ALMOST READY TO FLY
R/C TRAINER MODEL

CHIPMUNK 40

ASSEMBLY GUIDE
SPECIFICATION

WINGSPAN	63 INCHES
FUSELAGE LENGTH	42 INCHES
WEIGHT	5.1/2 TO 6.1/2 LBS. 2,6 TO 3 Kg
RADIO	4 CHANNELS 4 SERVOS
ENGINE	. 40-. 53 2CYCLES 48-. 60 4CYCLES

TM

BILL OF MATERIAL

WING PART

RIGHT WING (W/PRE-ASSEMBLED TIP, AILERON & SERVO MOUNT)	1
LEFT WING (W/PRE-ASSEMBLED TIP, AILERON & SERVO MOUNT)	1
WING JOINER, WING DOWEL GUIDER	2
WING JOINER TAPE COVER	1

FUSELAGE PART

FUSELAGE (W/PRE-ASSEMBLED ENGINE MOUNT, SERVO TRAY &PUSHROD	1

TAIL PART

STABILIZER (W/PRE ASSEMBLED ELEVATOR)	1
FIN (W/PRE-ASSEMBLED RUDDER)	1

HARDWARE PART

RUDDER PUSHROD (PRE-INSTALLED IN FUSELAGE)	1
ELEVATOR PUSHROD (PRE-INSTALLED IN FUSELAGE)	1
THROTTLE CONTROL ROD (PRE-INSTALLED IN FUSELAGE)	1
CLEVISES (PRE-INSTALLED TO THE CONTROL ROD)	6
CONTROL HORN SETS (FOR RUDDER &ELEVATOR)	2
AILERON PUSHROD (W/PRE-INSTALLED CLEVISES BOTH END)	2
FUEL TANK SETS (EXCLUDING SILICON FUEL LINE)	1
TAIL GEAR (W/COMPLETED HARDWARE)	1
EZ CONNECTOR	4

MISCELLANEOUS

PLASTIC WING BOLT	6
SPARE COVERING MATCHING COLOR SHEET	1
INSTRUCTION MANUAL	1

PRE-ASSEMBLY INFORMATION

YOUR CHIPMUNK 40 HAS BEEN CONSTRUCTED. ALIGNED AND COVERED. ALL THAT REMAIN FOR YOU TO DO IS TO FOLLOW THE ASSEMBLY INSTRUCTION PROVIDED IN THIS MANUAL. PLEASE READ MANUAL SEVERAL TIMES BEFORE STARTING ACTUAL ASSEMBLY TO FAMILIARIZE YOURSELF. YOU WILL NEED THE FOLLOWING ITEMS TO COMPLETE THIS MODEL.

EQUIMENTS

ENGINE: .40-53 2 CYCLES 48-. 60 4 CYCLES WITH SUITABLE PROPELLER
SMALL SIZE SILICON TUBING FOR FUEL TANK
RUBBER SPONGE FOR WRAPPING RECEIVER AND AIRBORNE BATTERY
RADIO SYSTEM: MINIMUM 4 CHANNELS AND 4 SERVOS

TOOLS & MATERIAL

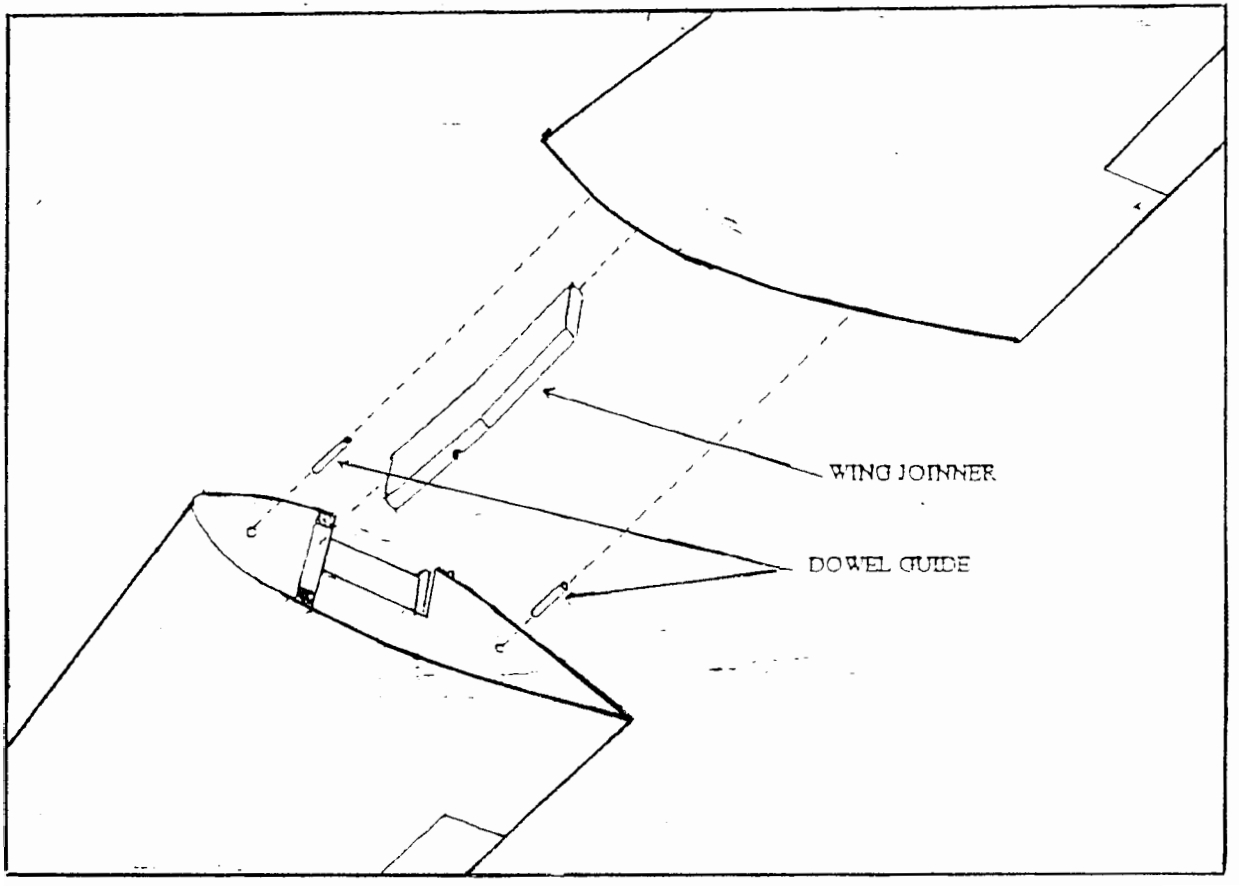
SCREWDRIVER SETS
HEX DRIVER SETS (METRIC)
PLIERS SETS
5 0R 30 MIN EPOXY GLUE
DRILL & DRILL BIT
MASKING TAPE

