

ADAMS PROPORTIONAL ACTUATOR

Patent No. 2,771,572

Adams Mfg. Co.
JANESVILLE, WISCONSIN
USER'S INSTRUCTIONS
for Adams Actuator

You have just purchased as fine a magnetic actuator as is available, the result of eleven years of development and refinement. The small size, light weight and low drain of this unit make it ideal for use in $\frac{1}{8}A$ and $\frac{1}{4}A$ radio controlled aircraft, but torque output is adequate for the average $\frac{1}{2}A$.

The dual coil winding provides for rotation of the rotor in both clockwise and counter clockwise directions from one common battery supply. In the case of dual output transistorized receivers, the same battery supply is used for both the receiver and the actuator. Up weight of the complete radio, battery supply and actuator complement may be kept at 3 oz. or less. For use with a relay type receiver, a separate battery supply must be used. Six volts may be applied to the actuator with a resultant drain of only 200 ma. Increasing applied voltage increases torque and decreases response time of rotor rotation from one control extreme to the other.

Great care must be taken to keep the magnet free of stray iron or steel particles as they will short the magnetic circuit and prevent rotation of the rotor. Keep it clean. The magnet was purposely left out in the open to facilitate cleaning. Blow off stray particles or push magnet back from its normal position and press modeling clay or typewriter cleaner against it. The particles will stick to the clay and be removed.

Do not do any soldering to the actuator or near it with a soldering gun. The AC field surrounding this type of equipment may demagnetize the rotor. Use a small, low wattage iron or pencil. Install in aircraft per installation diagram, with red dot on rotor and red dot on frame facing up. Keep output shaft of actuator and torque rod in airplane in alignment. Front bearing on torque rod should be as close to yoke as possible. Rear bearing of delrin is furnished with the actuator. Drill out hole to fit torque rod used. Roughen or nick up outside of bearing for

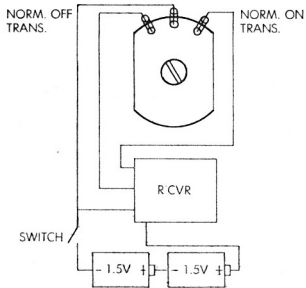
good adhesion and glue into rear of airplane. Short lengths of insulation from hookup wire may be forced over the rear crank and the L bend of the actuator to prevent any metal to metal chafing which could cause receiver malfunction. Stops should be installed on the rudder or rear crank so that the actuator may rotate as far as it will and deliver all power possible to the rudder by twisting the torque rod against the stops.

Make sure when wiring the actuator to the receiver relay or output transistors that right on the transmitter pulser and right on the airplane agree. If not reverse the wires to the two outer coil connections. A self shorting mini-jack may be used for a switch. Wire it in so that radio is on when unwired mini plug is removed.

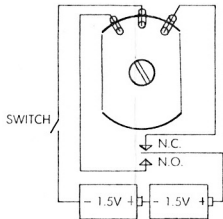
Keying of the transmitter may be accomplished with any pulser on the market such as Wag, Worth, Shows, Phelps, etc.

WIRING DIAGRAM

RELAYLESS



RELAY



If dust cover is desired, cut lower section of container off. Drill hole for coil wires and glue to slide over actuator.