# FIRST DAY TRACKER

## ASSEMBLY AND FABRICATION INSTRUCTIONS

### SUGGESTED BILL OF MATERIALS

(Approximately 3sq.ft.) of Clear 3/4in (18MM) thick Wood or Plastic Material

(1) 5/16 in. Carriage bolt 2 ½' length

(1) 5/16 in. Flat washer

(1) 5/16 in. Wing nut

(11) 1 1/4 in. x number 8
All Purpose Screws

(4) 1/2in. x number 6
Pan Head Screws
(To secure the "Shadow Strings)

(1) Plastic Line Level

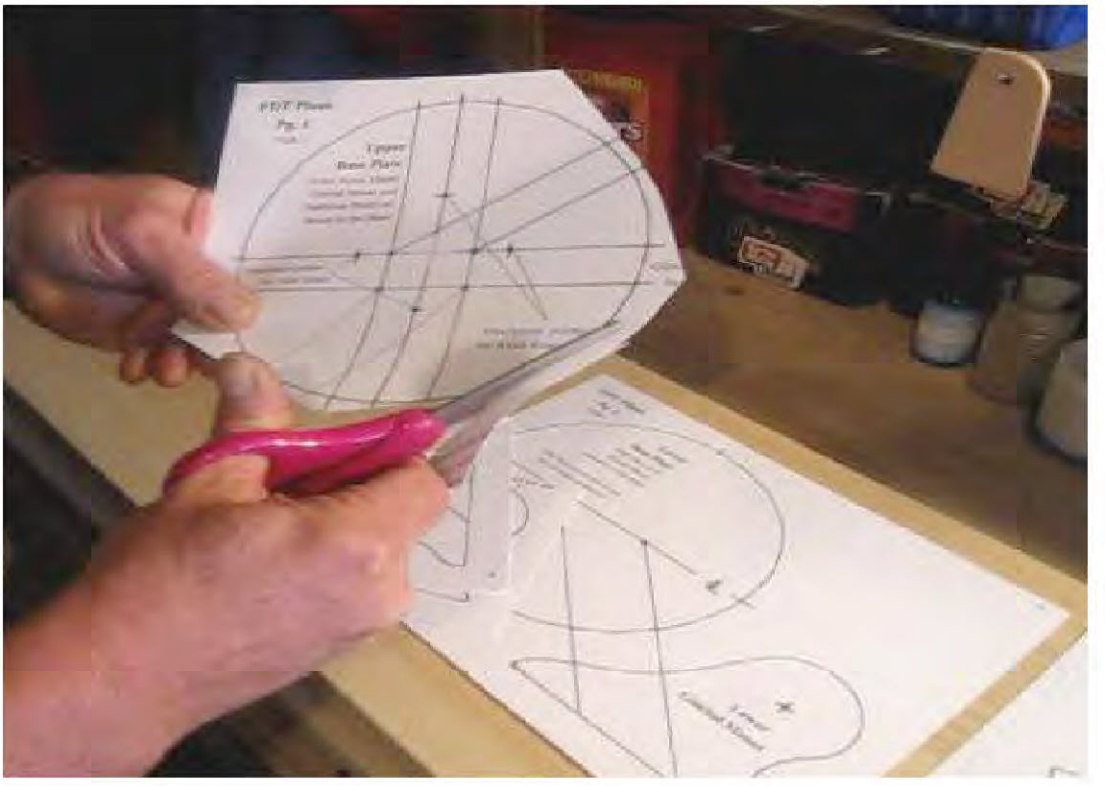
(3 ft.) of Heavy duty Thread or Waxed Dental Floss (For the Shadow Strings)