WING ASSEMBLY

TEST-FIT THE DIHEDRAL BRACES (WING JOINER) INTO EACH OF THE WING PANELS,USE SAND PAPER 240 GRIT TO SAND THE WING JOINER IF NEEDED. 0NCE SATISFIED,INSTALL THE DOWEL GUIDE THEN EPOXY THE TWO WING PANELS TOGETHER WITH THE WING JOINER EPOXIED INTO EACH PANEL

USE MASKING TAPE TO HOLD THE PANEL,ACCURATELY TO EACH OTHER AND ALLOW TO DRY

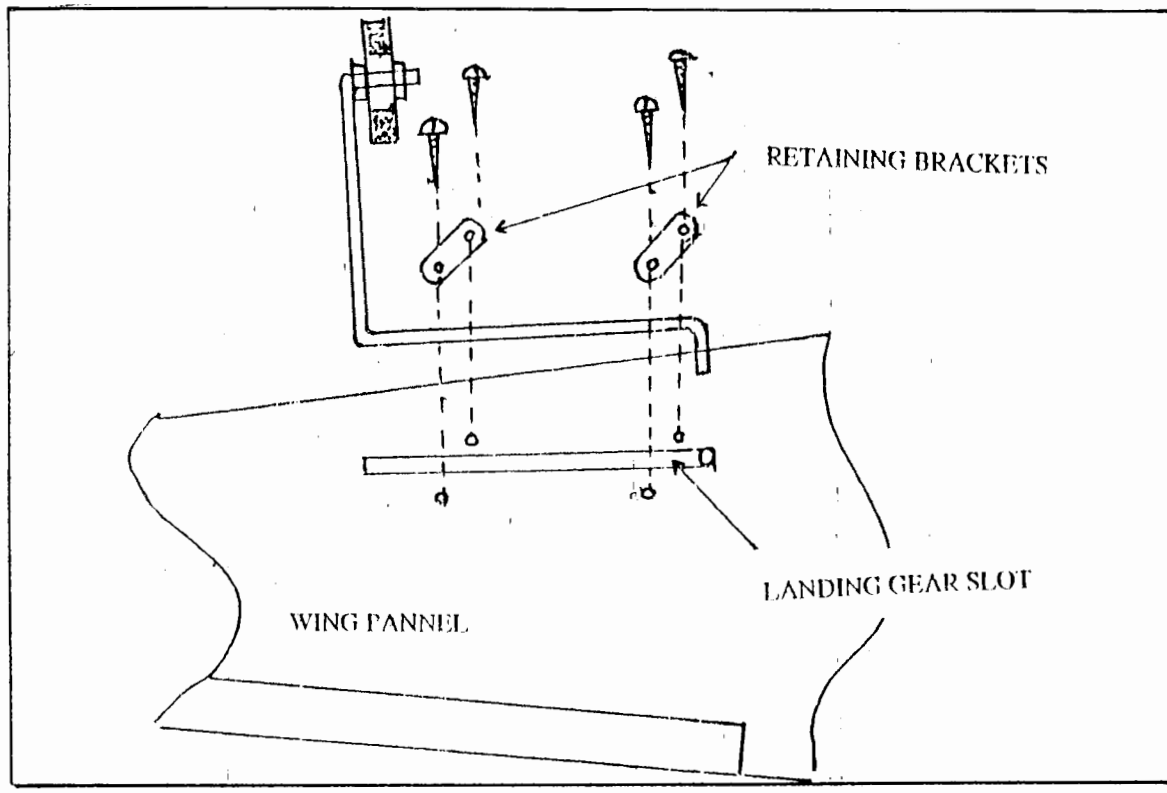
COVER THE WING PANEL JOINT WITH THE TAPE COVER (SUPPLIED) END OF TAPE SHOULD OVERLAP AT THE TRALING EDGE TRIM AS NEEDED.



INSTALL THE LANDING GEAR

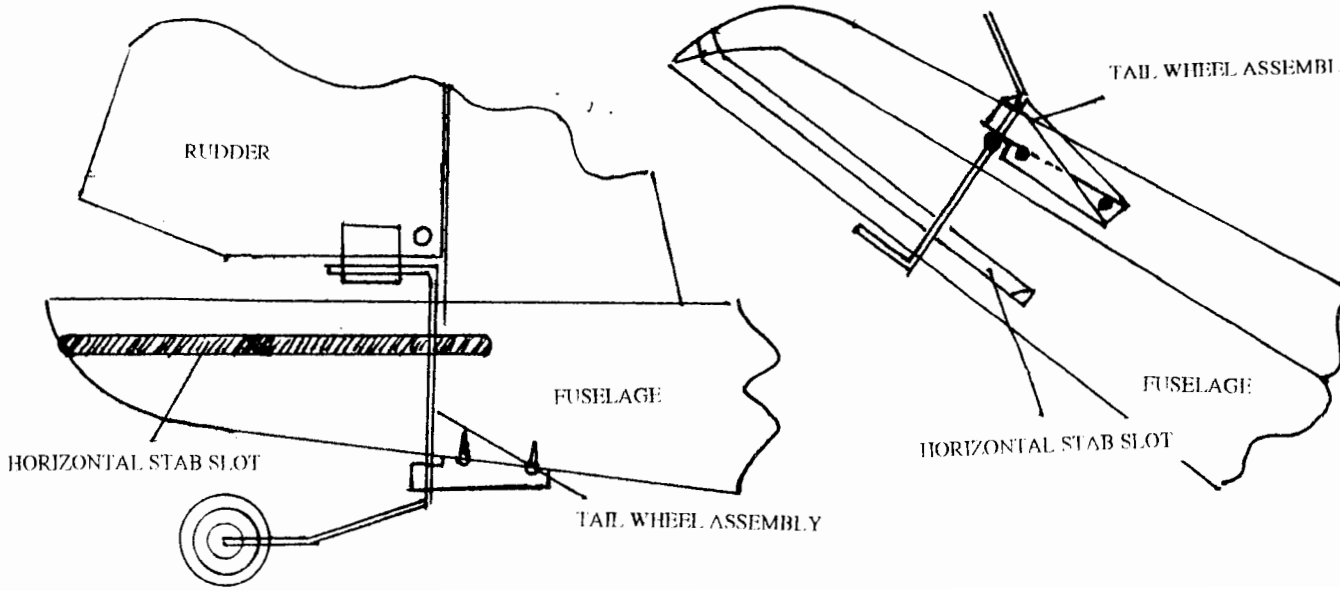
MAIN LANDING GEAR

TURN THE WING OVER.INSTALL THE TWO LANDING GEAR IN PLACE (AS SHOWN) USE 8 SCREWS (SUPPLIED) TO MOUNT THE RETAINING BRAKETS IN PLACE.



