



# Plastic Servo Case Kit

CONTROLAIRE PROPO

DIGITRIO

PHELPS ANALOG

Controlaire - Reed



\$3.49

# INSTRUCTIONS

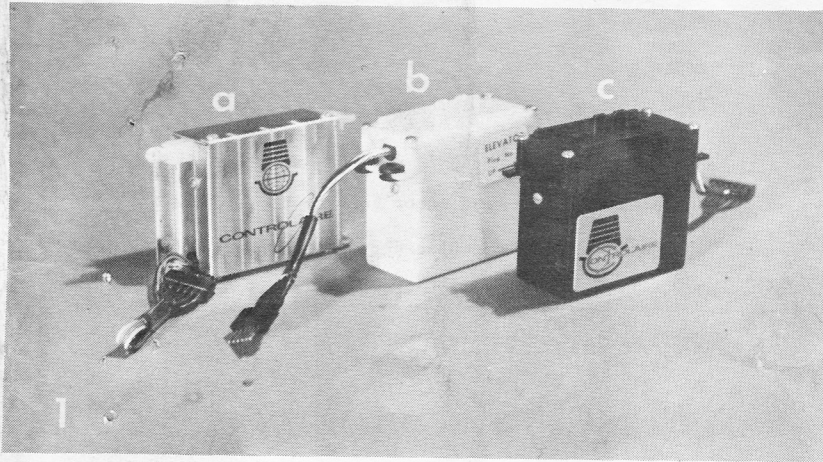


PHOTO #1

We are offering the top drive plastic case as it helps to prevent case to component shorts and permits a shorter mounting dimension. Case comes either in white or black plastic. Both colors are used in the instruction manual. See Dwg. #1 for mounting dimensions.

- a. Controlaire servo in Metal Case
- b. Controlaire Servo in White Plastic Case
- c. Controlaire Servo in Black Plastic Case.

PHOTO #2

Shows a three element brush on the rack. Snip center element out of brush. This may have been done for you by factory.

PHOTO #3

## Bill of Material:

4	Top Screws	} .30 Pkg.
2	Sheet Metal Screws	
4	Lge. Grommets	
1	Sm. Grommet	
1	Case . . . . .	\$1.00
1	Rack with Brush . . . . .	1.75
1	Slideway . . . . .	.75
1	Cover . . . . .	.75

PHOTO #4 The inner parts of your servo; boards, C-frame,  
 #5 motor and spur gears are interchangeable between  
 #6 metal and plastic case. After removing this  
 #7 assembly from metal case, notch C-frame for wire  
 clearance as shown in Dwg. #2. This clearance  
 notch shows in Photos #4 and #5. Photo #4 illus-  
 trates how the wires are passed up through the  
 notch. Place the C-frame and board assembly into  
 the plastic case. The motor goes to the side of  
 the case with the circular depression. Look in-  
 side case - See Photo #7. Photo #6 shows how the  
 small grommet is pressed into notch in case.

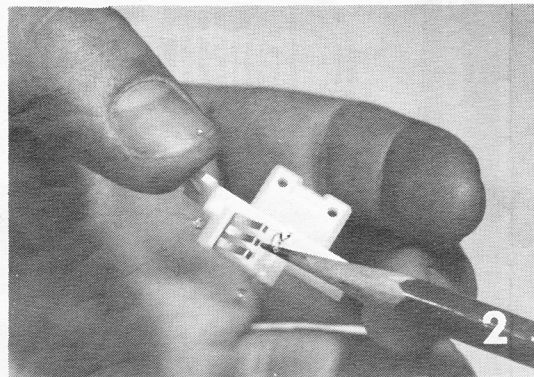


PHOTO #8 Line up the holes in the C-frame with the holes  
 in the side of the case. Assemble screws (2).  
 Note that the C-frame top edge is down from case  
 edge by about .050".