**(Glo-String works the best however and is available at the following website)**

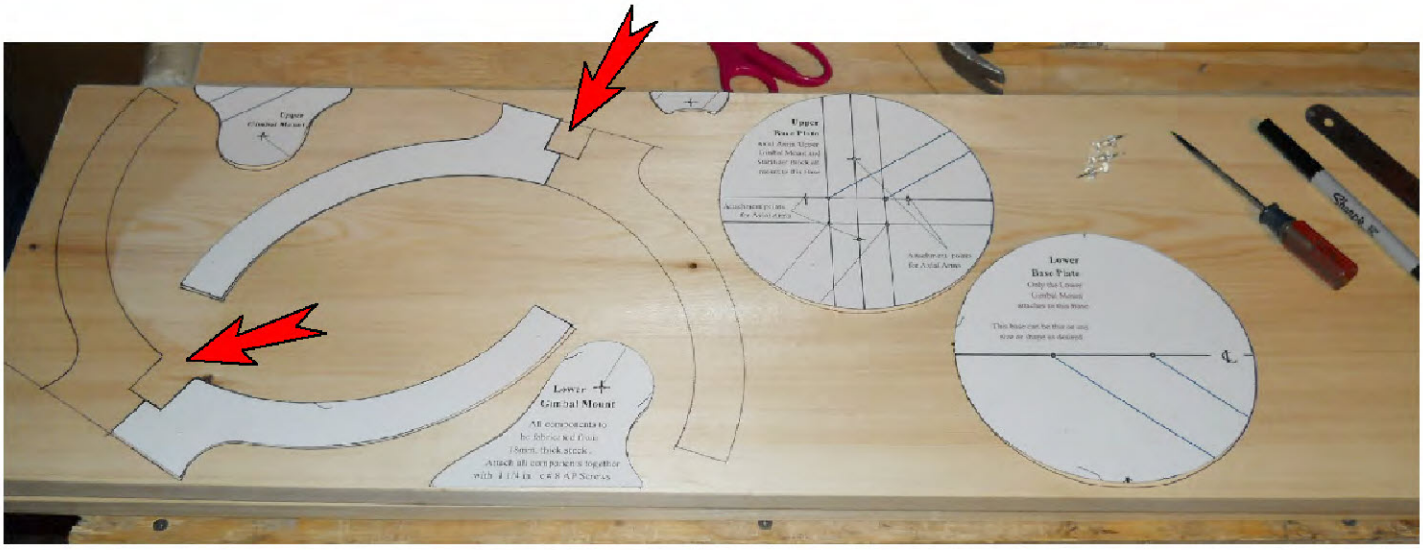
**( www.superiorthreads.com/shop/product/pastel-yellow-nitelite-extraglow-80-yds/ )**