THE TAIL WHEEL

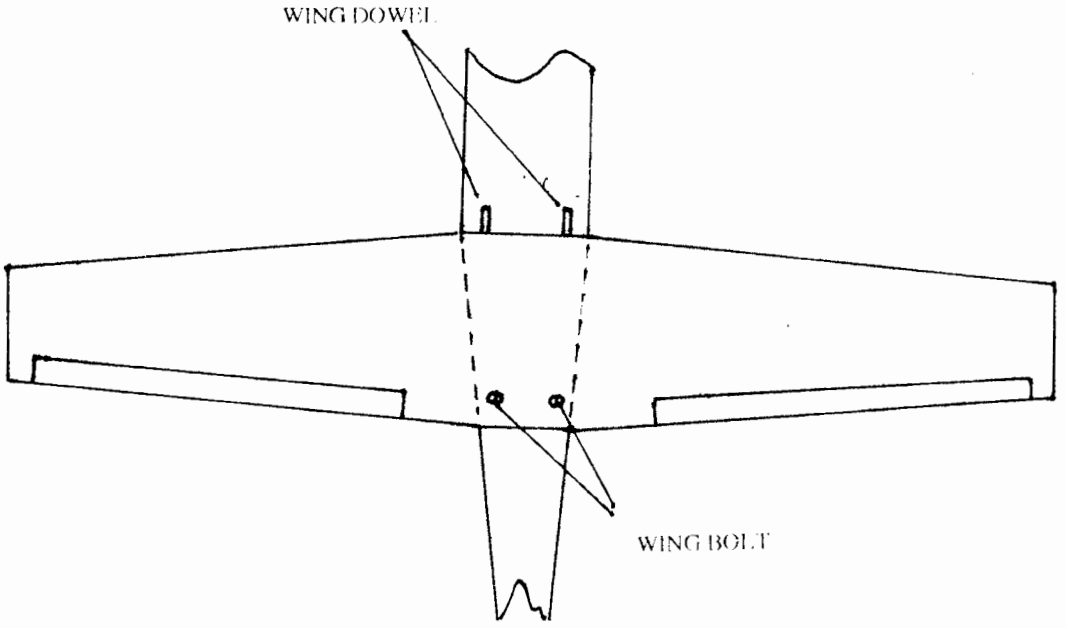
TURN THE FUSELAGE OVER.INSERT THE BENT END OF THE TAIL WHEEL WIRE TO THE PRE-DRILL HOLE NEAR THE END OF THE FUSELAGE (AS SWOWN)
SCREW THE TAIL WHEEL TO THE FUSELAGE WITH 2 SCREWS (0.4-2 SIZE)



INSTALL THE WING AND TAIL SECTION TO THE FUSELAGE

WING

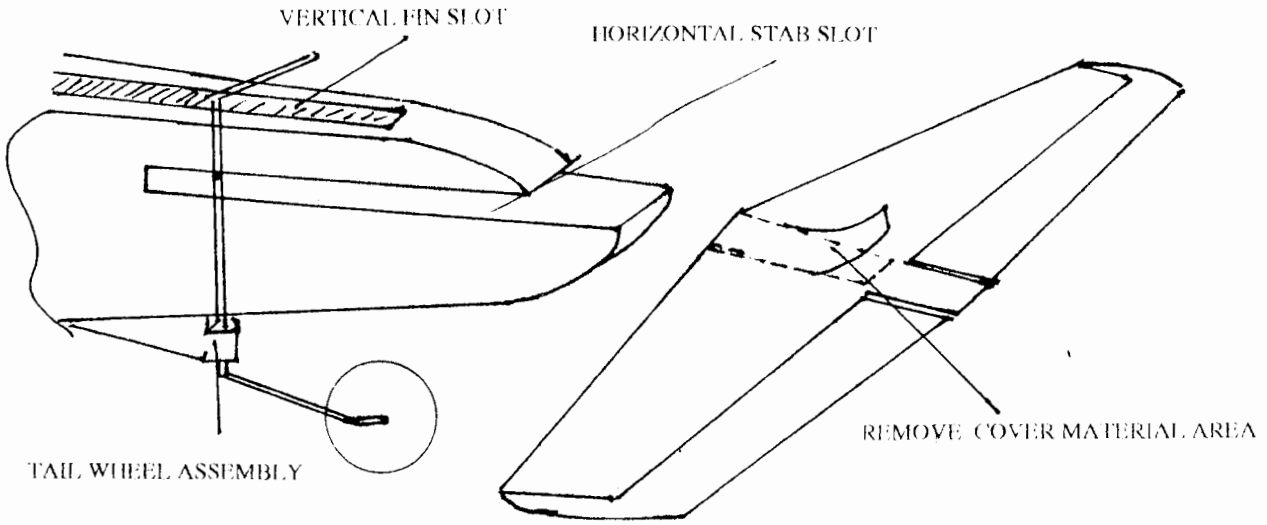
MOUNT THE WING TO THE FUSELAGE,INSERT THE TWO DOWELS (PRE- INSTALL) INTO TWO HOLE ,USE TWO PLASTIC BOLT(SUPPLIED) ,TO TIGHTENING THE WING TO THE FUSELAGE



