

COBB HOBBY'S

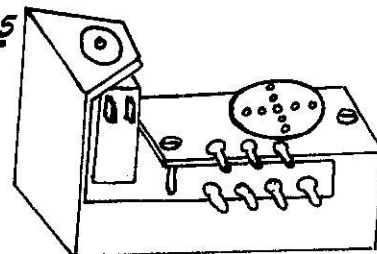
THREE MODELS

R/C

New

Electro'
SERIESCOMPOUND \$9⁹⁵3 POS. \$8⁹⁵S-N \$8⁹⁵

USE WITH ANY TRANSMITTER AND RECEIVER

Powered With the
POWER MITE "JR." Electric Motor

HOW IT WORKS

The ELECTRO' Series actuators function exactly like an escapement except a small electric motor is used in place of the usual rubber.

No current is used while the actuator is in a position, only when actually moving does the motor draw current.

A unique (Patent Pending) switching circuit automatically "BRAKES" the unit at the position selected. This ELECTRONIC BRAKE works despite varying voltage & load. Nothing like it has ever been used in R/C before.

In the absence of a signal the ELECTRO' COMPOUND returns to neutral. The S-N and 3 Pos. advance one position with each signal.

The 3 rd. position on the compound actuates the "slave" unit which can be a S-N, 3 Pos. or Slim Line Servo.

SPECIFICATIONS

Weight 1½ Oz.

Size - 1½ x 1½ x 2½

Battery Weight 1½ oz.

Current drain - Less than 1¢ per flight.

Push Rod Linkage

Powerful - over 4 times as powerful as other escapements tested.

ELECTRONIC BRAKE - Can't Over-run

CONTROL ACTION

ELECTRO' Compound Positions

- 1 Signal Rt.
- 2 Signals Lt.
- 3 Signals operate Slave actuator... S-N, 3 Pos or Slim Line Servo

ELECTRO' S-N & 3 Pos. Actuator advances one position with each signal.

CONTROL SYSTEM INDEX

MULTI-CHANNEL

2 Position Motor Control

S-N #1 #1

3 Position Motor Control

3 Pos. #1 #1

SINGLE CHANNEL

Rudder & Motor Control No sequence

Comp. & S-N #1&2 #2

Rudder Control- No sequence

Comp. #2 #1

Rudder & Up Elevator (Small planes 48" and Under) Use R-UE Linkage

Comp. See R-UE #1

Rudder & Up Elevator for Large Planes *Use "Slim Line" Servo

Comp. #2 #3

U- Control

Motor Control

S-N or Comp. #1 #1

Motor Control & Flaps or other Control *Use Slim Line Servo

Comp. & 3Pos #1&2 #4

BOATS

Left & Right Steering

Comp. #1&2 #4

Left and Right Positionable Steering -Use Slim Line Servo

Comp. #1&2 #4

Left and Right Positionable Steering & Speed Control as Above Use Slim Line Servo and 3 Pos.

Comp. #1&2 #3&4

Cars

Use the same Set-Ups as Boats

#3

OTHER - The above information will allow you to make many other control set-ups. Just use the diagrams which fit your needs.

BATTERY REQUIREMENTS

Several battery combinations can be used with the ELECTRO' Series. The one used will depend on the size of your plane. Large batteries are more efficient and cost less in terms of amount of current delivered.

Listed below is a list of the approximate no. of control movements you can expect from a set of batteries.

	No. of movements	Flying Time
2- Pen Cells	600 to 800	1 Hr.
2- Medium Cells	1500 to 1800	2 Hrs.
2- 250 MAH Nickel Cadmium Rechargeable Cells	2000 to 2500	3 Hrs.

Maximum control useage will average about 12 per. min. When using pen cells it is wise to use 4 if possible since their life is not always predictable. Use "Load" tester to test pen cells and discard those reading less than 1.3 V. under 10 Ohm Load.