**1)** Copy two sets of the plans using Card stock. (Keep one set for details and backup).

**2)** Carefully cut out all the component tracing templates.

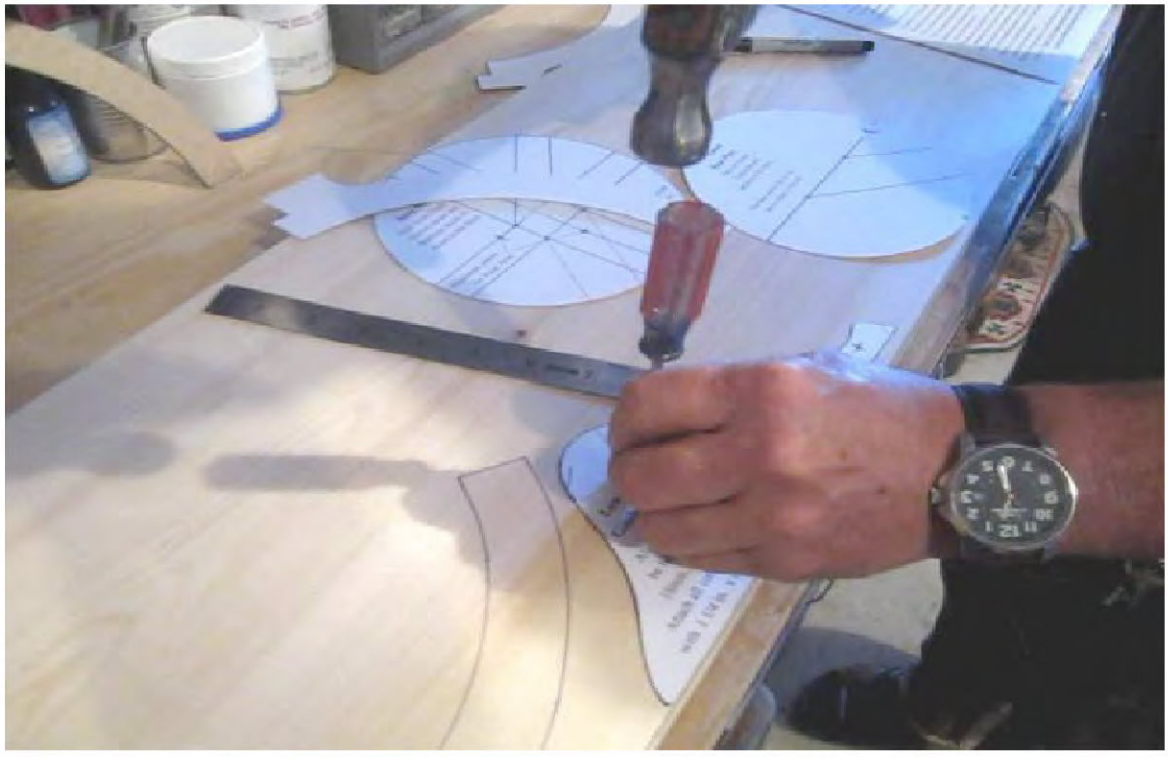


**3)** Carefully trace out all the components onto your 3/4in (18MM) thick material.

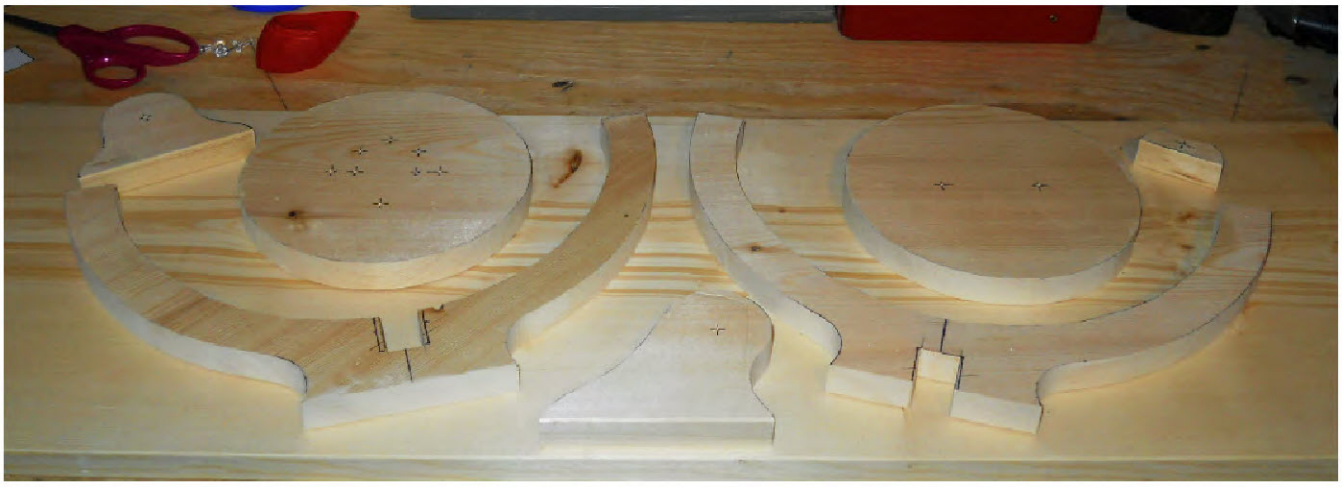



Important Note: Adjust the width of these slots in both Axial Arms to match the actual dimension of the thickness of the material being used.

