

the servo to the intermediate horn – without recourse to transmitter adjustments. It is much easier than it sounds, just look at Fig. 10.6.

Closed loop systems can be used for most control runs and it is not necessary for them to exit the airframe and make a direct connection to the control horn – although this is possible with many of the earlier aircraft. Cable runs can be terminated at a bellcrank near the control surface and the final connection made to the control horn with a pushrod (see Fig. 10.10). It can even be used in this way for engine throttle control.

Changes of direction in cable runs can be made in two ways. Available as R/C accessories are cable pul-

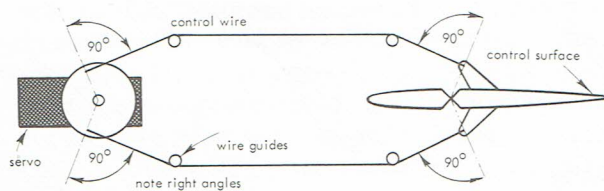


Fig. 10.8: Re-routing cables.

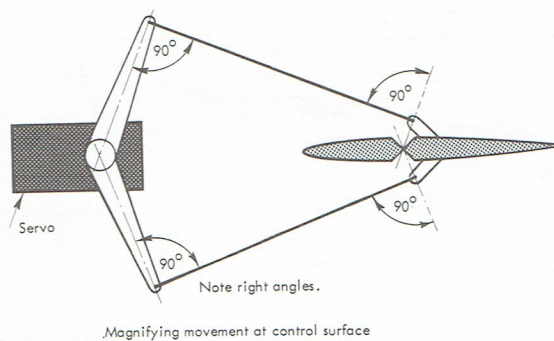


Fig. 10.9: Correct right angle cable connections.

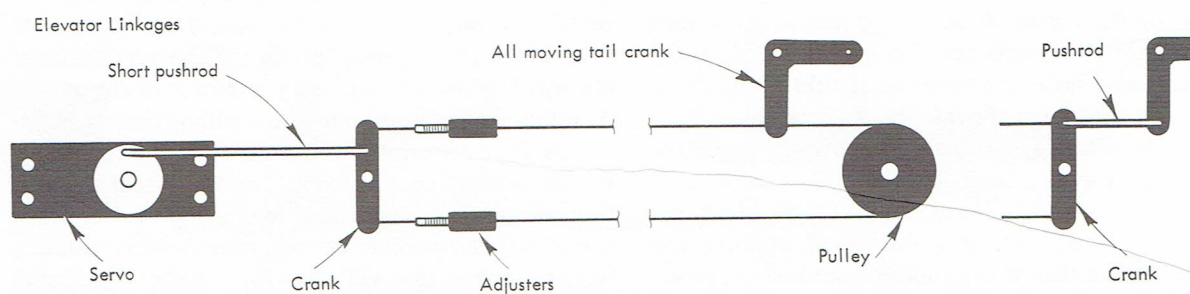


Fig. 10.10: Closed loop linkages for high and all-moving tailplanes.

leys of various types and fixings, ship fittings may be suitable for this purpose. It is most important the cable is taken between the pulley and the fitting and that there is no chance of the cable coming away from the pulley wheel, or jamming between the pulley and fitting. The other method is to run the cable in micro bore nylon, or similar low friction plastic tubing. The tubing can be taken around gentle curves (under the cockpit floor, for instance, before taking a straight run to the fuselage rear end) without introducing too much friction on the cables where they contact the tubing. For this purpose, and for any situation where there are changes of direction of cable runs, a flexible cable, such as nylon covered fishing trace line (typical 30lb. strain) should be used. If control runs are absolutely straight and direct, control line wire (seven strand) may be used and crimp and soldered joints used at the connections.

Special fittings, for use with closed loop cable control of Giant models are available and include automatic tensioners, slip adjusters and pulleys.

(e) Solid metal pushrods. Used when servos are adjacent to the control surface or for the final connection from a bellcrank, or plastic inner, to the control horn. Our great standby for smaller models, cycle spokes, are barely strong enough for our Giant purposes. Actually they would be sufficiently strong for straight line push and pull purposes, but not if we require off-set or if high vibration levels are present. In any case, most of the control horns, clevises and bellcranks marketed for large models are designed to take a heavier duty threaded rod connector. Unfortunately, there is no one set thread standard and you may find accessories designed for a variety of different thread connections i.e. USA 4-40, SAE, B