERS	8		
1.6MMX10" PUSHROD WITH CLEVIS	4		
1.6MMX7" PUSHROD WITH CLEVIS	4		
METAL PLATE(BOTTOM BRACKET)	1		
SILICONE CLEVIS KEEPERS	8		
2MMX10MM SCREWS	2		
CONTROL HORNS	8		
CONTROL HORN PLATES	6		
2MMX20MM SCREWS	14		
2MM NUTS	2		
PUSHRODS			
3MMX10CM PUSHRODS(AILERON)	4		
3MMX20CM PUSHRODS(ELEVATOR)	2		
3MM METAL CLEVIS	12		
3MM JAM NUTS	12		
BRAIDED CABLE	FEET 6		
RIGGING COUPLERS 2MM	4		
CABLE SWAGES	4		
2MM CLEVISES	5		
2MM JAM NUTS	5		
SILICONE CLEVIS KEEPERS	17		
2MMX50CM THROTTLE PUSHROD	1		
PUSHROD CONNECTOR(E-Z CONNECTOR)	1		
PLASTIC TUBE 4MMX25CM	1		

BUILDING INSTRUCTIONS

BEFORE STARTING TO BUILD THIS KIT, WE URGE YOU TO READ THROUGH THESE INSTRUCTIONS. THEY CONTAIN SOME IMPORTANT BUILDING SEQUENCES AS WELL AS INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THE MODEL.

WE EXPECT THAT YOU HAVE SOME BUILDING EXPERIENCE TO TAKE ON THIS MODEL. HOWEVER, EVERY MINUTE DETAIL IS NOT COVERED. THIS IS NOT A BASIC TRAINER. THE INSTRUCTIONS TOGETHER WITH THE SIMPLICITY OF THIS KIT WILL ALLOW YOU TO PRODUCE A FIRST CLASS WILD STICK 3-D.

BUILDING SUPPLIES NEEDED

HOBBY KNIFE W/ #11 BLADE

THIN ZAP CA

30 MINUTE Z-POXY

THREAD LOCK

WIRE CUTTERS

PLIERS

DRILL WITH BITS: 1/8", 5/32", 1/16"
5/64"

PHILLIPS AND STANDARD SCREWDRIVER

SMALL CLAMPS

MASKING TAPE

TAPE MEASURE

WASHABLE MARKER

PAPER TOWELS

RUBBING ALCOHOL

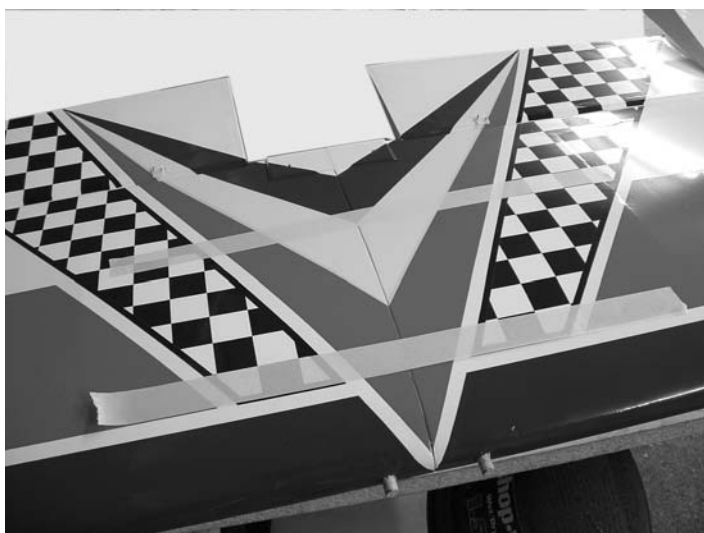
WING CONSTRUCTION

COLLECT THE FOLLOWING PARTS:

1. LEFT AND RIGHT WING PANEL
2. DIHEDRAL BRACE
3. WING HOLDDOWN BOLTS(2)



1. TRIAL FIT THE DIHEDRAL BRACE IN THE SLOT ON ONE WING. THE WING IS FLAT (NO DIHEDRAL) SO THE BRACE SHOULD FIT EITHER WAY. SLIDE THE OTHER WING PANEL IN PLACE AND MAKE SURE THE JOINT IN THE CENTER IS CLOSED.



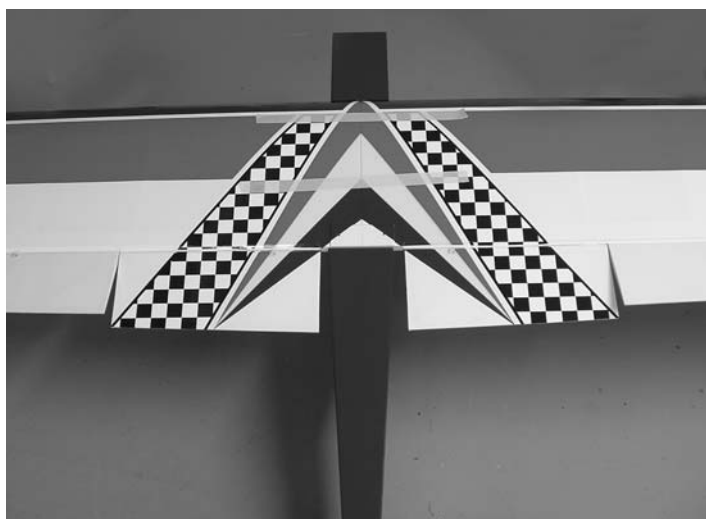
2. MIX SOME 30 MINUTE EPOXY AND SPREAD ON ALL SIDES OF THE DIHEDRAL BRACE, FRONT BACK AND EDGES.

3. SPREAD EPOXY ON THE ROOT RIB OF EACH WING PANEL. USE A THIN SCRAP OF WOOD AND WORK SOME OF THE EPOXY DOWN INTO THE SLOTS FOR THE DIHEDRAL BRACE ON EACH PANEL.

4. USE MASKING TAPE TO HOLD THE WING PANELS FIRMLY TOGETHER WHILE THE EPOXY SET. LAY THE WING FLAT ON THE FLOOR OR WORK BENCH WHILE THE EPOXY CURES. DO NOT STAND THE WING ON ONE TIP, ALL THE GLUE WILL RUN TO ONE END AND GIVE YOU A POOR JOINT.



5. LOCATE THE TWO 4MM X 40MM BOLTS AND TWO 4MM FLAT WASHERS.

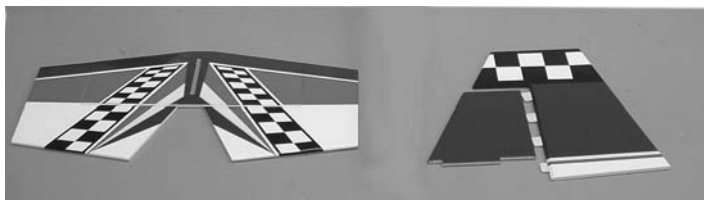


6. AFTER THE EPOXY HAS CURED, BOLT THE WING IN PLACE ON THE FUSELAGE..

TAIL CONSTRUCTION

LOCATE THE FOLLOWING PARTS;