**4)** Use a scribe or small nail to mark all the attachment points to be drilled.

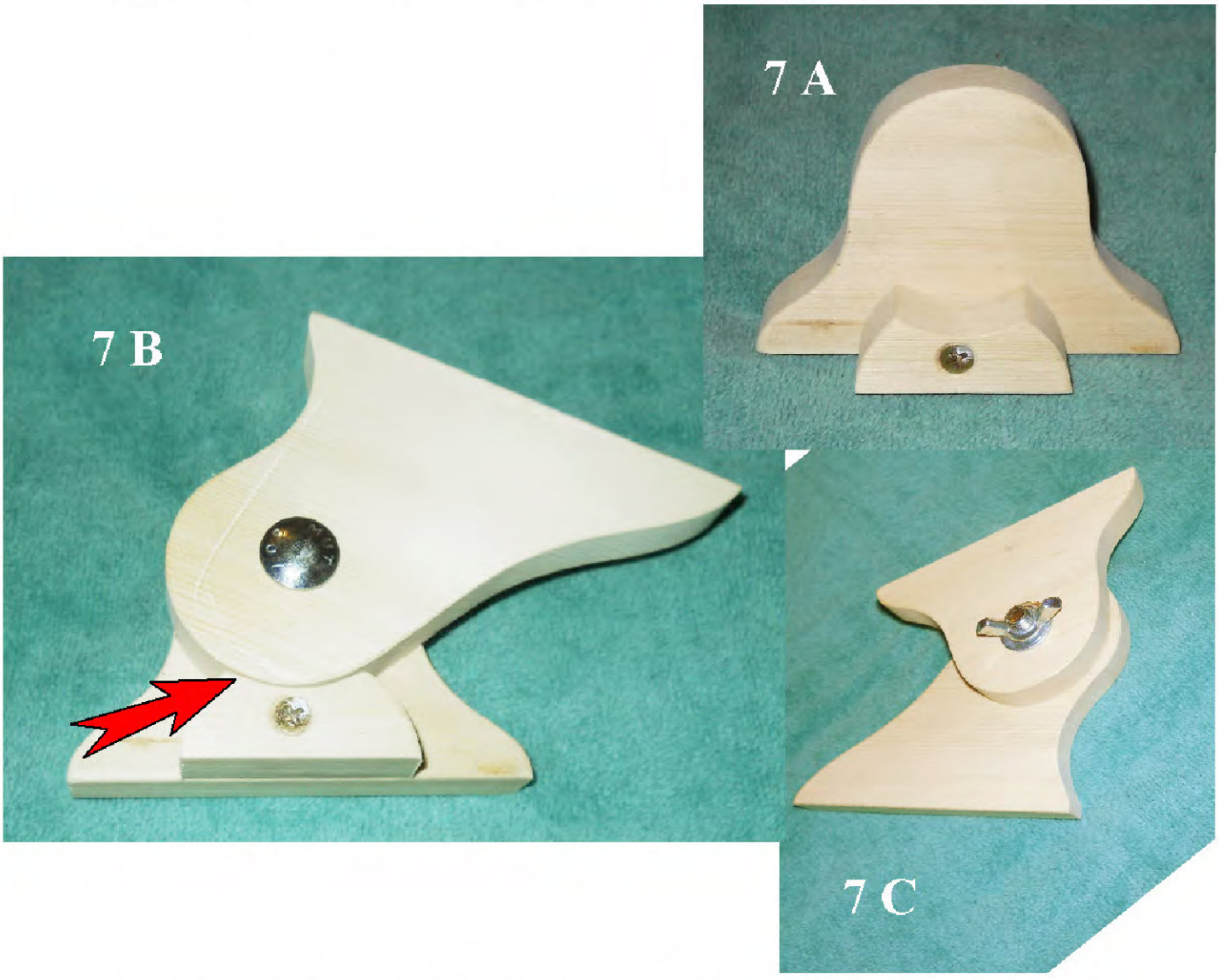


**5)** Cut, Drill and Sand all components as indicated on the Plan Sheets.



**6)** Mark a centerline onto the bases of both Axial Arms, Upper Gimbal Mount, Lower Gimbal Mount, Stabilizer Block and both Base Plates for assembly alignment during the fastening process.