The Nickel Cadmium Batteries are by far the best choice. A pair weighs about the same as a pair of pen cells and can be recharged for years.

SOLDERING INSTRUCTIONS The plastic case of the Motor can be damaged unless care is used in attaching lead wires.

PROCEED AS FOLLOWS ---- See Sketch

1- Clean and "Tin" (apply solder) to the condenser leads (not included) BEFORE attaching it to the motor.

2- Thread the condenser leads thru the motor terminals.

3- Use 50 Watt iron. Apply rosin solder to the iron.

4- Apply this melted solder to the motor terminal. Hold iron in place only long enough for the solder to "Flow" on the joint.

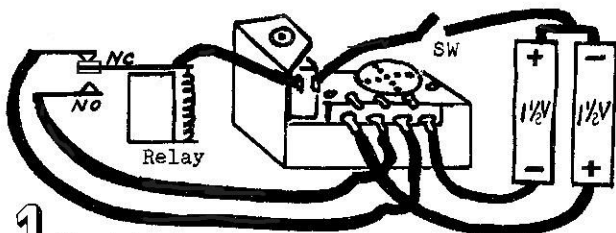
5- Apply damp (not wet) cloth to absorb heat.

6- Clip condenser leads to ½" and connect leads to these "tails". DO NOT ATTEMPT TO REMOVE THE CONDENSER OR RESOLDER THE MOTOR TERMINALS.

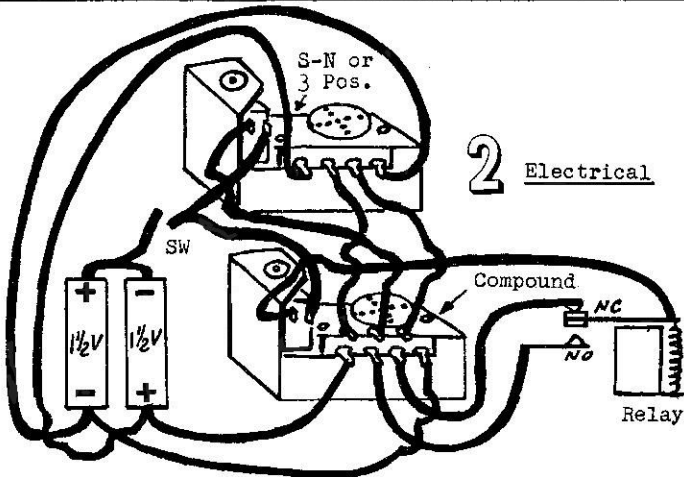
Always "Tie Down" all leads from the actuator to prevent breaking due to vibration.

BONDING RELAY ARMATURE

Most relays have a very poor connection from the armature (moving part) to the frame. For reliable results this must be improved by making a direct connection. On receivers having 3 mills or more current change, the tension spring may be soldered at both end --- very carefully. Other receivers will have to have a very flexible stranded wire connection.

