

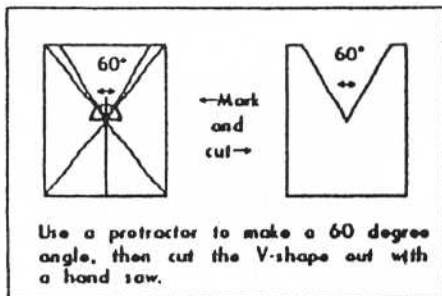
Cutting the Cradle Boards And Balancing The Tube

CUTTING THE CRADLE BOARDS

1) Use the two remaining pieces of Part B for the Cradle Boards.

2) The Cradle Boards need to be cut to hold the Side Bearings (circles). (Note: Cutting a V-shape is the simplest way to cut the Cradle Boards and is very satisfactory, but some people prefer to cut a semicircle for COSMETIC reasons. (The V-shape can be easily cut with a hand-saw.)

3) To cut the V-shape, find and mark the center of one of the boards (Part B). The angle of the "V" should be about 60 degrees. Use a protractor to mark the "V" and cut it out with a hand saw. (See below.) Do both Cradle Boards the same way.



BALANCING THE TUBE

1) To balance the tube we will need to install the primary mirror and the spider with the diagonal mirror in the telescope tube. Remember: **HANDLE MIRRORS WITH CAUTION!!!** (SEE PAGE 1)

2) Slide the telescope tube into the Tube Box. The fit of the tube should be snug in the Tube Box. If the fit is much too loose, a piece of masonite or thin plywood may be glued inside the Tube Box to tighten the fit as needed (see page 29). If the fit is just a little loose, a shim shingle may be shoved between the box and the tube.

3) Slide the Tube Box along the tube to the spot where the weight of the telescope is **BALANCED** at the Tube Box.

Attaching The Cradle Boards

ATTACHING THE CRADLE BOARDS

1) The telescope's Side Bearings (the circles on the Tube Box) sit in the V-shaped notches in the Cradle Boards, allowing the telescope to be moved up and down easily. Position the Cradle Boards so that there will be at least 1" clearance between the lower end of the telescope tube (i.e. the tailgate end) and the Bottom Board of the Rocker Box when the telescope is sitting vertically in the Cradle Boards. The telescope must also be able to move forward into a nearly horizontal position without interference by the Front Board.

2) The Cradle Boards, when properly positioned, may be nailed or screwed to the Side Boards as shown, slightly forward of center. The Cradle Boards must be far enough back from the Front Board to allow the telescope to stand straight up in the rocker.

Note: Since the Cradle Boards may have to be moved around a few times to get the placement just right, it is a good idea to "tack" them in place with just a couple of nails while you are making adjustments. Nail them firmly in place later.)

3) [We will henceforth refer to the Tube Box-and-tube assembly (with mirrors installed) as the "telescope". The mount in which the telescope sits will be referred to as the "rocker".]

To enable the telescope to move smoothly in the up-and-down direction, we nail small pieces of Teflon at the points where the Side Bearings contact the Cradle Boards. Place the telescope in the rocker. Make a mark on the wood of each of the V-shaped notches at the two points where the Side Bearings make contact.

4) Nail a small piece of Teflon at each of the four marked contact spots (two on each side). Let the Teflon protrude a little over the inside edge of the Cradle Boards to keep the Tube Box away from the Cradle Boards. Use finish nails and set the nails with a nail set. Place the telescope back in the rocker. The Side Bearings should glide smoothly on the Teflon