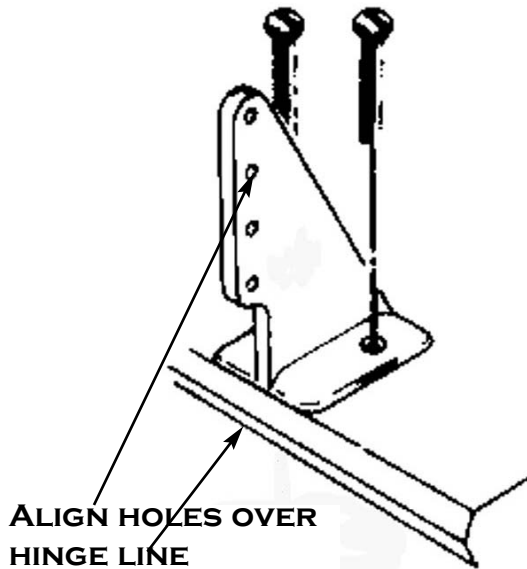
- 1. STABILIZER WITH ELEVATORS**
- 2. FIN WITH RUDDER**



- 3. NYLON CONTROL HORNS**
- 4. NYLON NUT PLATES**
- 5. 2MM X 20MM SCREWS**
- 6. SILICONE CLEVIS KEEPERS**



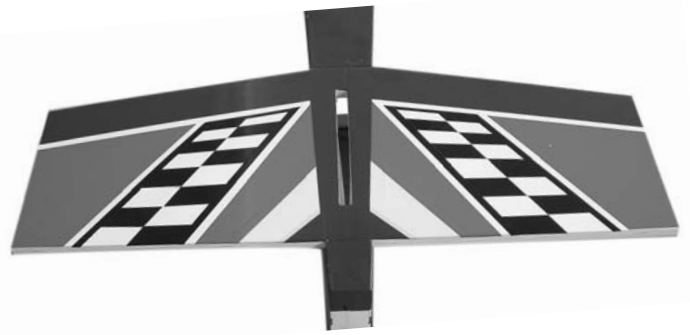
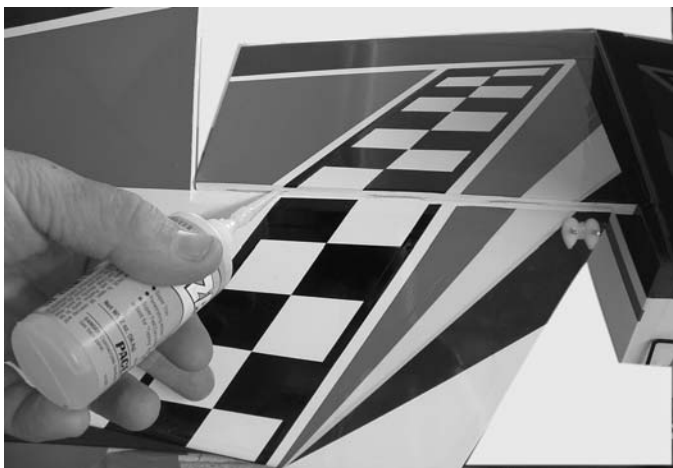
1. LOCATE THE CONTROL HORNS ON THE INSIDE EDGE OF THE ELEVATORS ON THE BOTTOM SIDE. MAKE SURE THE HOLES FOR THE CLEVIS ARE ALIGNED OVER THE HINGE LINE. MARK THE LOCATION OF THE HOLES AND DRILL A 3/32" HOLE AT THE FOUR LOCATIONS. USE THE 2MM SCREWS AND NUT PLATES TO MOUNT THE CONTROL HORNS.



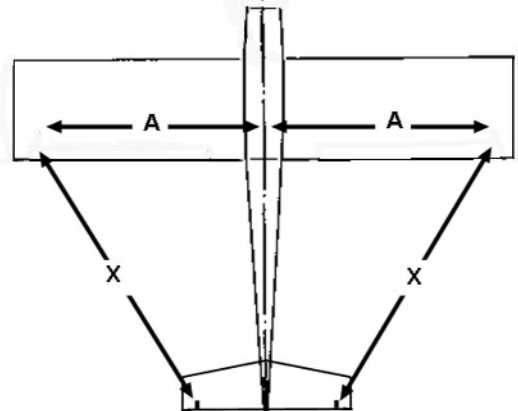
2. REMOVE THE ELEVATORS FROM THE STAB AND MAKE SURE ALL THE HINGES ARE CENTERED IN THE SLOTS. TO MAKE SURE THE HINGES ARE CENTERED, USE A STRAIGHT PIN IN THE MIDDLE OF THE HINGE WHEN PUSHING THE ELEVATOR ONTO THE STAB.



3. FLEX THE ELEVATOR TO THE FULL EXTENT OF ITS TRAVEL IN ONE DIRECTION. MAKE SURE THE HINGE LINE STAYS CLOSED AS CLOSE AS POSSIBLE. APPLY A DROP OF THIN CA TO EACH HINGE. TURN THE STAB OVER, FLEX THE ELEVATOR TO THE FULL TRAVEL IN THE OTHER DIRECTION AND APPLY GLUE TO EACH HINGE. GO BACK AND APPLY ANOTHER DROP OF GLUE TO EACH HINGE.



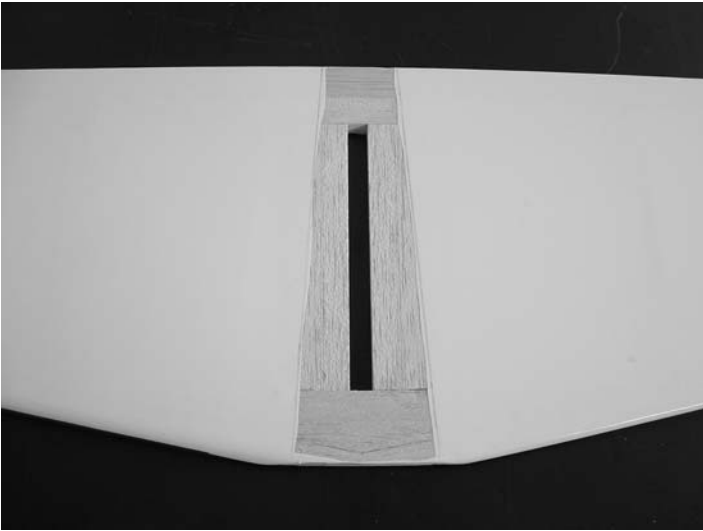
4. SET THE STAB IN PLACE IN THE SLOT ON THE REAR OF THE FUSELAGE.



5. MEASURE THE STAB TO MAKE SURE IT IS CENTERED IN THE FUSELAGE. MAKE SURE THE SLOT FOR THE FIN IS CENTERED ON THE FUSELAGE. MOVE THE STAB UNTIL DIMENSION X-X ARE THE SAME. THIS WILL HAVE THE STAB SQUARE TO THE FUSELAGE.



6. WHEN YOU HAVE THE STAB SQUARE TO THE FUSELAGE, MAKE A MARK ALONG THE SIDE OF THE FUSELAGE ON THE BOTTOM OF THE STAB.



7. USE A RAZOR BLADE OR E-XACTO KNIFE TO CAREFULLY REMOVE THE COVERING INSIDE THE MARKS ON THE BOTTOM OF THE STAB. CUT CAREFULLY SO AS NOT TO CUT THE WOOD, JUST THE COVERING.



9. REMOVE THE COVERING FROM THE BOTTOM PORTION OF THE RUDDER WHERE IT PLUGS INTO THE STAB.



8. MIX SOME 30 MINUTE EPOXY AND APPLY TO THE BARE WOOD ON THE BOTTOM OF THE STAB AND IN THE SLOT ON THE REAR OF THE FUSE. REINSTALL THE STAB AND CHECK TO MAKE SURE IT IS SQUARE. USE PINS TO HOLD IN PLACE. CHECK THE ALIGNMENT WITH THE WING BY SIGHTING FROM THE FRONT AND REAR. APPLY PRESSURE TO ONE SIDE IF NECESSARY TO MAKE STAB PARALLEL TO WING.



10. FIT THE FIN IN PLACE AND MAKE A MARK AROUND IT. REMOVE THE COVERING INSIDE THE MARKS ON BOTH THE STAB AND THE REAR PORTION OF THE FUSELAGE BEHIND THE STAB.

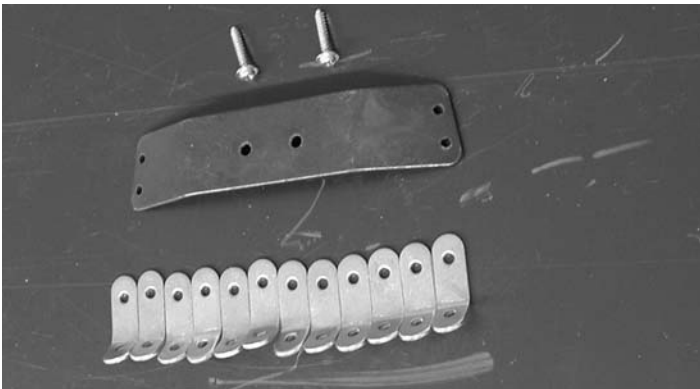


11. EPOXY THE FIN IN PLACE MAKING SURE IT IS SQUARE TO THE STAB AND CENTERED ON THE FUSELAGE IN THE REAR.



1.TAKE FOUR OF THE ANGLE BRACKETS, TWO SCREWS, TWO NUTS AND FOUR FLAT WASHERS AND BOLT TO THE TOP OF THE FIN IN THE PREDRILLED HOLES. YOU WILL HAVE TO LOCATE THE HOLES UNDER THE COVERING. PUT TWO BRACKETS ON EACH SIDE OF THE FIN.