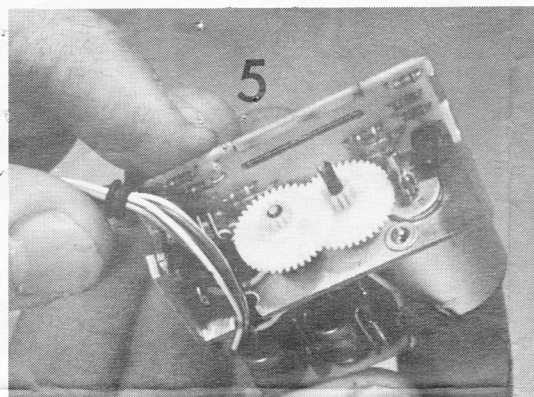


PHOTO #9  
 #10 Photo #9 - Note the position of the rack in the  
 slideway. Remove spur gears. Assemble rack in  
 slideway. (Omit lower case). See photo #10.  
 Note the brushes of the rack are placed through  
 the opening first then rotate rack 90° so as to  
 get rack in slide as per Photo #9. Place cover on  
 assembly and slide rack back and forth. If ex-  
 tremely tight sand guides on rack lightly.

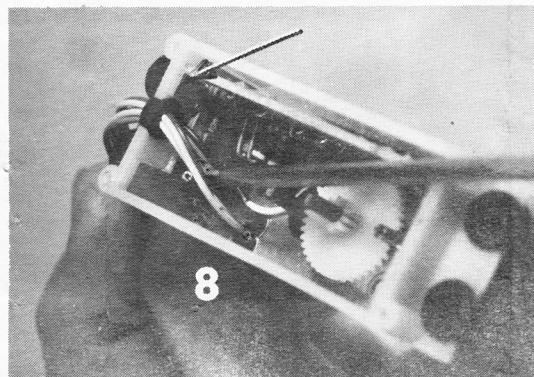
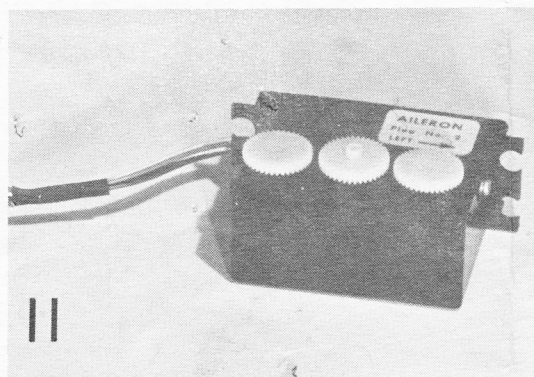
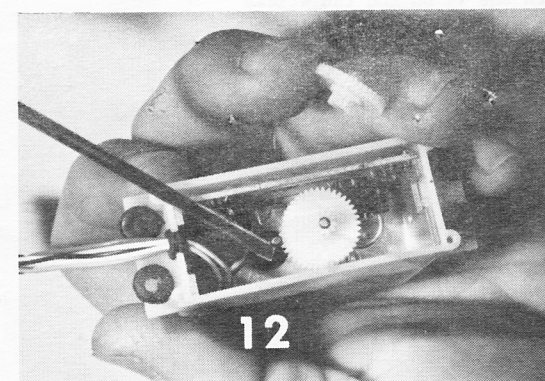
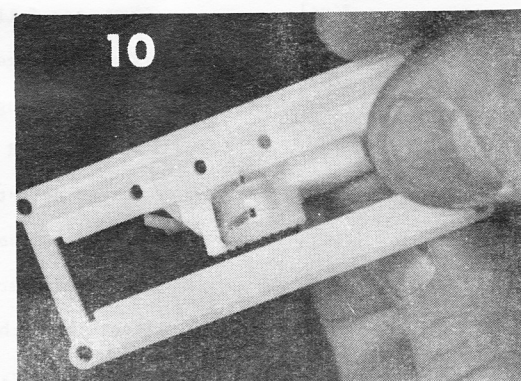
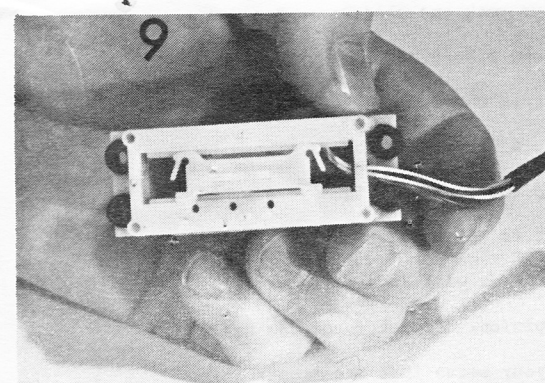
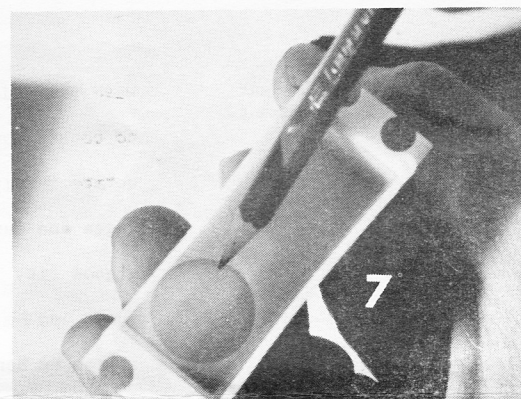
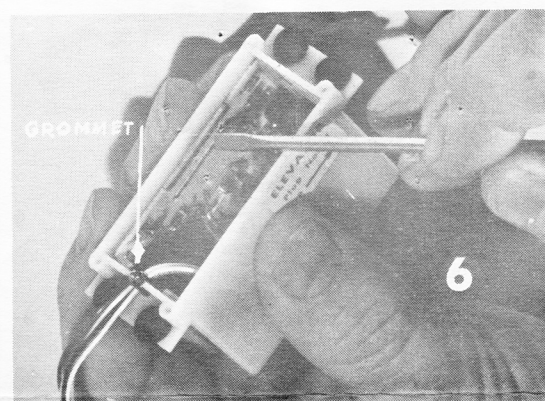
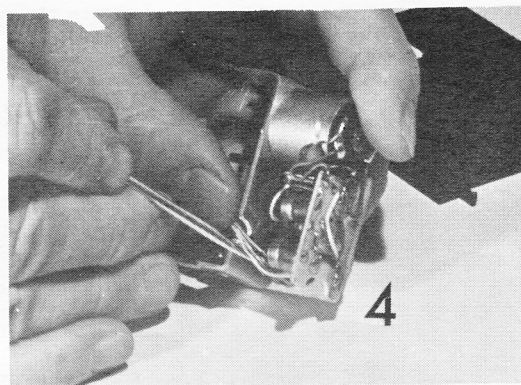
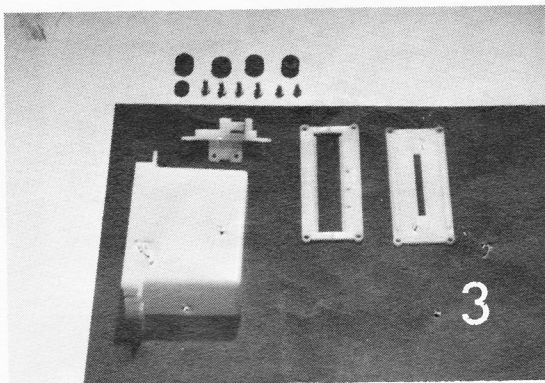


PHOTO #11 Shows 3 gears. The center gear with the spacer  
 #12 boss goes on the shaft the farthest away from  
 the motor shaft. Assemble the two gears without  
 boss on other shaft - see Photo #12. This is  
 in preparation for a gear mesh check between rack  
 and top gear. Read next assembly steps carefully  
 to avoid mashing the brushes.







Here's the  
tricky step.

Rotate the rack into the slideway so that the brushes are on the side with the 3 holes. Push this rack to the far end of the slide so that the finger spring on the rack is compressed. Place the empty end of the slide into the servo case. Now, carefully swing the slide assembly in and down - be careful not to jam or bend the brushes as you do this. Look under rack and thru holes in slideway to make sure brushes are O.K. and in position.

Check gear  
engagement.