HORIZONTAL STAB WITH ELEVATOR

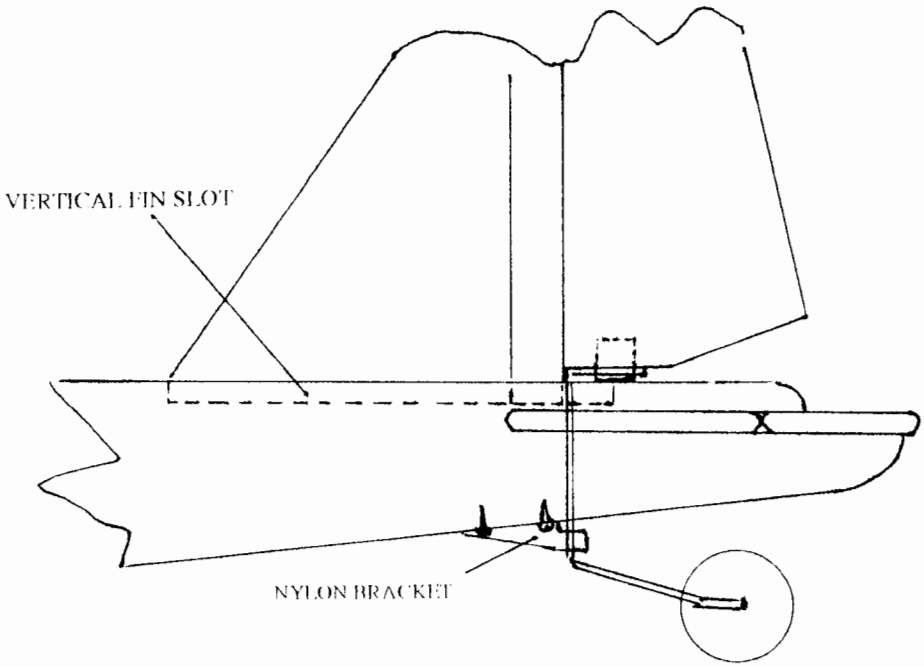
BEFORE INSTALL THE HORIZONTAL STABBMAKE SURE THE TAIL WHEEL ASSEMBLY ALREADY INSTALL,

INSERT THE HORIZONTAL STAB WITH ELEVATOR INTO THE HORIZONTAL STAB SLOT USING THE RULER TO CENTERING THE STAB TO THE FUSELAGE.USE THE BALL PEN OR PENCIL TO MARK THE GLUE AREA ON THE STAB.REMOVE THE STAB FROM THE FUSELAGE.USE HOBBY KNIFE TO REMOVE THE COVER MATERIAL(AS SHOWN) NOW YOU CAN APPLY THE GLUE TO GLUE THE STAB TO THE FUSE (WE RECOMMEND THE 15 MIN EPOXY)



FIN WITH PRE-INSTALL RUDDER

TRY FIT THE FIN INTO THE FIN SLOT USE THE BALL PEN OR PENCIL TO MARK THE GLUE AREA REMOVE THE FIN FROM THE FUSELAGE USE HOBBY KNIFE TO REMOVE THE COVER MATERIAL (AS SHOWN) , INSTALL THE TUBE GUIDER TO THE TAIL WHEEL ASSEMBLY .USE 15 MIN EPOXY TO GLUE THE TUBE GUIDER TO THE RUDDER AND THE FIN TO THE FIN SLOT IN THE FUSELAGE

