Don Steeb Incorporated

PRECISION MODEL EQUIPMENT

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IDlewood 6-0058

ATLAS PCM-1

INTRODUCTION:

The ATLAS PCM-1 multi channel servo is the result of months of testing different designs and principles in actual flight.After completion of these tests a final design was arrived at and production was begun. The original servos of this design were put in a plane and flown for months without any service whatsoever.We have been very pleased with the results of our efforts and believe this servo to be the finest on the market today.Its very compact size makes it possible for an aileron instalation even in a thin wing in which the servo is completely covered.The power take-off disk has four holes so the servo can be mounted in any position without alteration The contacts employed are the rotary type which tests proved to be the most reliable because they do not flex or bend in operation which means they will retain their setting through-out their life.This type of contact wipes with each operation therefore require no cleaning under normal use.The very low current drain makes possible the use of a very small battery compliment.

OUTSTANDING FEATURES:

Precision fitted,MACHINED,brass gear train.
MOTOR--Ball bearing(in metal race),twin alnico magnets,Copper graphite brushes(with spring loaded brush holder),Spring centered armature with machined thrust washer.Low drain.
24ST chasis for maximum protection.
Mounts in any position without alteration.
Positive limit pin(never any over-travel).
Photo etched,Nickel plated,Circuit board(Rotary type).
Phospher bronze rotary contacts(never need adjustment).
Oilite bearings on main drive shaft.
Excesive power from 103 to 1 gear ratio.
Very compact size(Only 1"high,1-5/8"wide,2-1/2"long).
Weight - only 3oz.
Very low current drain.
Self neutralizing,Full trim or trim in neutral if desired.

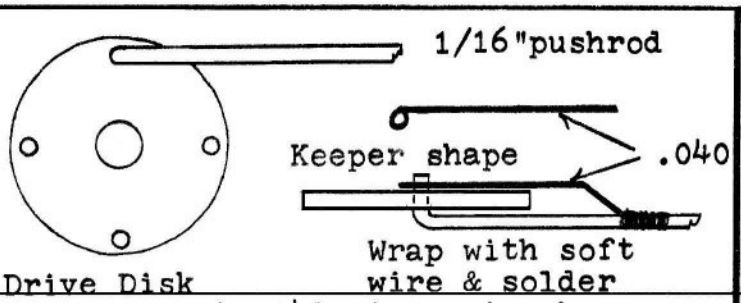
MAINTENANCE:

The servo as it is received is ready for instalation unless trim is desired.Very little need be done as far as service is concerened but it's a good idea about every 10 hours or 100 flights to remove the servo dust cover and inspect all parts.Clean if necessary but do not disassemble to do this.Oil all bearings and gears with light weight oil.DO NOT OIL the motor bearings as they are factory lubricated and should require no attention.

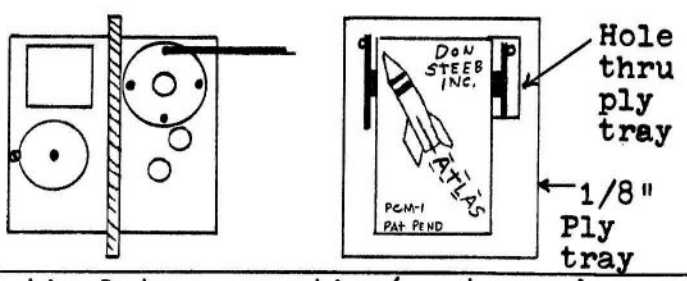
SERVICE:

If for any reason a servo has to be sent back for adjustment,a minimum of $1.00 plus $.25 for postage will be charged.If the servo is damaged beyond economical repair,it will be replaced for one half the list price.This servo was designed with one purpose in mind,to give the Multi flyer a quality servo with the utmost in reliability.We believe this has been accomplished

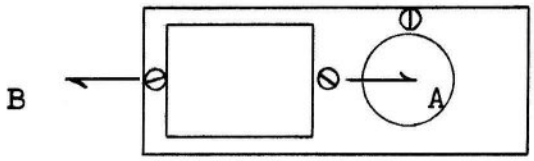
" QUALITY WILL BE REMEMBERED LONG AFTER PRICE IS FORGOTTEN "



Use at least .040 piano wire keepers.
Be sure linkage is free.
If you should get your relays wired backwards, just switch holes in disk.

