

STEP 43 Rudder Linkage

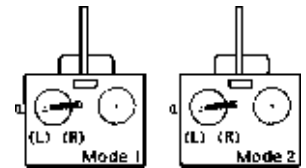
The pushrod changes the pitch of the tail rotor blades to increase or decrease the torque compensation and to rotate the nose of the helicopter about the main shaft.

Use a servo horn in the shape of a cross and trim 3 of the 4 arms off. Using threadlock on the nut only, install one steel ball and one M2 Hex nut at a distance of 10-14mm from the center of the servo. Thread the front part of the tail rotor control pushrod (the short part) (G) through the rear guide in the upper frames. Thread the rear end of it into the hex connector and attach the ball link to the servo end. Having the radio on and the rudder trim centered, press the servo horn onto the servo set at 90 degrees to the servo and align the rudder bellcrank to 70 degrees as shown in the diagram.



The accuracy of the rudder pushrod really comes down to the type of gyro that will be installed in the helicopter. From a beginner standpoint, a *heading-lock* or *rate* gyro are good choices however, if the *heading-lock* type of gyro is selected make sure that the rudder servo speed is within the range specified by the gyro manufacturer. Choosing a *heading-lock* gyro and using a regular servo will lead to premature failure of the servo, crashing the helicopter.

Our general recommendation is to get a piezo rate gyro but if *heading-lock* is desired, get one with both modes.



As the rudder stick is to the right the rudder pushrod will move forwards increasing the thrust in the tail blades rotating the nose to the right.