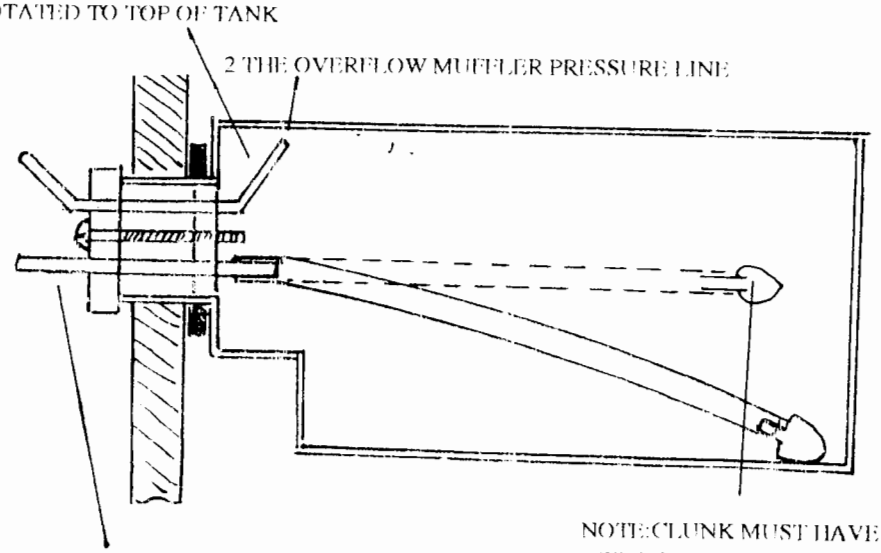


FUEL TANK ASSEMBLY

YOU CAN NOW MAKE THE FUEL TANK ASSEMBLY.WE PREFER THE TWO LINE SYSTEM

1- **THE FUEL PICK-UP TO THE ENGINE**
2- **THE OVERFLOW MUFFLER PRESSURE LINE**

NOTE: ORIENTATION OF PIPES OVERFLOW
IS ROTATED TO TOP OF TANK



1-THE FUEL PICK-UP TO THE ENGINE

NOTE:CLUNK MUST HAVE MINIMUM 10MM
1/3" CLEARANCE FROM REAR TANK WALL
WHEN TANK IS HELD VERTICALLY

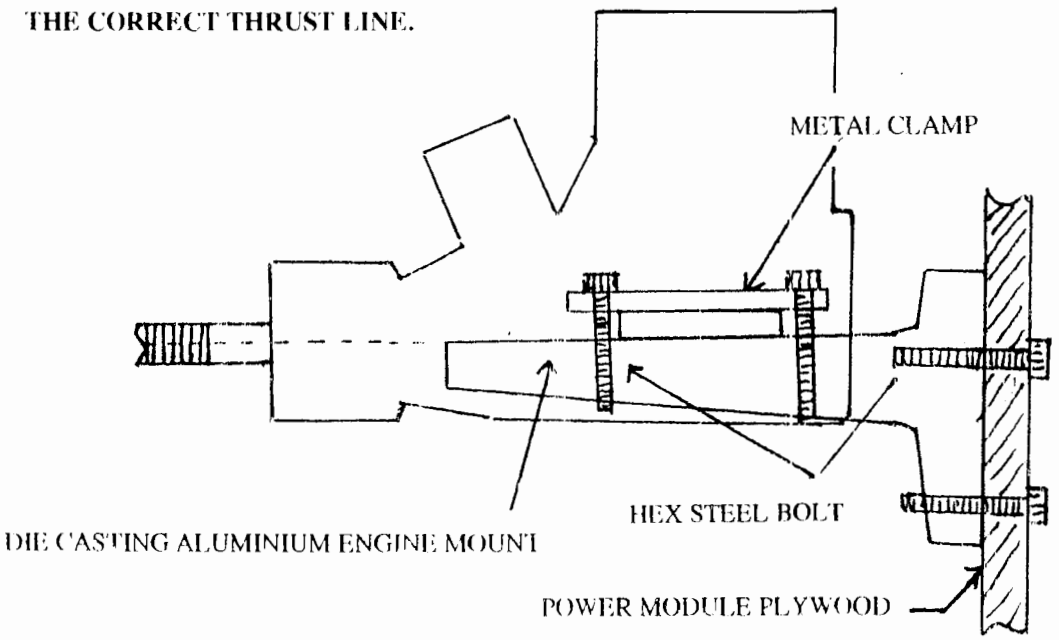
MOUNTING THE ENGINE

YOUR ENGINE DIE CASTING ENGINE MOUNT SETS INCLUDE 2 METAL CLAMPS 8 HEAD SOCKET BOLTS AND 4 WASHERS (SUPPLIED).

MOUNT YOUR ENGINE TO THE ENGINE MOUNT FIRST(AS SHOWN) USE A PIECE OF PAPER AND PENCLI TO MARK THE POSITION OF 4 MOUNTING HOLE AT THE BACK OF THE ENGINE MOUNT.THIS PIECE OF PAPER WILL HELP YOU EASYLY DRILL PRECISE 4 HOLE ON THE DETACHABLE FIREWALL(POWER MODULE) MAKE SURE THE THRUST LINE IS CORRECT THE THRUST LINE ADREADY MARKING ON THE POWER MODULE

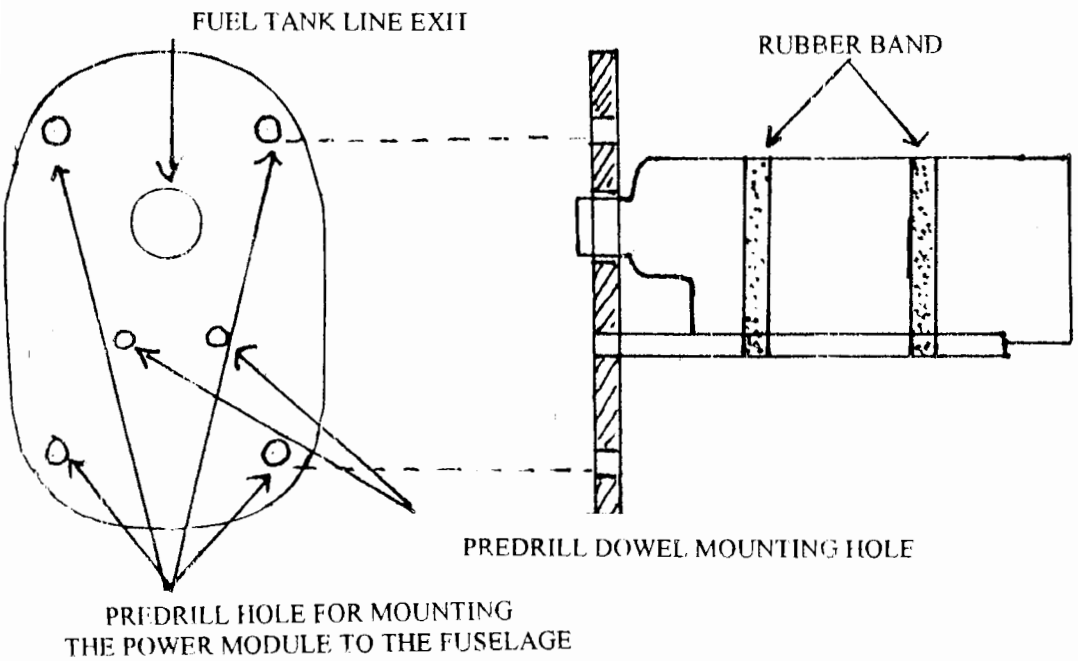
REMARK

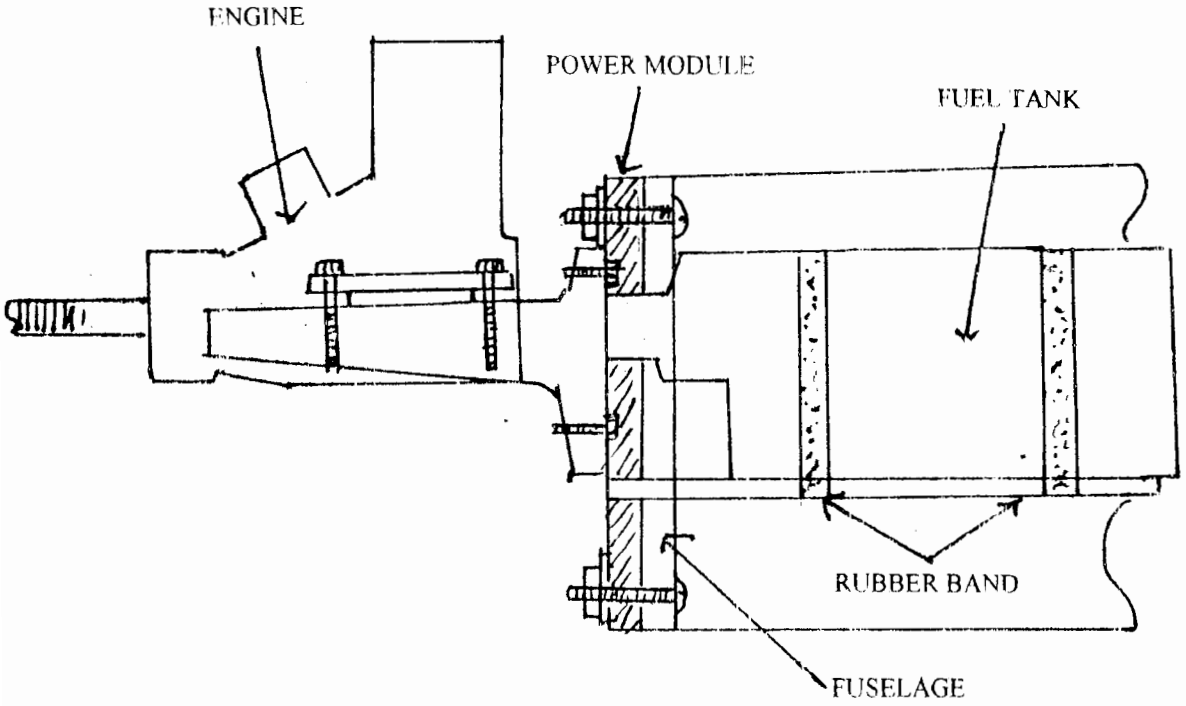
YOU CAN MOUNT THE ENGINE AT ANY POSITION YOU PREFERE AS LONG AS YOU KEEP THE CORRECT THRUST LINE.