**7A)** Mount the Stabilizer Block to the Upper Gimbal Mount with an All Purpose screw (countersink for the screw)

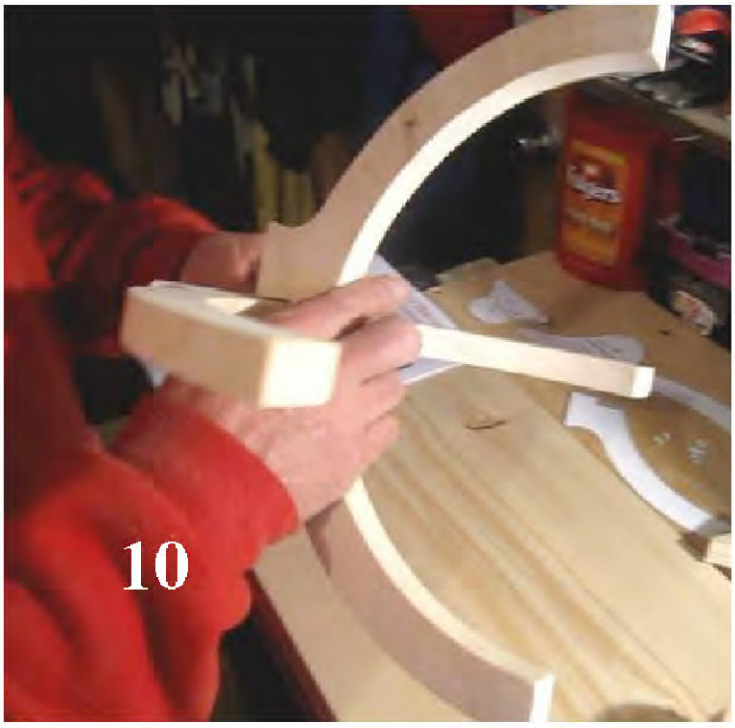


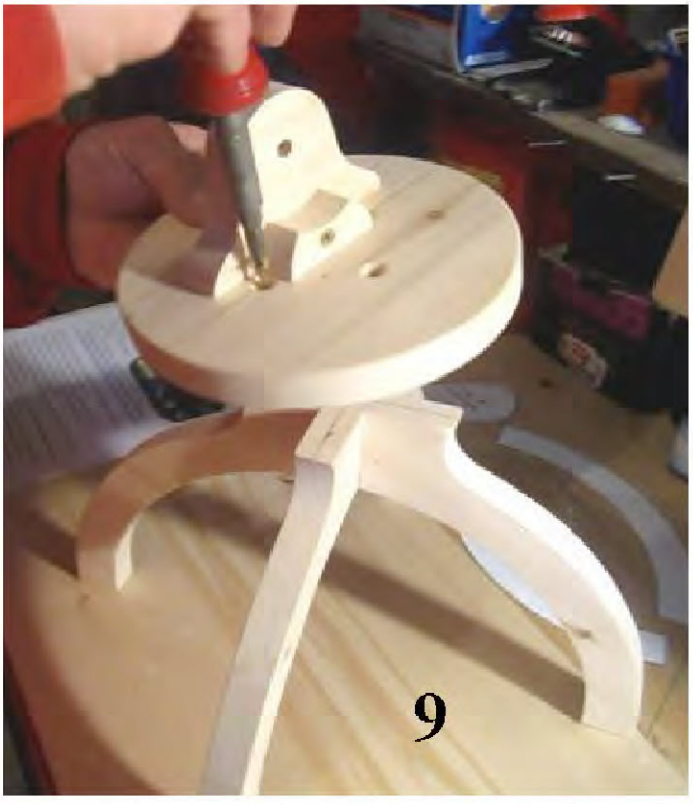

**7B)** Set the Lower Gimbal Mount on the Assembled Upper Gimbal Mount Assembly, take a small piece of scrap card stock and place it between the Stabilizer Block and the Lower Gimbal Mount to serve as a temporary shim-spacer.

**7C)** Secure the entire assembly, then drill through both the Upper and Lower Mounts with a 5/16 in. Drill bit. Carriage bolt assembly is then used here to serve as a pivot and brake for the finished Gimbal Assembly as shown above.

**8)** Dissasemble Upper Gimbal Mount from the Lower Gimbal Mount by removing the carriage bolt assembly.

**9)** Align and Attach the Upper Gimbal Mount with Stabilizer Block still attached to the Upper Base Plate using (4) All Purpose Screws (countersink the appropriate side of the base for the screws).




10) Interlock both of the Axial Arms ,then Align and Attach the interlocked Axial Arm Assmbly onto to Upper Base Plate (the opposite side from the Upper Gimbal Mount Assembly using (4) All purpose screws (countersink the appropriate side of the base for the screws).