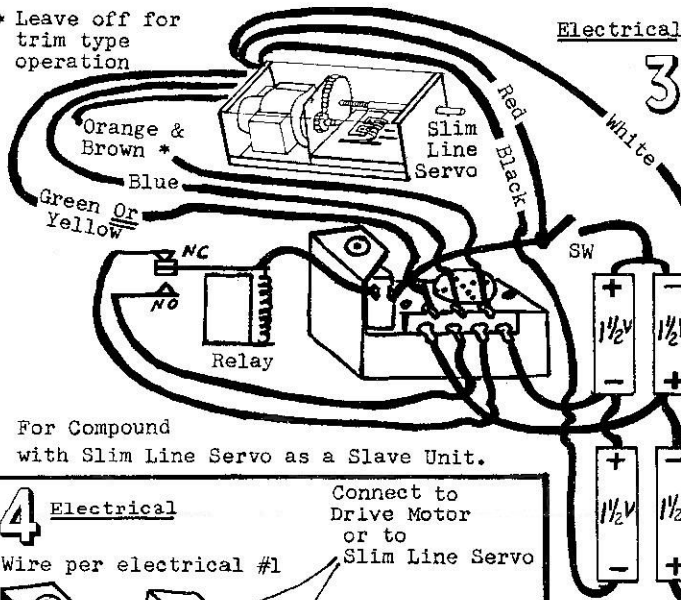


1 Electrical For Single Compound, S-N or 3 Pos.

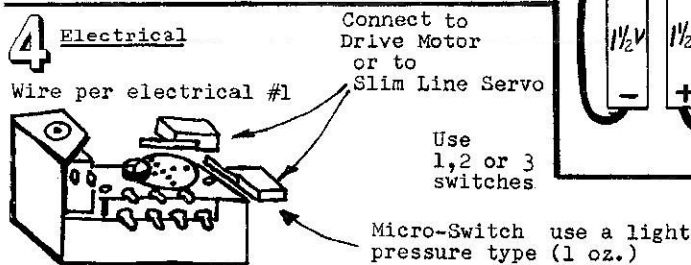


For Compound with S-N or 3 Pos. as a Slave Unit.

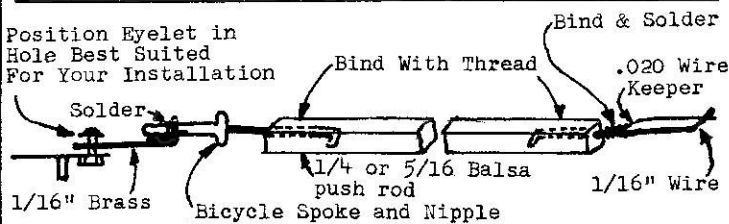
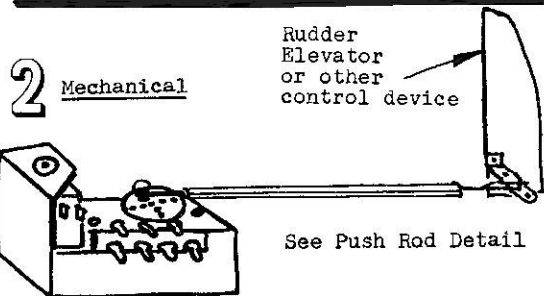
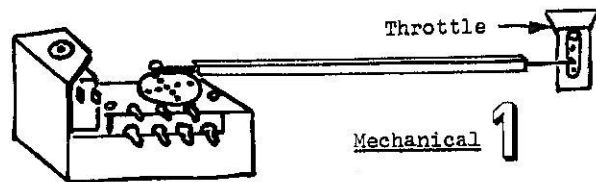
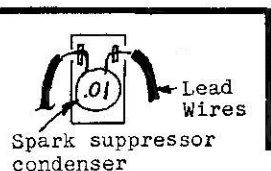
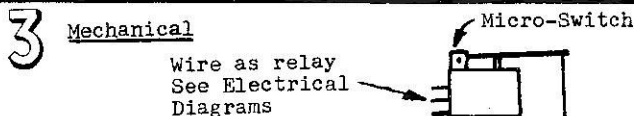
* Leave off for trim type operation



For Compound with Slim Line Servo as a Slave Unit.



Showing Micro Switches used with Compound, S-N or 3 Pos. Do not use with planes.



Trouble Shooting Hints

Unit may be mounted on sponge if engine vibration causes erratic operation.

Do not disassemble the unit. Special Tools are required to reassemble correctly. No attempt should be made to bend or adjust the contact fingers. They will require no maintenance or cleaning.

The motor should run at 1.0 Volts
Failure to do this indicates a bent frame due to a hard landing.

COBB HOBBY
MANUFACTURING CO., Powder Springs, Ga.

Pilot Control - Selector "4" - Slim Line SERVO
COMPOUND ESCAPEMENT