INSTALL THE FUEL TANK TO THE POWER MODULE

INSERT TWO DOWEL TO THE POWER MODULE (AS SHOWN) THEN MOUNT THE FUEL TANK USE RUBBER BANK TO HOLD THE TANK IN IT POSITION (AS SHOWN)

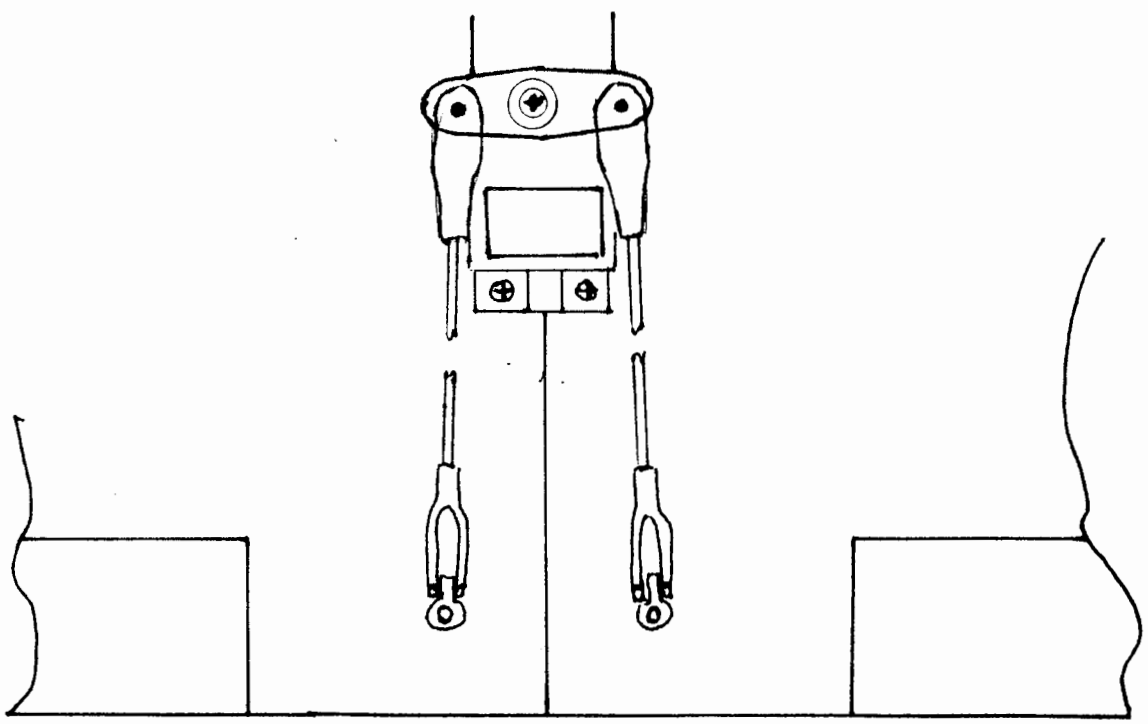




INSTALL THE SERVOS

AILERON SERVO

AILERON SERVO PLACE LOCATED IN THE WING,MOUNT THE SERVO IN PLACE BY USING THE SERVO SCREWS (NOT SUPPLIED)
NOW INSTALL THE SERVO ARM TO THE SERVO (LARGE SERVO OUTPUT ARM IS RECOMMENDED DO NOT USE ROUND AND CROSS SERVO ARM)
INSTALL THE AILERON PUSHROD AND ADJUST AS NEEDED (AS SHOWN)



RUDDER,ELEVATOR AND THROTTLE SERVOS

RUDDER,ELEVATOR AND THROTTLE SERVOS ARE MOUTED TO THE " SERVO MOUNT " INSTALLED INSIDE FUSELAGE (AS SHOWN)

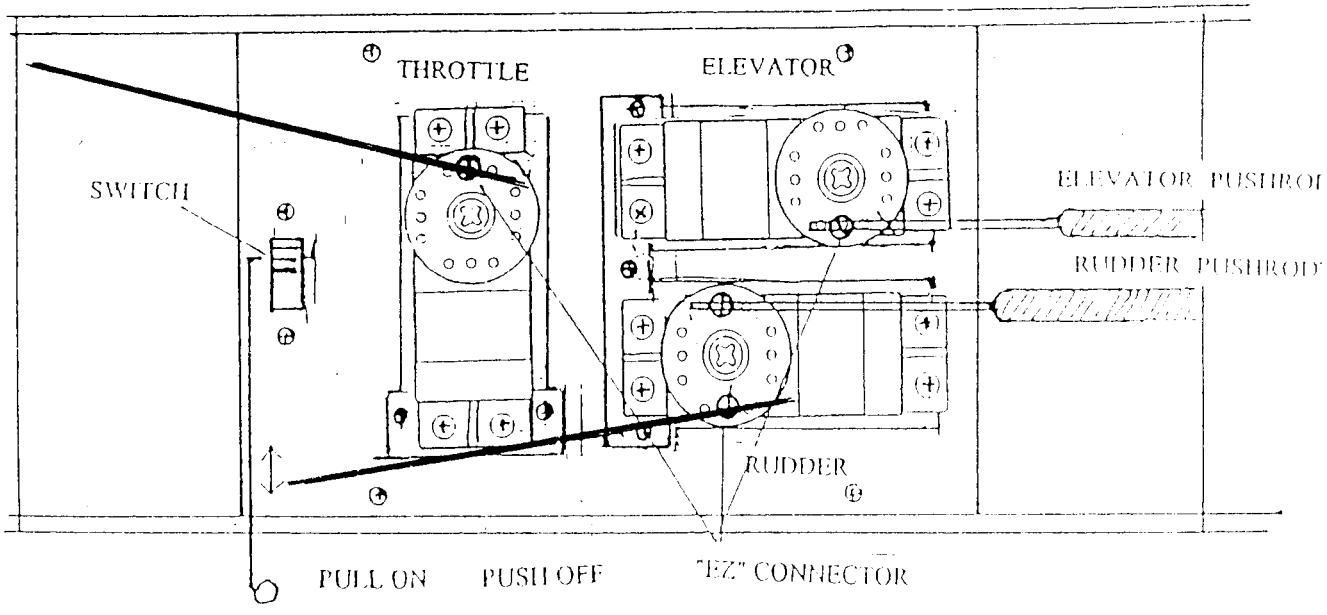
UNSCREW THE FOUR SCREWS SLIDE FORWARD IN ORDER TO REMOVE THE SERVO MOUNT,THEN INSTALL THE RUDDER,ELEVATOR AND THROTTLE SERVO,LABEL ALREADY STUCK ON THE SERVO MOUNT SHOWING THE LOCATION OF EACH SERVO.