FLYING WIRES

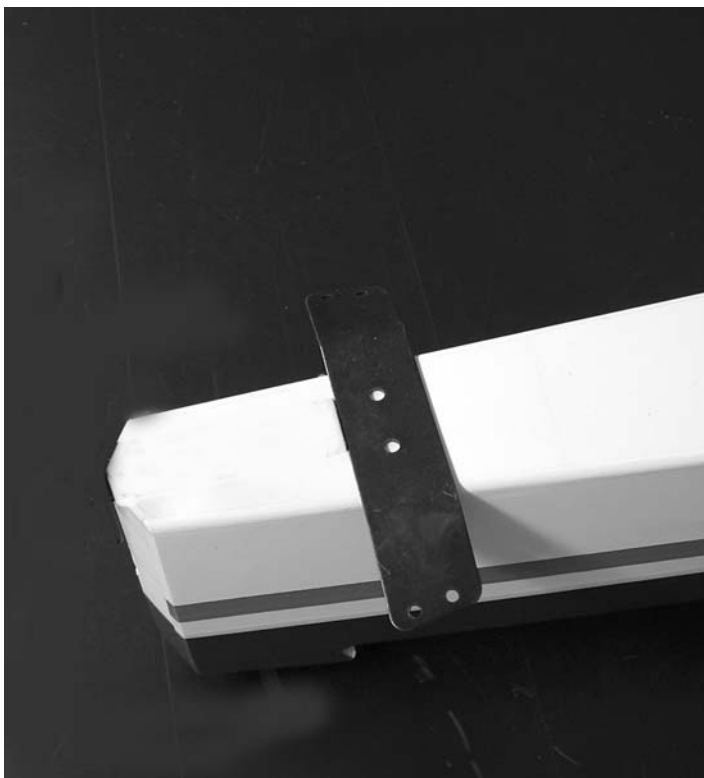


LOCATE THE FOLLOWING PARTS:

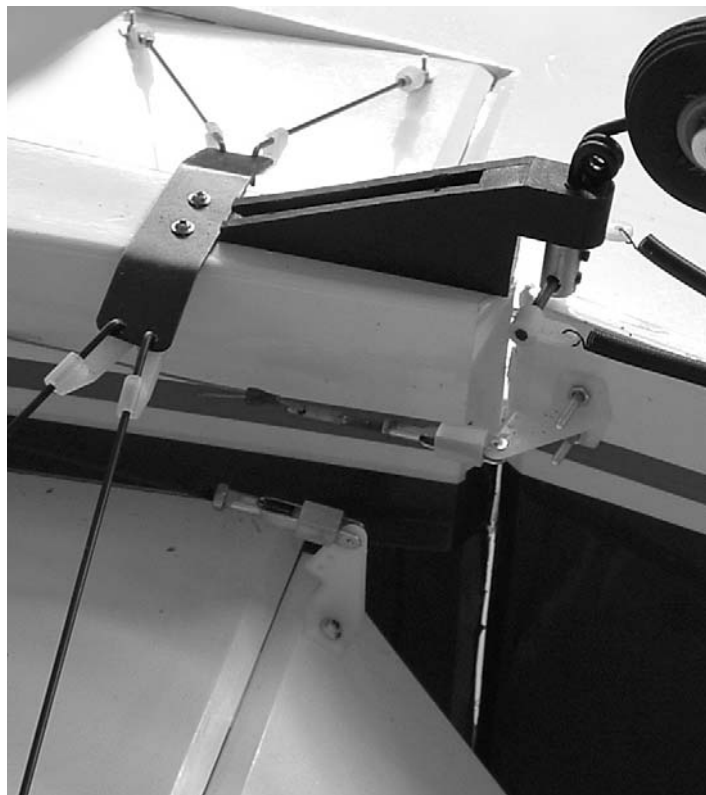
ALUMINUM BRACKET FOR FUSE BOTTOM	1
2MMX10MM SCREWS	2
ANGLE BRACKETS	12
1.8X16MM BOLTS	6
1.8MM NUTS	6
FLAT WASHERS	12
NYLON SWING IN KEEPERS	8
2MM PUSHRODS WITH CLEVIS X 10"	4
2MM PUSHRODS WITH CLEVIS X 7"	4
SILICONE CLEVIS KEEPERS	8



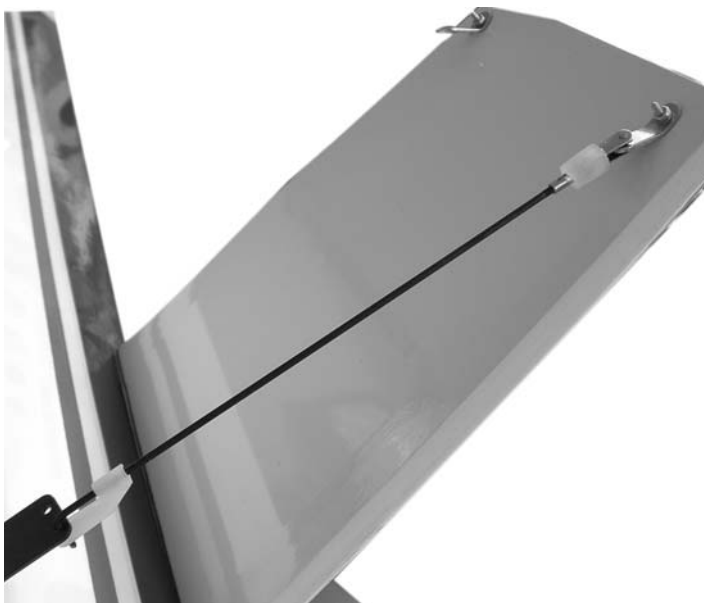
2.REPEAT WITH THE OTHER BRACKETS ON THE END OF THE STAB. PUT BRACKETS ON BOTH SIDES TOP AND BOTTOM.



3.MOUNT THE ALUMINUM BRACKET ON THE BOTTOM OF THE FUSELAGE USING THE TWO 2MMX10MM SCREWS.



USE THE TAIL WHEEL BRACKET TO ALIGN THE FLYING WIRE BRACKET AT THE FRONT EDGE OF THE MOUNTING BLOCK. ALIGN THE TAIL WHEEL BRACKET AT THE REAR EDGE OF THE FUSELAGE AND MOUNT THE ALUMINUM BRACKET AT THE FRONT EDGE.



4. TAKE ONE OF THE 7" PUSHRODS AND MAKE SURE THE CLEVIS IS SCREWED ON WITH ABOUT 1/16" OF THREADS SHOWING ON THE INSIDE. INSTALL THE CLEVIS ON THE ANGLE BRACKET AND MARK THE LOCATION OVER THE HOLE ON THE FUSELAGE BRACKET. MAKE A 90 DEGREE BEND AND CUT AT 3/8". INSTALL THE WIRE IN THE ALUMINUM FUSE BRACKET AND RETAIN WITH THE NYLON SWING IN KEEPER. ADJUST THE LENGTH SO YOU DON'T PULL THE STAB OUT OF ALIGNMENT.



6. TAKE THE 10" PUSHRODS AND ATTACH TO BRACKETS ON STAB. BEND 90 DEGREES AT BRACKETS ON FIN AND CUT TO 3/8". RETAIN WITH NYLON SWING IN KEEPERS. REPEAT FOR OTHER SIDE.



5. REPEAT FOR ALL FOUR WIRES ON THE BOTTOM SIDE.



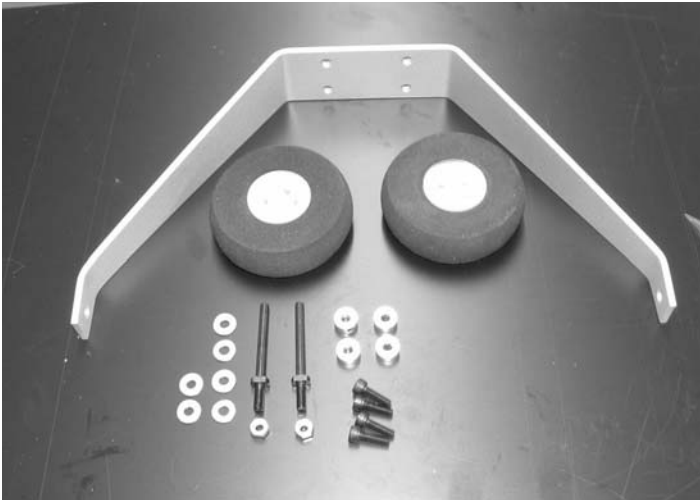
7. AFTER ALL WIRES ARE INSTALLED THEY CAN BE ADJUSTED BY PUTTING A LEVEL IN THE CENTER OF THE STAB AND LEVELING THE PLANE. MOVE THE LEVEL TO THE TIP OF THE STAB AND ADJUST WIRES TILL LEVEL.