**11)** Re-Attach both Complete Lower and Upper Assemblies together using the 5/16 in.carriage bolt assembly.

**12)** Paint or finish as desired.

**13)** Attach a Line Level to the Lower Base Plate at 90 degrees to the North South Axis so as to be able to level the Tracker to the East - West Horizon Axis.

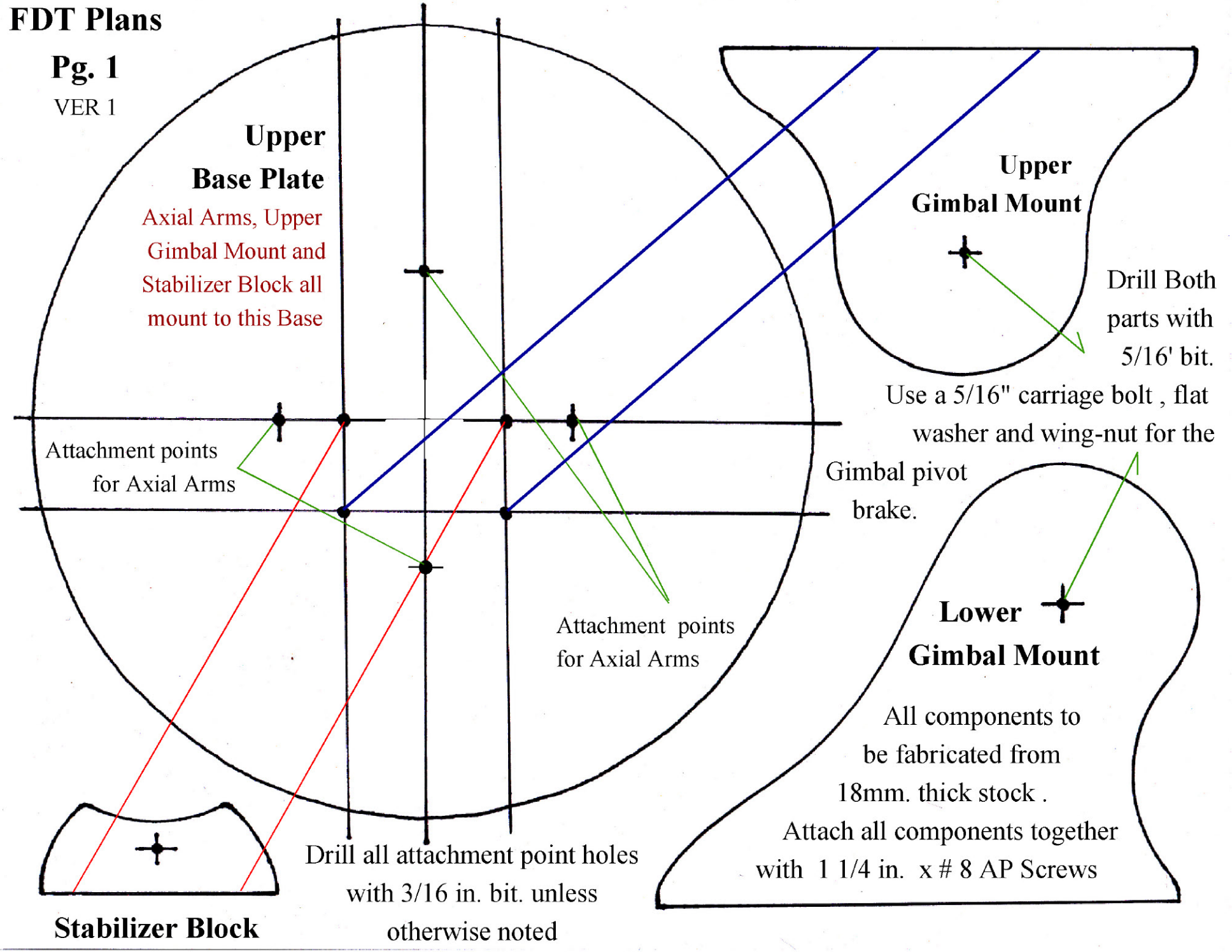
**14)** Make a slight linear indentation parallel to and centered on the axis on each of the (4) four tops of the Axial Arms for the "Shadow Strings" to set in.