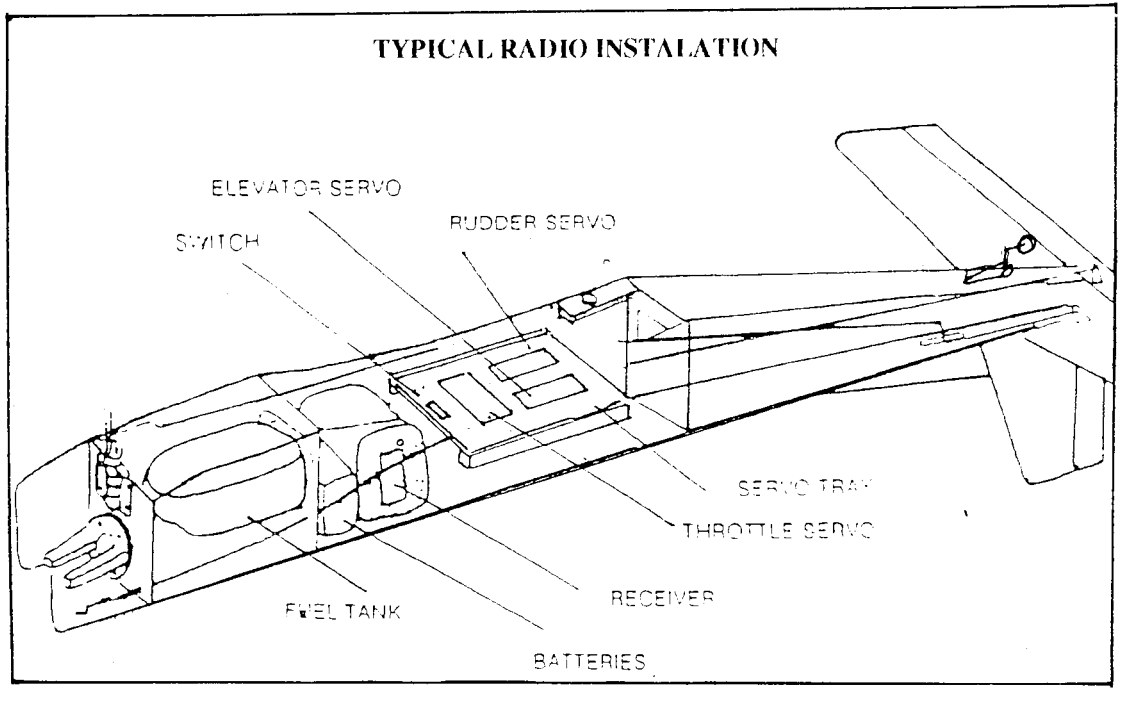
PUT THE SERVO MOUNT WITH THREE SERVO FITTED IN PLACE IN FUSELAGE,HOLD WITH 4 SCREWS

INSTALL THE "EZ" CONNECTOR TO THE SERVO ARM

CONNECT THE RUDDER PUSHROD TO THE RUDDER SERVO ARM,ADJUST THE MOVEMENT THEN TIGHTEN THE BOLT ON "EZ"CONNECTOR TO HOLD CONTROL

SAME PROCEDURE WILL BE DONE FOR ELEVATOR AND THROTTLE CONTROL SYSTEMS





PRE-FLIGHT PROCEDURE

1- BALANCE: THE CORRECT BALANCE POINT FOR YOUR CHIPMUNK IS 3" TO 4" MEASURED FROM THE LEADING EDGE OF THE WING.THIS CENTER OF GRAVITY (C.G) LOCATION WILL PROVIDE VERY PREDICTABLE FLIGHT CHARACTERISTIC.ADJUST THE LOCATION OF THE BATTERY PACK AS REQUIRED TO ACHIEVE THIS C.G

2- CONTROL SURFACE MOVEMENT : THESE MAY CERTAINLY BE ADJUSTED TO SUIT INDIVIDUAL FLYING STYLES BUT SHOULD USE FOR INITIAL FLIGHT ADJUST THE CLEVIS AND CONTROL HORN ON EACH FLIGHT SURFACE AS WELL AT THE SERVO ARM TO ACHIEVE THE MESUREMENT (AS SHOWN).IF YOUR RADIO EQUIPPED WITH CONTROL OVER SERVO THROW THEN SIMPLY A MATTER OF "DIALING IN" THESE MOVEMENTS