LANDING GEAR

2. INSTALL THE AXELS USING THE AIRCRAFT LOCK NUTS.

LOCATE THE FOLLOWING PARTS:

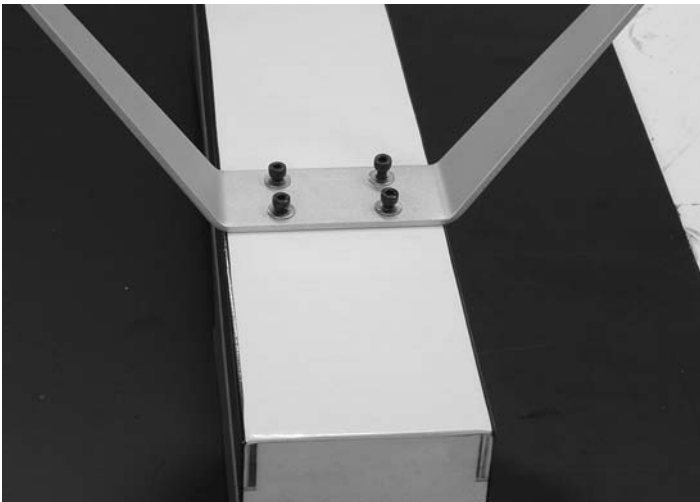
- 1. LANDING GEAR**
- 2. TWO WHEELS**
- 3. TWO AXELS**
- 4. TWO AXEL NUTS**
- 5. FOUR WHEEL COLLARS**
- 6. SIX FLAT WASHERS**
- 7. FOUR MM SCREWS**



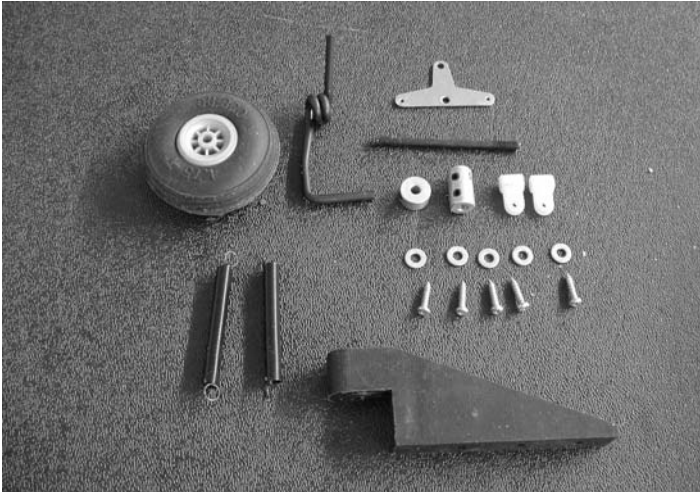
1. FIT THE LANDING GEAR TO THE BOTTOM OF THE FUSELAGE AND INSTALL THE FOUR SCREWS AND FLAT WASHERS. USE LOCKTIT ON THE SCREWS.



3. INSTALL THE WHEELS USING ONE WHEEL COLLAR ON THE INSIDE AND ONE ON THE OUTSIDE OF THE WHEEL.



TAIL WHEEL



LOCATE THE FOLLOWING PARTS:

TAIL WHEEL BRACKET

TAIL WHEEL

RUDDER TILLER ARM

WIRE AXEL

3MM WHEEL COLLAR

NYLON CONTROL HORN BRACKETS 2

SPRINGS 2

TAIL WHEEL TILLER ARM

TAIL WHEEL TILLER ARM COLLAR

2MM SCREWS 5

2MM WASHERS 5



1. INSERT THE TAIL WHEEL WIRE INTO THE BRACKET AND FIT THE COLLAR ON TOP. ALIGN THE HOLE FOR THE TILLER ARM SO IT IS PARALLEL TO THE AXEL.



2. CENTER THE TILLER ARM IN THE COLLAR AND TIGHTEN THE SET SCREW. SCREW THE NYLON HORN BRACKETS ON EACH END. INSTALL THE TAIL WHEEL USING THE 3MM COLLAR TO RETAIN.



3. MOUNT THE BRACKET FLUSH WITH THE REAR OF THE FUSELAGE USING THE THREE SCREWS.

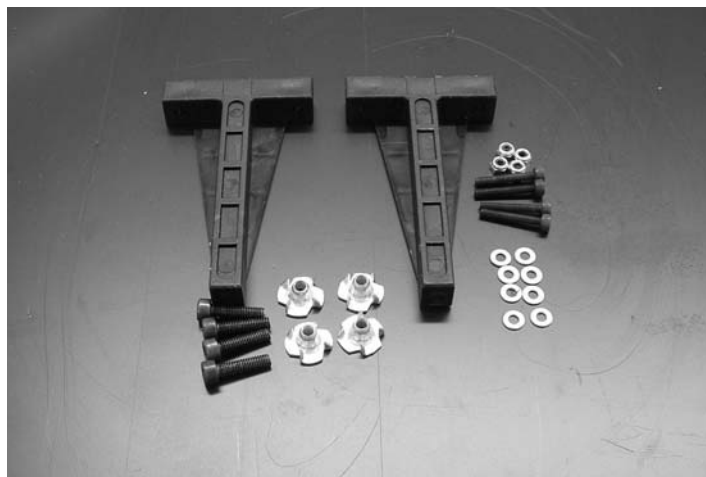
ENGINE INSTALLATION

LOCATE THE FOLLOWING PARTS:

1. TWO MOTOR MOUNTS
2. FOUR 4MMX20MM SCREWS
3. FOUR 4MM BLIND NUTS
4. FOUR 4MMX25MM BOLTS
5. FOUR 4MM AIRCRAFT LOCK NUTS.
6. 8 4MM FLAT WASHERS

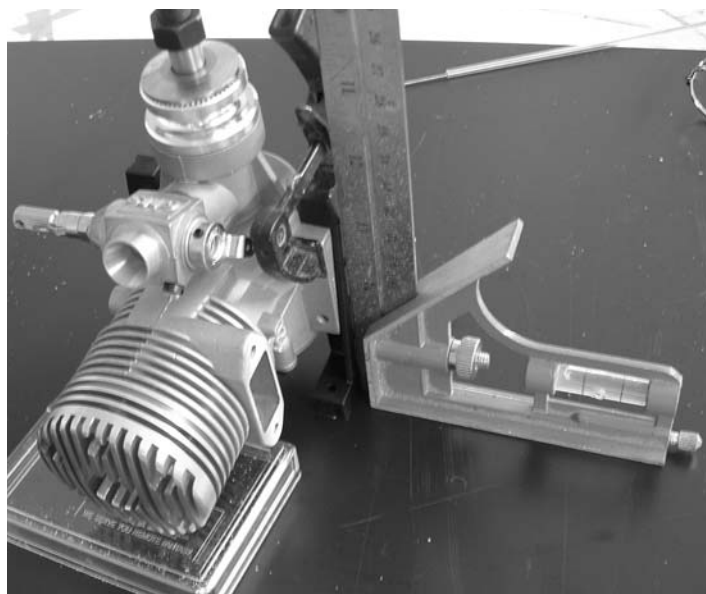


4. ATTACH THE TWO SPRINGS TO THE TILLER ON ONE END AND THE TWO NYLON HORN BRACKETS ON THE OTHER. PULL THE BRACKET ALONG THE BOTTOM OF THE RUDDER UNTIL THE SPRINGS HAVE A LITTLE TENSION ON THEM. MOUNT THE BRACKET AT THIS POINT. DRILL TWO HOLES WITH A #54 DRILL AND HARDEN THE HOLES WITH THIN CA. MOUNT THE BRACKET WITH THE TWO 2MMX1MM SCREWS AND FLAT WASHERS.

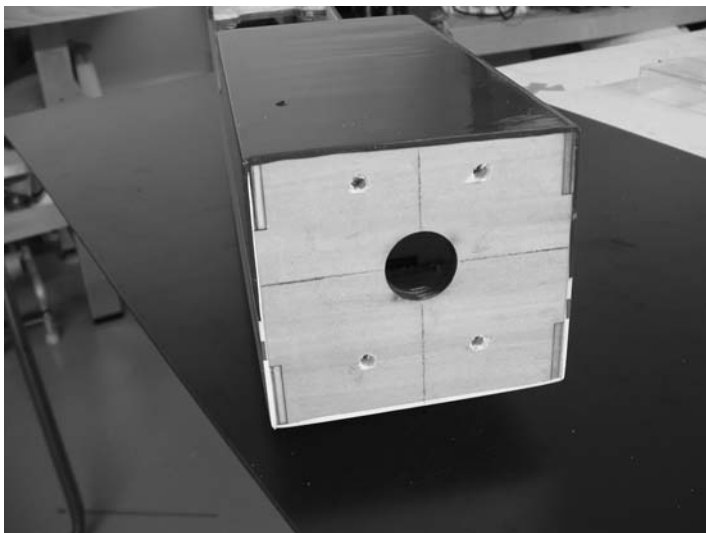


1. CLAMP YOUR ENGINE TO THE TWO MOTOR MOUNT MAKING SURE THAT BOTH SIDES OF THE MOUNTS SIT SQUARELY ON THE TABLE. MAKE SURE THE ENGINE IS NOT OFFSET TO THE LEFT OR RIGHT IN THE MOUNT. MARK THE LOCATION OF THE FOUR HOLES.