With the middle gear out of the train there is no connection to the motor and the top gear will rotate freely. Slide the rack so that it engages and turns top gear. What is required is a good fit. If the mesh seems too tight the gear shaft can be bent away slightly. If too loose, it can be bent for closer mesh.

Final  
Assembly

Now, carefully remove rack and slideway. Replace the middle gear. Now, reassemble rack and slideway repeating the steps above. The cover should now be added and the 4 screws assembled. These screws self-tap into the plastic. Take it easy on the screws so as not to strip the threads. The spring finger on the rack will engage the rack teeth with the top pinion. Do not force the gearing. Rather, plug your servo into the proper wiring harness. With the Tx on and the sticks centered, the servo will center.



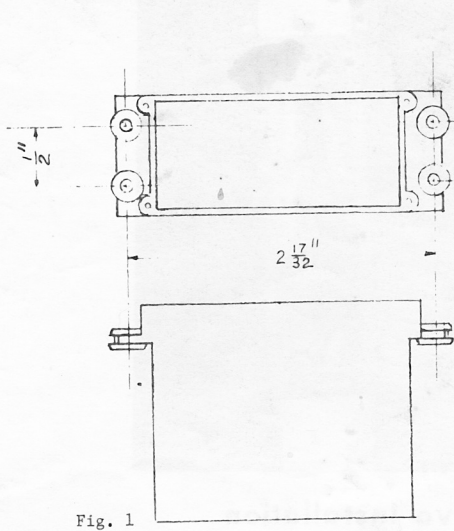


Fig. 1

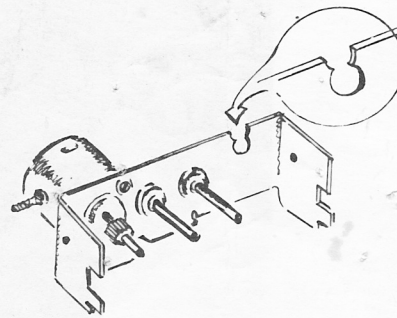


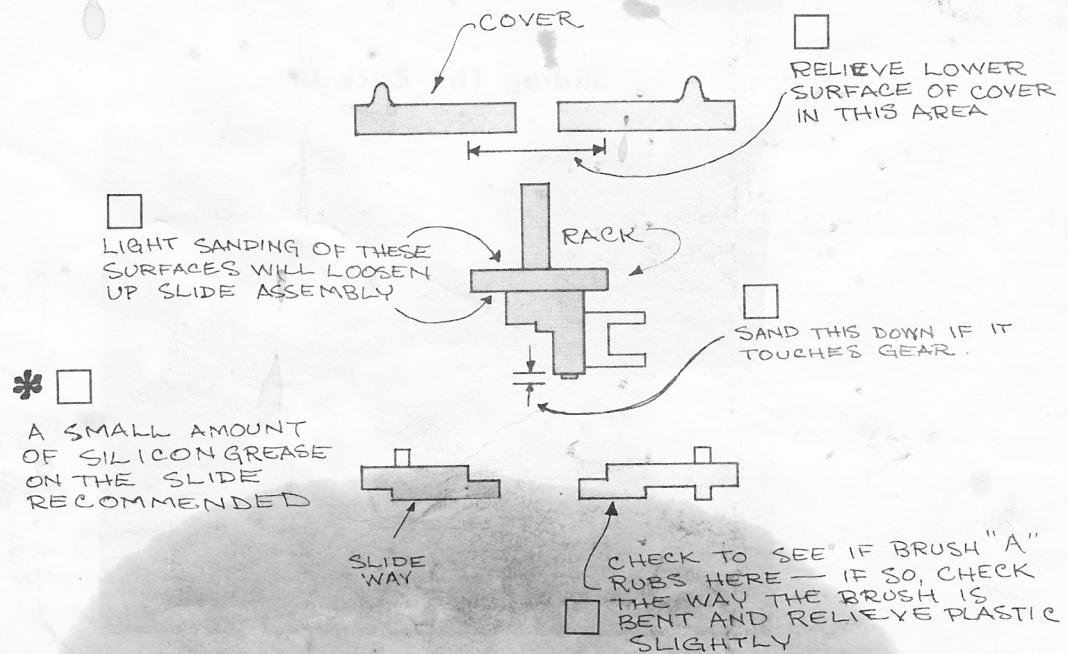
Fig. 2

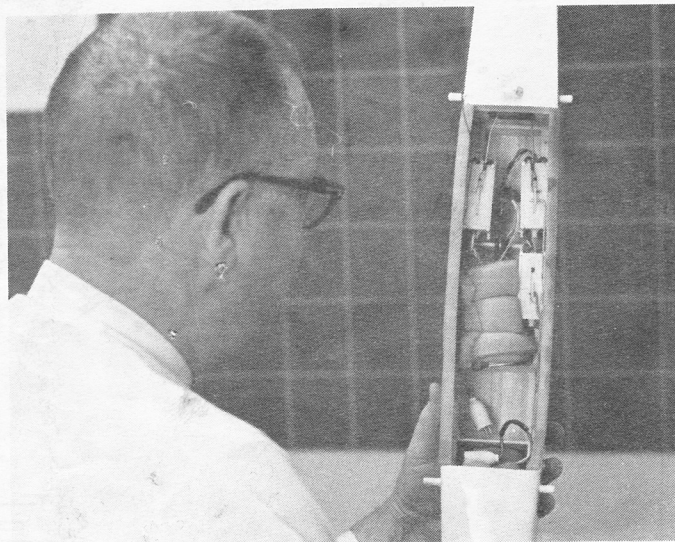
Fig. 2

### SLIDE NOTES

#### NOTE:

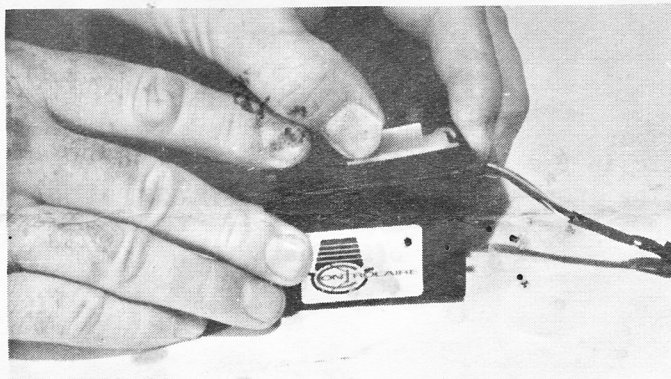
The plastic in the slide assembly has some shrinkage. This can cause some binding and make the servo draw higher current (also makes the resolution sloppy). Here are a few places to touch up if your servo seems tight -- use check off squares.





Plastic Case Servo Installation

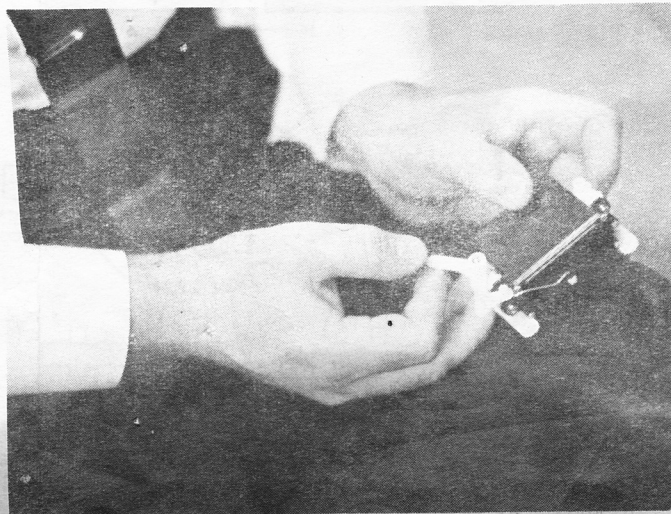
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 42



Sliding The Rack In

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22  
 12  
 14



Foot & Bellcrank Kit — \$1.49

26.90  
 4.50  
 0.60