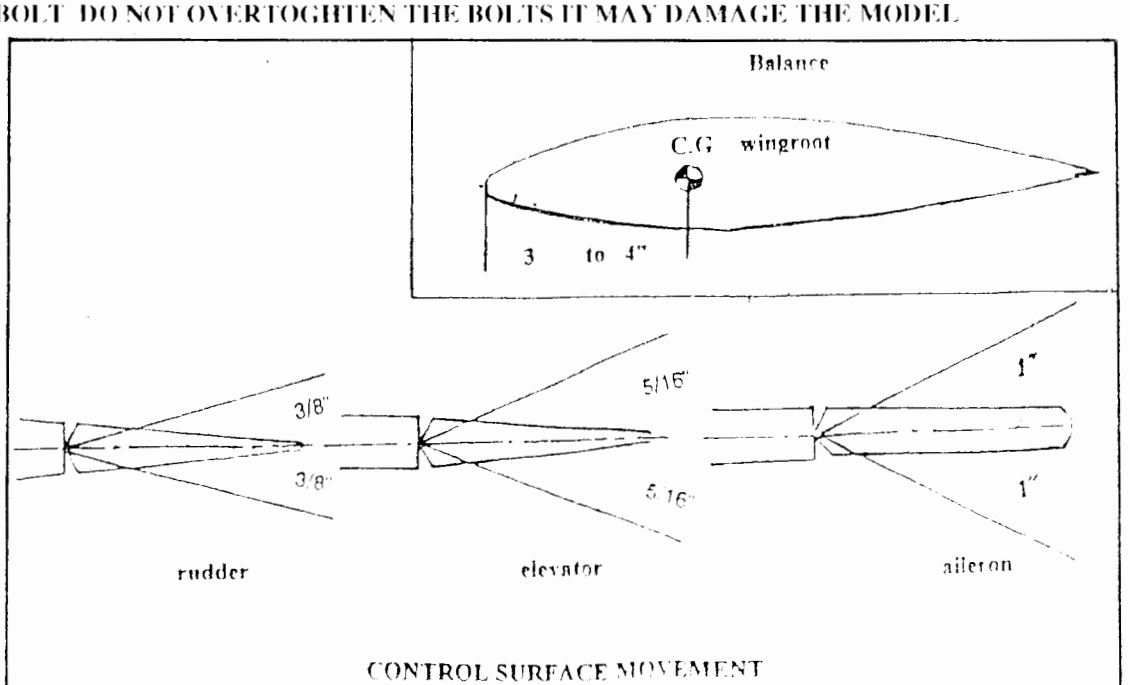
3- RADIO OPERATION : FOLLOW THE MANUFACTURE'S SUGGESTION TO APPROPRIATE GROUND RANGE.DO NOT FLY WITHOUT THE CORRECT GROUND RANGE

4- ENGINE : YOUR ENGINE SHOULD BE CAREFULLY "BROKE IN " TO PROVIDE A CONSISTANT AND RELIABLE IDLE.FOLLOW THE MANUFACTURE'S INSTRUCTION TO ACHIEVE THIS PERFORMANCE

5- LANDING GEAR : MAKE SURE THAT THE MODEL ROLLS STRAIGHT AT NEUTRAL RUDDER AND THE STEERING IS SMOOTH AND POSITIVE.ADJUST AS NEEDED.ALSO ENSURE WHEELS ROLL SMOOTH WITHOUT BINDING.

6- CLEVISES : BEFORE FLYING SESSION,CHECK EACH SERVOS AND FLIGHT SURFACE CONNECTION TO BE SURE ALL ARE SECURE AND ALL SERVOS MOVEMENT ARE FREE, SMOOTH AND NOT BINDING.

7- WING MOUNT : WING CAN BE MOUNTED TO THE FUSELAGE BY THE PLASTIC WING BOLT DO NOT OVERTOGHTEN THE BOLTS IT MAY DAMAGE THE MODEL



CONTROL SURFACE MOVEMENT

FLYING

TAKE OFF SHOULD ALWAYS BE PERFORMED WITH THE NOSE OF THE AIRPLANE POINTED DIRECTLY INTO THE WIND

ON PAVED HARD SURFACE RUNWAYS,YOUR APACHE 2 SHOULD BE POINTED INTO THE WIND AND THE THROTTLE ADVANCED SMOOTHTLY,USE RUDDER CONTROL STICK TO MAINTAIN STRAIGHT GROUND TRAVEL,WHEN MODEL SPEED IS REACHED, APPLY A SMALL AMOUNT OF "UP" ELEVATOR AND YOUR MODEL WILL LIFT OFF SMOOTHTLY.

ON GRASS FLYING FIELDS IT IS GOOD TO REMEMBER THAT GRASS WILL RETARD THE MODEL'S ACCELATION,IN THIS CASE,LONGER TAKE- OFF RUN MAYBE NEEDED,A TECHNIQUE TO USE ON GRASS FIELDS IS HOLD MODEL'S VERTICAL FIN,THROTTLE THE ENGINE AT FULL POWER THEN PUSH THE MODEL FORWARD,THIS WILL RESULT IN A FAIRLY SHORT TAKE- OFF RUN

ONCE CHIPMUNK IS AIRBORNE,KEEP STRAIGHT AND SMOOTHLY CLIMB TO A GOOD ALTITUDE AND MAKE ANY TRIM CHANGES NECESSARY TO ACHIEVE STRAIGHT AND LEVEL FLIGHT.

IF MODEL IS FLYING A BIT TOO FAST,THROTTLE BACK TO SLOW THE MODEL. THE APACHE 2 IS VERY GOOD ON SLOW SPEED,YOU WILL SOON FIND THAT THE CHIPMUNK IS NOT ONLY VERY COFORTABLE TO FLY,IT HAS A LOT OF FUNDAMENTAL AEROBETIC CAPABILITIES AS WELL

CLEAN-UP AND MAINTENANCE

AFTER EACH FLYING SESSION,USE A CLEANER SUCH AS WINDEX OR FANTASTIC (YOU CAN USE LIQUID DETERGENT MIXED WITH WATER) TO CAREFULLY REMOVE ALL FUEL RESIDUE FROM YOUR MODEL,DO NOT STORE YOUR MODEL WITH WING ATTACHED REMOVE WING FROM THE FUSELAGE BETWEEN FLYING SESSIONS.

YOU MAY NOTICE SOME SAGGING WHEN THE MODEL IS SUBJECTED TO THE TEMPERATURE CHANGE,THIS IS QUITE NORMAL,AND AS THE MATERIAL STABILIZES THE SAGGING WILL DISAPPEAR,USE HEATGUN TO CORRECT THE COVERING IF NEEDED APPLY THE HEAT NOT LESS THAN I INCHE FROM THE MATERIAL SURFACE.

IF THIS IS YOUR FIRST LOWWING MODEL WE RECOMMEND THAT YOU GET HELP FROM AN EXPERIENCED KNOWEDGEABLE MODELER WITH YOU FIRST FLIGHT.