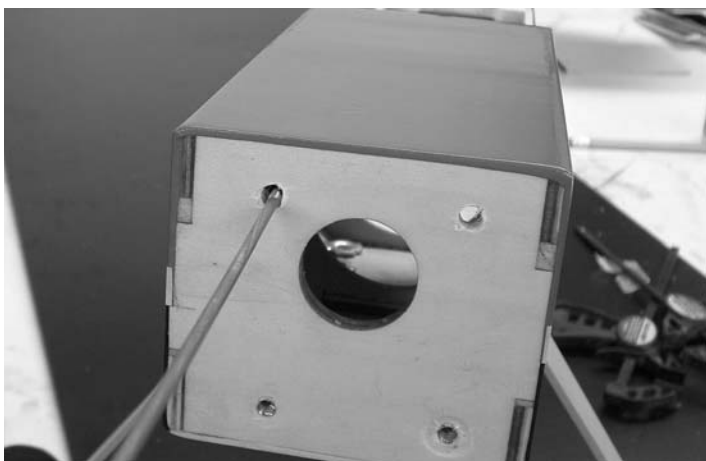
2. DRILL FOUR HOLES AND MOUNT THE ENGINE USING THE FOUR 4MM BOLTS AND AIRCRAFT LOCK NUTS.



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3. CENTER THE ENGINE ON THE FIREWALL AND MARK THE LOCATION OF THE FOUR MOUNTING BOLTS.

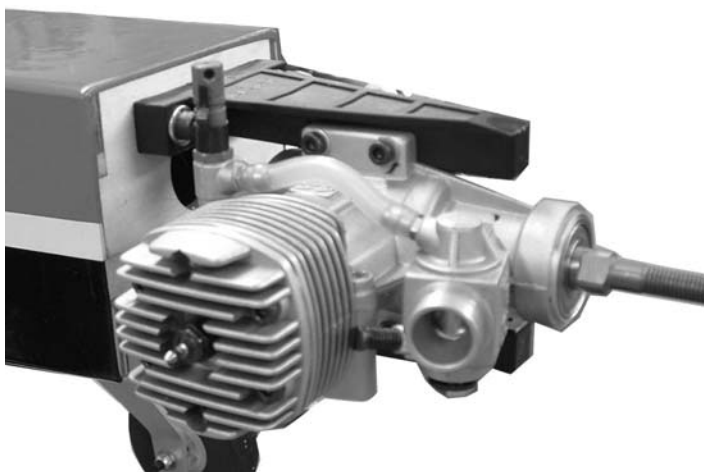


4. INSTALL THE FOUR BLIND NUTS IN THE FIREWALL. THE BEST WAY TO INSTALL THE NUTS IS TO USE A PIECE OF WIRE TO PULL THE NUTS INTO PLACE .

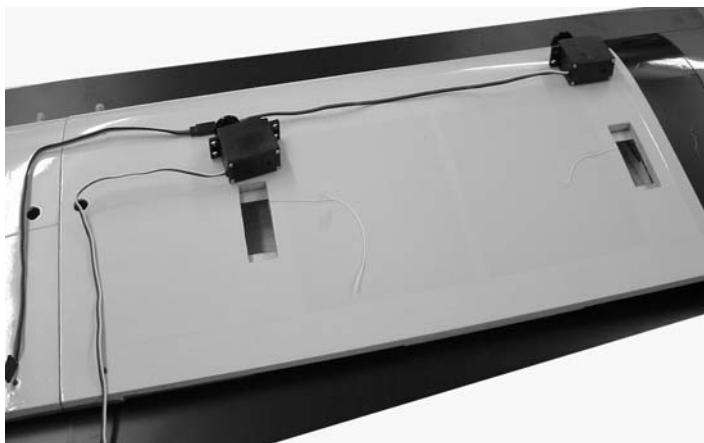


5. PULL THE NUTS UP WITH THE WIRE THEN INSTALL THE BOLT AND WASHER THROUGH THE HOLE AND TIGHTEN TO FINISH PULLING THE BLIND NUT INTO THE HOLE.

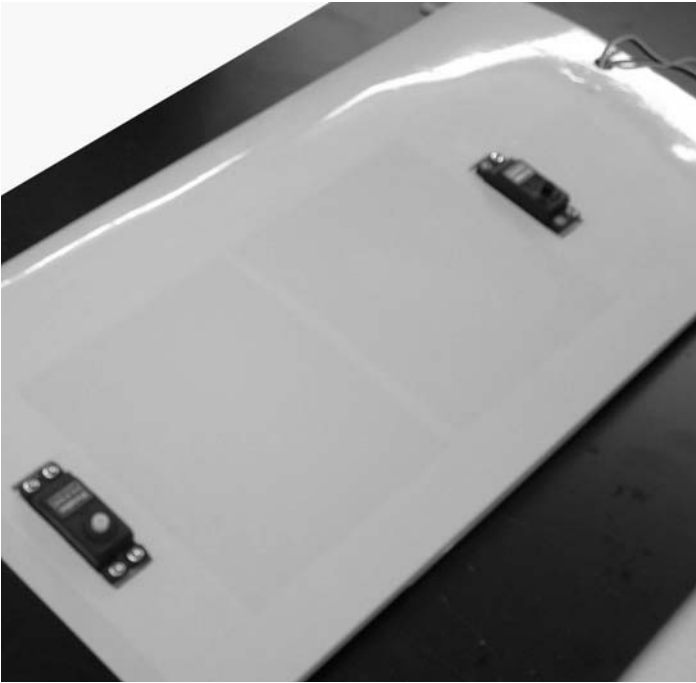
6. AFTER ALL FOUR NUT ARE PULLED TIGHT, INSTALL THE ENGINE USING THE FOUR 4MM BOLTS AND WASHERS. USE LOCK TITE ON THE BOLTS.



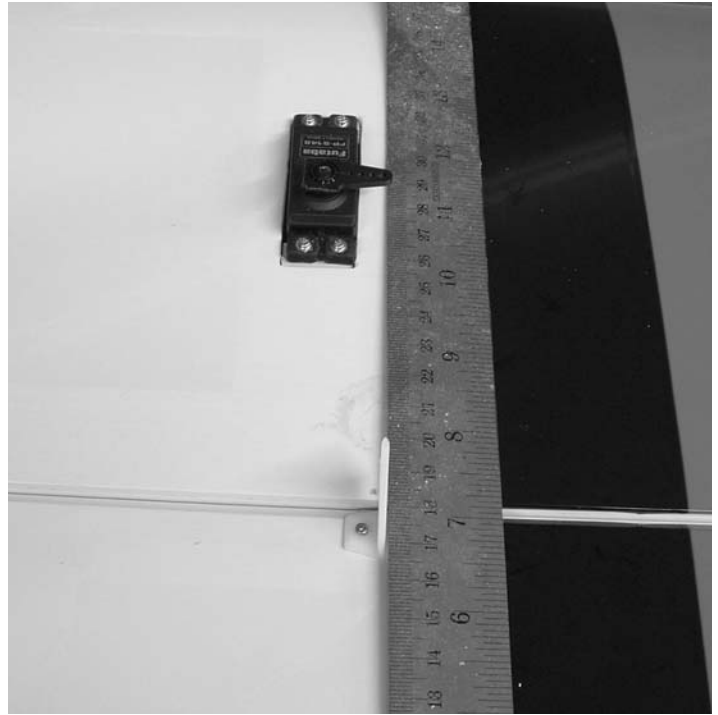
RADIO INSTALLATION



1. FOR THE AILERONS YOU WILL NEED FOUR SERVOS AND TWO 18" SERVO EXTENSIONS.



2. INSTALL THE SERVOS USING THE HARDWARE SUPPLIED WITH THE RADIO. USE THE STINGS INSTALLED IN THE WING TO PULL THE WIRES THROUGH TO THE CENTER OF THE WING.



4. USE A STRAIGHT EDGE TO MARK THE LOCATION OF THE FOUR AILERON HORNS IN LINE WITH THE OUTPUT ARM. INSTALL THE FOUR HORNS USING THE 2MM BOLTS AND NYLON PLATES. ALIGN OVER THE HINGE LINE AS WE DID ON THE ELEVATORS.