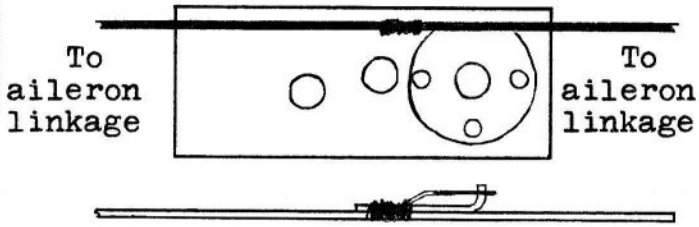


Vertical tray mounting (most crash proof. Mark all screw points on bottom of servo and drill relief holes in tray. Use # 2-56 nuts & bolts to mount

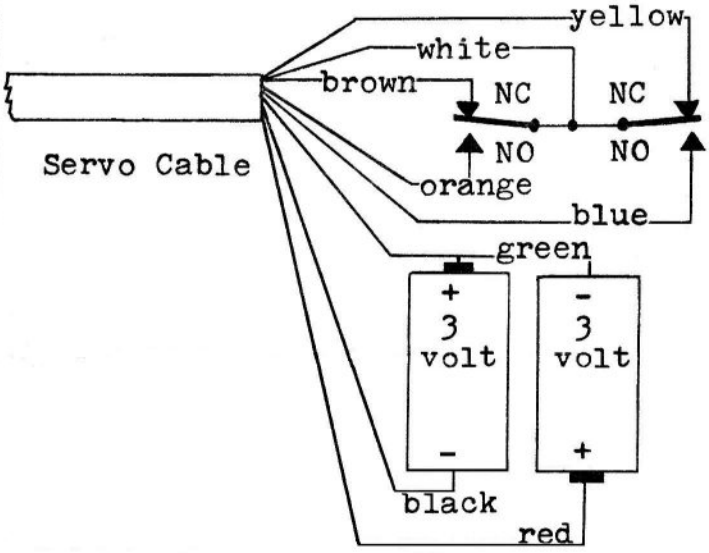


Trim & Neutral adjustments

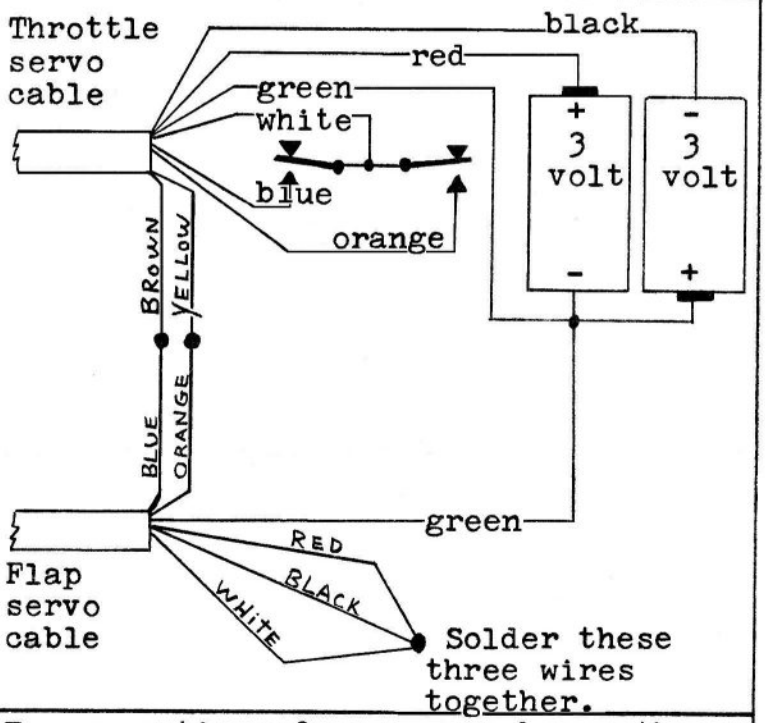
For adjusting neutral or trim-Loosen two screws and move circuit board. In "A" direction for trim, in "B" direction for close neutral. Be sure when setting a close neutral there is no short. The servo should hunt a few times then stop. Plyobond screw heads when adjusted.



1/16"piano wire pushrod, one piece. This eliminates one wear point in linkage. Put a "V" in rod to corespond with dihedral angle. Make keeper as shown.



Self Neutralizing circuit.



Shown above is the self neutralizing circuit. By leaving off the wires to the normally closed (NC) side of the relays the servo becomes a full trim actuator. These are the brown and yellow wires.
Use a good grade of solder and be very careful with each joint. On multi pin plugs use spaghetti on each joint then wrap the plug with plastic tape.

For operation of one servo by another. This works out fine for controling a flap servo from a throttle servo. Here is how it works: from high speed to half speed-flaps up. From half speed to low-flaps down. From low to half speed-flaps down. From half to high speed-flaps up.