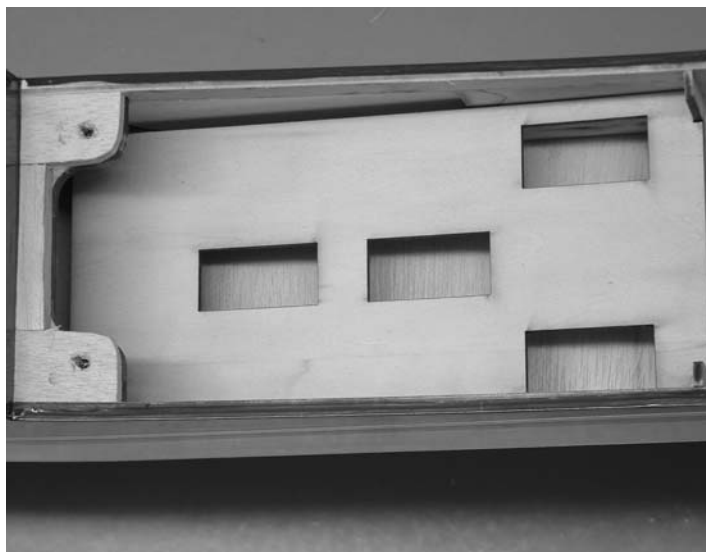
3. HINGE THE AILERONS USING THE SAME METHOD USED ON THE ELEVATORS. CENTER ALL HINGES AND USE THIN CA TO GLUE IN PLACE MAKING SURE YOU HAVE FULL DEFLECTION IN BOTH DIRECTIONS AND A TIGHT HINGE LINE.



5. LOCATE ONE OF THE 3MM PUSHRODS, METAL CLEVIS, TWO 3MM NUTS AND SILICONE CLEVIS KEEPER. MAKE SURE THE CLEVIS IS SCREWED ON THE PUSHROD WITH ABOUT 1/16" OF THREADS SHOWING ON THE INSIDE OF THE CLEVIS. INSTALL THE CLEVIS ON THE CONTROL HORN AND THE SERVO ARM. MAKE SURE THE SERVO IS CENTERED AND THE AILERON IS IN NEUTRAL AND ADJUST LENGTH. TIGHTEN THE 3MM NUTS AGAINST THE CLEVIS TO LOCK IN PLACE.



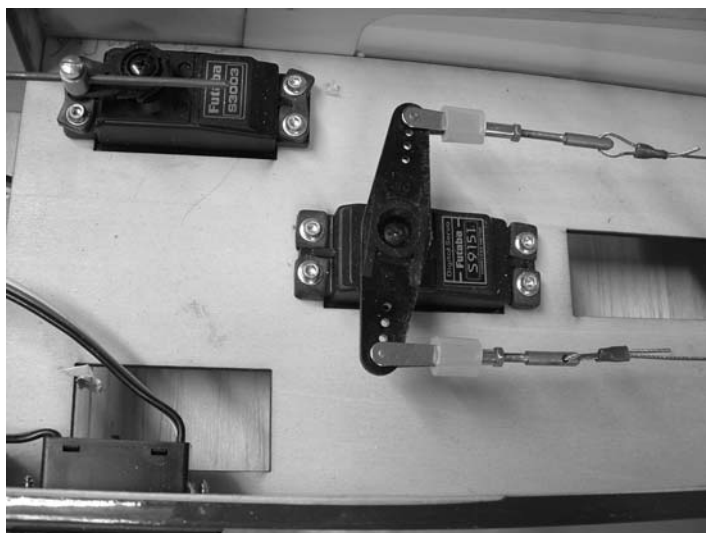
7. HINGE THE RUDDER USING THE SAME METHOD WE DID ON THE AILERONS AND ELEVATORS. MOVE THE RUDDER FROM SIDE TO SIDE BEFORE GLUING THE HINGES TO MAKE SURE THE COUNTER BALANCE CLEARS THE TOP OF THE FIN. USE THIN CA ON ALL THE HINGES.

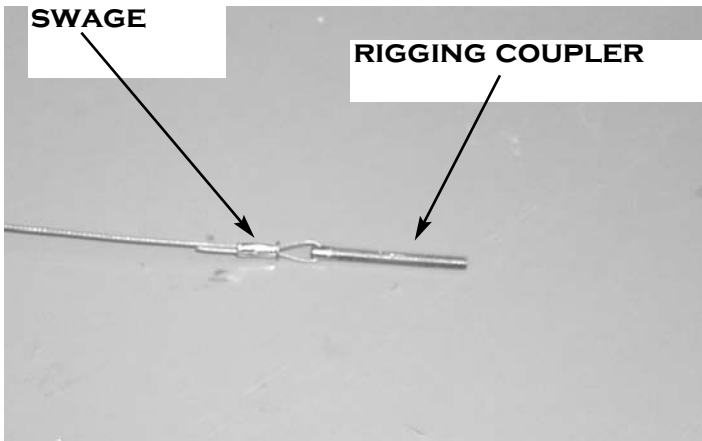


6. INSTALL THE RUDDER SERVO IN THE TRAY IN FUSELAGE USING HARDWARE SUPPLIED WITH RADIO. THE TRAY IS SET UP FOR DOUBLE RUDDER SERVOS IF YOU WISH. THE THROTTLE SERVO CAN BE MOUNTED ON EITHER SIDE TO SUIT YOUR ENGINE.

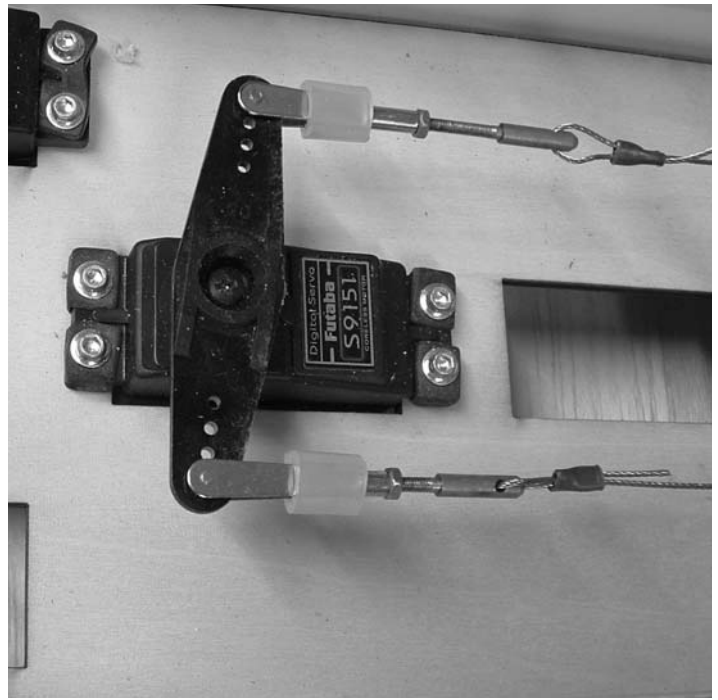


8. LOCATE THE RUDDER CABLE EXIT HOLES IN THE FUSE SIDE UNDER THE COVERING. ALIGN THE RUDDER HORN WITH THE SLOT AND MARK THE LOCATION OF THE HOLES. BOLT THE HORNS TO THE RUDDER, ONE ON EACH SIDE, WITH TWO 2MM BOLTS AND NUTS.





9. LOCATE THE PULL-PULL CABLE, CABLE ENDS AND CABLE SWAGES. TAKE TWO OF THE RIGGING COUPLERS AND TWO OF THE SWAGES AND INSERT THE CABLE THROUGH THE SWAGE, THROUGH THE RIGGING COUPLER AND LOOP BACK THROUGH THE SWAGE. CRIMP THE SWAGE IN TWO PLACES ON OPPOSITE SIDES TO SECURE THE CABLE IN PLACE.

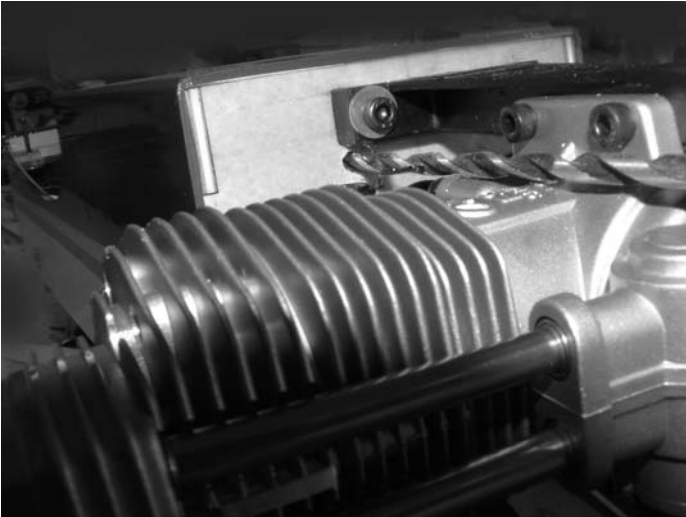


11. TAKE THE OTHER TWO RIGGING COUPLERS AND INSTALL THE NUT AND CLEVIS. ATTACH TO THE RUDDER ARM AND INSTALL THE SILICONE KEEPER. TAPE THE RUDDER IN PLACE WITH IT CENTERED AND CENTER THE SERVO. THREAD THE PULL-PULL CABLE THROUGH THE SWAGES AND RIGGING COUPLERS ON BOTH SIDES. PULL BOTH CABLES TIGHT, GET AS MUCH SLACK AS POSSIBLE OUT NOW. WHEN TIGHT CRIMP BOTH SWAGES.

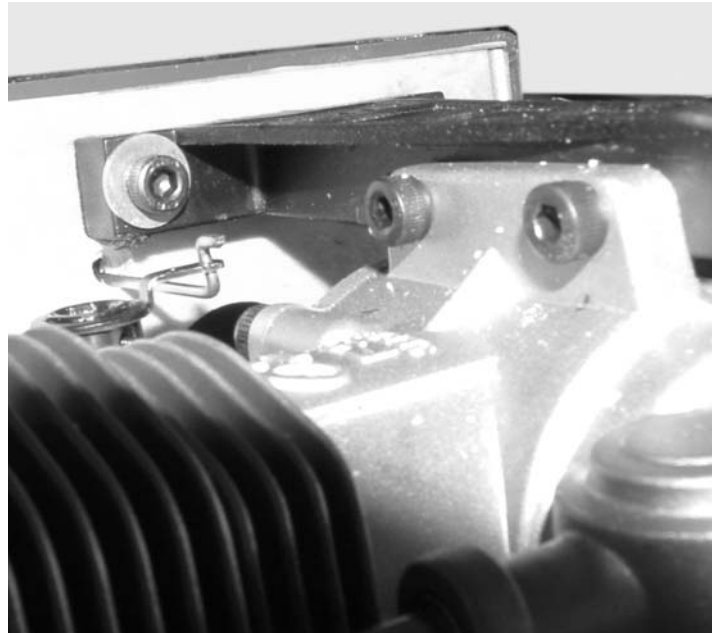


10. INSTALL A NUT AND CLEVIS WITH SILICONE KEEPER ON THE RIGGING COUPLER AND ATTACH TO RUDDER HORN. THREAD THE OTHER END OF THE CABLE THROUGH THE SLOT IN THE FUSE AND PULL FORWARD TO THE RUDDER SERVO. REPEAT ON THE OTHER SIDE.

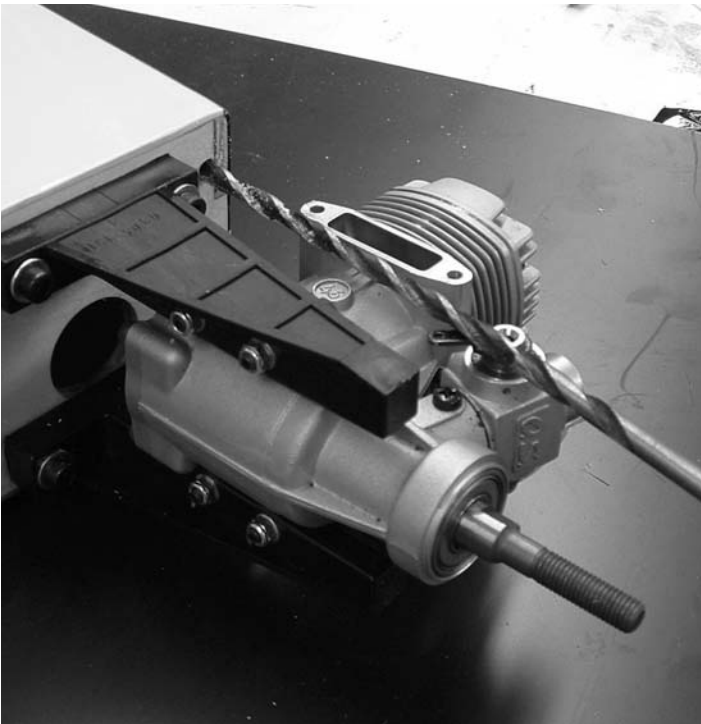
THROTTLE SERVO



1. USE A LONG DRILL FOR THE THROTTLE PUSHROD HOLE AND ALIGN WITH THROTTLE ARM.



2. ON FOUR STROKE ENGINES YOU NEED TO BEND A Z-BEND IN THE PUSHROD AND ATTACH TO THE THROTTLE ARM.

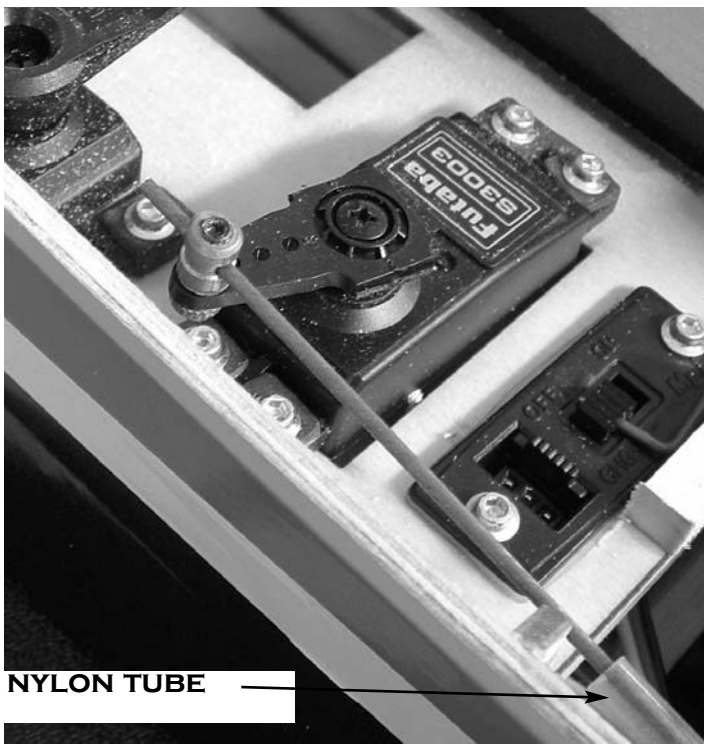


3. ON TWO STROKE ENGINES YOU CAN USE THE CLEVIS AND SILICONE KEEPER AND INSTALL ON THE THREADED ROD.

WILD STICK 120



4. LOCATE THE PUSHROD CONNECTOR AND ATTACH IT TO A SERVO ARM. IT HAS A WASHER ON TOP OF THE ARM, THE BOTTOM OF THE ARM, THEN INSTALL NUT. USE A DROP OF CA GLUE ON NUT TO MAKE SURE IT DOES NOT COME LOOSE. MAKE SURE THE PUSHROD CONNECTOR WILL ROTATE IN THE SERVO ARM.



5. SLIDE THE 5MM PLASTIC TUBE ON THE THROTTLE PUSHROD UNTIL IT EXTENDS 1/4" THROUGH THE FIREWALL. INSTALL THE PUSHROD CONNECTOR ON THE SERVO. OPEN THE THROTTLE FULL AND SET THE THROTTLE SERVO TO FULL. TIGHTEN THE SET SCREW ON THE PUSHROD CONNECTOR ONTO THE PUSHROD. CUT THE PUSHROD OFF ABOUT 1/4" PASS THE CONNECTOR. THE THROTTLE CAN BE ADJUSTED BY LOOS-ENING THE SCREW ON THE PUSHROD CON-NECTOR IF NECESSARY.

ELEVATOR SERVOS

COLLECT THE FOLLOWING ITEMS:

3MMX20 PUSHRODS	2
3MM NUTS	4
3MM CLEVISES	4
SILICONE CLEVIS KEEPERS	4



1. INSTALL THE ELEVATOR SERVOS IN EACH SIDE OF THE FUSELAGE USING THE HARD-WARE SUPPLIED WITH THE RADIO.

2. THREAD A NUT AND CLEVIS ON EACH END OF THE TWO ELEVATOR PUSHRODS.

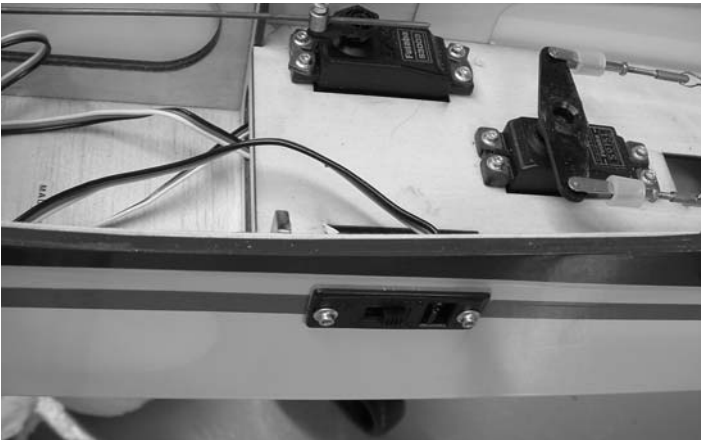
FUEL TANK



3. ATTACH THE PUSHROD TO THE CONTROL HORN ON THE ELEVATOR AND THE OUTPUT ARM ON THE SERVO. CENTER THE SERVO AND THE ELEVATOR AND ADJUST LENGTH. WHEN CORRECT TIGHTEN THE JAM NUT AGAINST THE CLEVIS ON BOTH ENDS AND APPLY A DROP OF LOCK TITE. SLIDE THE SILICONE KEEPER OVER THE CLEVIS.

4. YOU WILL NEED TWO 24" SERVO EXTENSIONS TO REACH FORWARD TO THE RECEIVER.

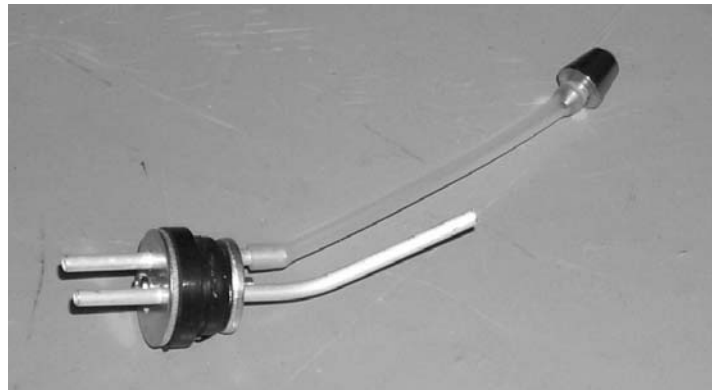
RADIO SWITCH



THE SWITCH CAN BE MOUNTED IN THE SIDE OF THE FUSELAGE ON EITHER SIDE DEPENDING ON WHICH SIDE YOUR THROTTLE SERVO IS ON. YOU CAN ALSO MOUNT THE SWITCH IN THE SERVO TRAY BESIDE THE THROTTLE SERVO IF YOU WISH.

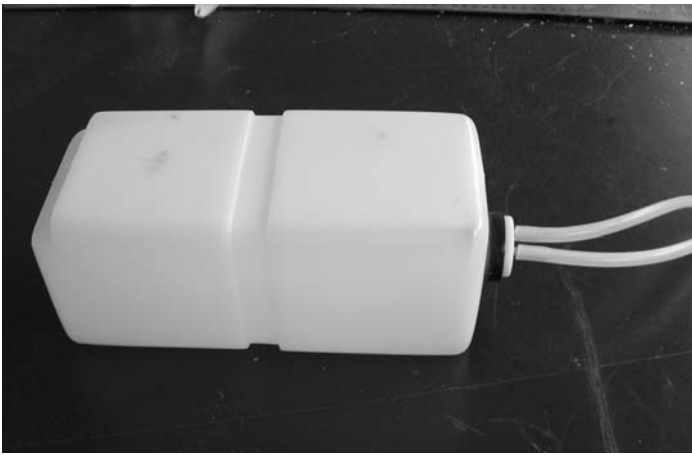


1. LOCATE THE FUEL TANK AND HARDWARE.



2. ASSEMBLE THE TANK CAP WITH THE BIG WASHER, THE RUBBER STOPPER, AND THE LITTLE WASHER IN THE REAR. FOR A TWO LINE SYSTEM WE WILL ONLY USE THE LONG PIECE OF ALUMINUM TUBE AND ONE SHORT ONE.

3. INSERT THE TUBES THROUGH THE STOPPER AND ATTACH THE SILICONE TUBING ON THE SHORT ONE. CUT THE TUBING SO THAT WHEN THE CLUNK IS ATTACHED IT WILL BE ABOUT 1/4" OFF THE BOTTOM OF THE TANK WHEN HELD VERTICALLY. LEAVE THE TUBES OUT THE FRONT OF THE CAP ABOUT 3/4" AND BEND THE LONG TUBE AT A 45 DEGREE ANGLE SO IT GOES TO THE TOP OF THE TANK WHEN INSTALLED.



4. INSTALL STOPPER IN TANK AND TIGHTEN THE BOLT IN THE CENTER UNTIL STOPPER IS SNUG. DON'T OVER TIGHTEN. CLUNK SHOULD MOVE FREELY AND VENT TUBE SHOULD BE TO THE TOP OF THE TANK.

5. INSTALL THE TANK IN THE FUSELAGE WITH THE CAP IN THE HOLE IN THE FIRE-WALL.

6. IF NECESSARY FOR BALANCE, THE BATTERY CAN BE INSTALLED UNDER THE TANK BEFORE IT IS INSTALLED.



7. INSTALL THE RECEIVER AND BATTERY IN THE AREA IN FRONT OF SERVO TRAY AND BEHIND TANK. USE FORM AROUND RECEIVER. IF NECESSARY FOR BALANCE THE BATTERY CAN BE MOVED UNDER THE TANK.

FINAL SETUP

THE CG SHOULD BE BETWEEN 5.75" AND 6.5" BEHIND THE LEADING EDGE OF THE WING.

THE CONTROL THROWS SHOULD BE :

ELEVATOR LOW RATE +OR- 1"
 HIGH RATE ALL YOU CAN GET

AILERONS LOW RATE +OR- 1/2"
 HIGH RATE ALL YOU CAN GET

RUDDER LOW RATE +OR- 2"
 HIGH RATE ALL YOU CAN GET

THE FOUR AILERON SETUP GIVES YOU SEVERAL OPTIONS. IF YOU WANT TO FLY THE PLANE IN A NORMAL SETUP, JUST USE THREE Y-CONNECTORS AND CONNECT ALL FOUR AILERON SERVOS INTO THE AILERON CHANNEL. THIS WILL GIVE A NORMAL AILERON SETUP. BECAUSE OF THE LARGE SIZE THE ROLL RATE WILL BE REALLY RAPID. IF YOU WANT JUST FLAPS AND AILERONS YOU CAN USE TWO Y-CONNECTORS AND PLUG THE TWO OUTSIDE SERVOS INTO THE AILERON CHANNEL AND THE TWO INBOARD INTO THE FLAP CHANNEL.

IF YOU HAVE A COMPUTER RADIO YOU CAN EXPLORE SEVERAL OTHER FLIGHT MODES. IN THE FOLLOWING MODES YOU WILL NEED TO PLUG ALL FOUR AILERON SERVOS INTO DIFFERENT CHANNELS. CONSULT YOUR RADIO MANUAL FOR THE PROPER CHANNELS.

(1). FLAPERONS. IN THIS MODE YOU WILL COUPLE THE TWO INBOARD AILERON SERVOS WITH THE ELEVATOR SERVO. ADJUST THE RADIO SO THAT UP ELEVATOR CAUSES BOTH FLAPS TO GO DOWN, DOWN ELEVATOR WILL CAUSE THE FLAPS TO GO UP. THIS SET UP ALLOWS VERY TIGHT LOOPS AND VERY SQUARE CORNERS.

(2). CROW. IN THIS MODE THE TWO OUT-BOARD AILERONS MOVE TO THE UP POSITION AND THE FLAPS MOVE TO THE DOWN POSITION. THIS IS A VERY HIGH DRAG CONDITION AND WILL ALLOW YOU TO MAKE VERY STEEP DESCENTS, THEN SLOW TO A CRAWL TO LAND. IT IS ALSO USED TO DO THE "HARRIER". IN THIS MANEUVER YOU SLOW THE PLANE DOWN, FLIP THE SWITCH FOR THE CROW CONFIGURATION, AND SLOWLY FEED IN FULL UP ELEVATOR. THE PLANE WILL GET INTO A VERY HIGH ANGLE OF ATTACK , 50 TO 60 DEGREES. YOU WILL HAVE TO USE THE THROTTLE TO MAINTAIN THE ATTITUDE. THE CROW SET-UP MAKE THE PLANE VERY STABLE IN THIS ATTITUDE.

IT IS RECOMMENDED THAT BEFORE TRYING THESE DIFFERENT MODES THAT YOU FLY THE PLANE WITH A STANDARD SET-UP TO GET USED TO THE PLANE. WHEN TURNING ON THE DIFFERENT FLIGHT MODES BE SURE TO HAVE PLENTY OF ALTITUDE FOR YOUR FIRST TRIES. BECAUSE OF THE LARGE CONTROL SURFACES, THE PLANE CAN GET OUT OF CONTROL VERY QUICKLY IF YOU ARE NOT READY FOR IT OR IF YOU HAVE SOMETHING NOT SET UP CORRECTLY. IF THE FLIGHT MODES ARE NOT SET-UP CORRECTLY, THE PLANE COULD BE UNFLYABLE IN THAT CONFIGURATION, SO BE READY TO TURN IT OFF IF YOU CANNOT HANDLE IT.

**THANK YOU BUYING THE WILD STICK 120
SO GO HAVE SOME FUN.**