**15)** Stretch the "Shadow Strings" across the Axial Arm tops in the indentations and attach the ends of the string using the pan head screws at each end. The screws should be located around the corner and down about 1/2 in. from the top surface where the indentation is ( 90 degrees to the top axis ).

# FDT Plans

## Pg. 1

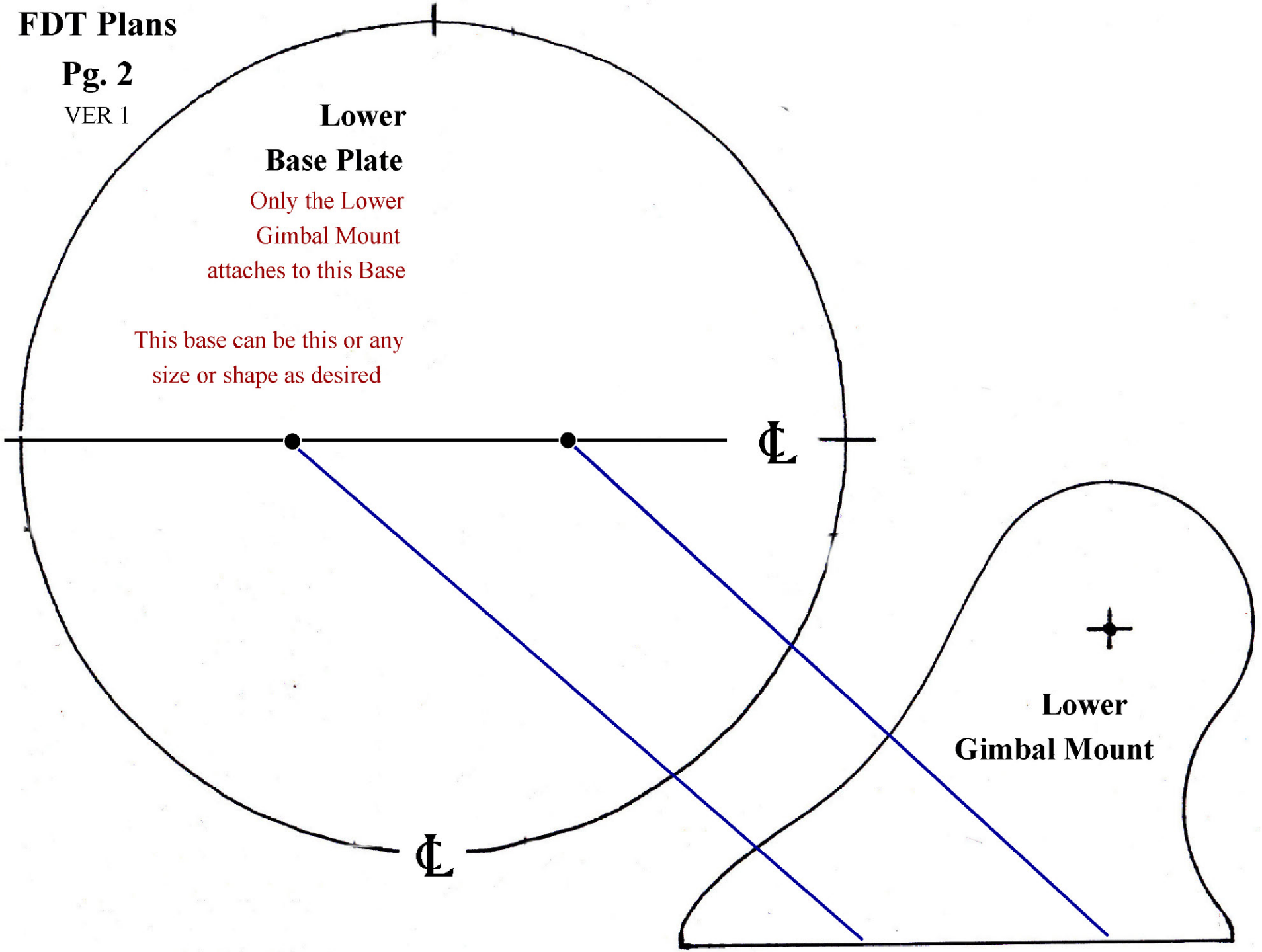
VER 1



**FDT Plans**

**Pg. 2**

VER 1



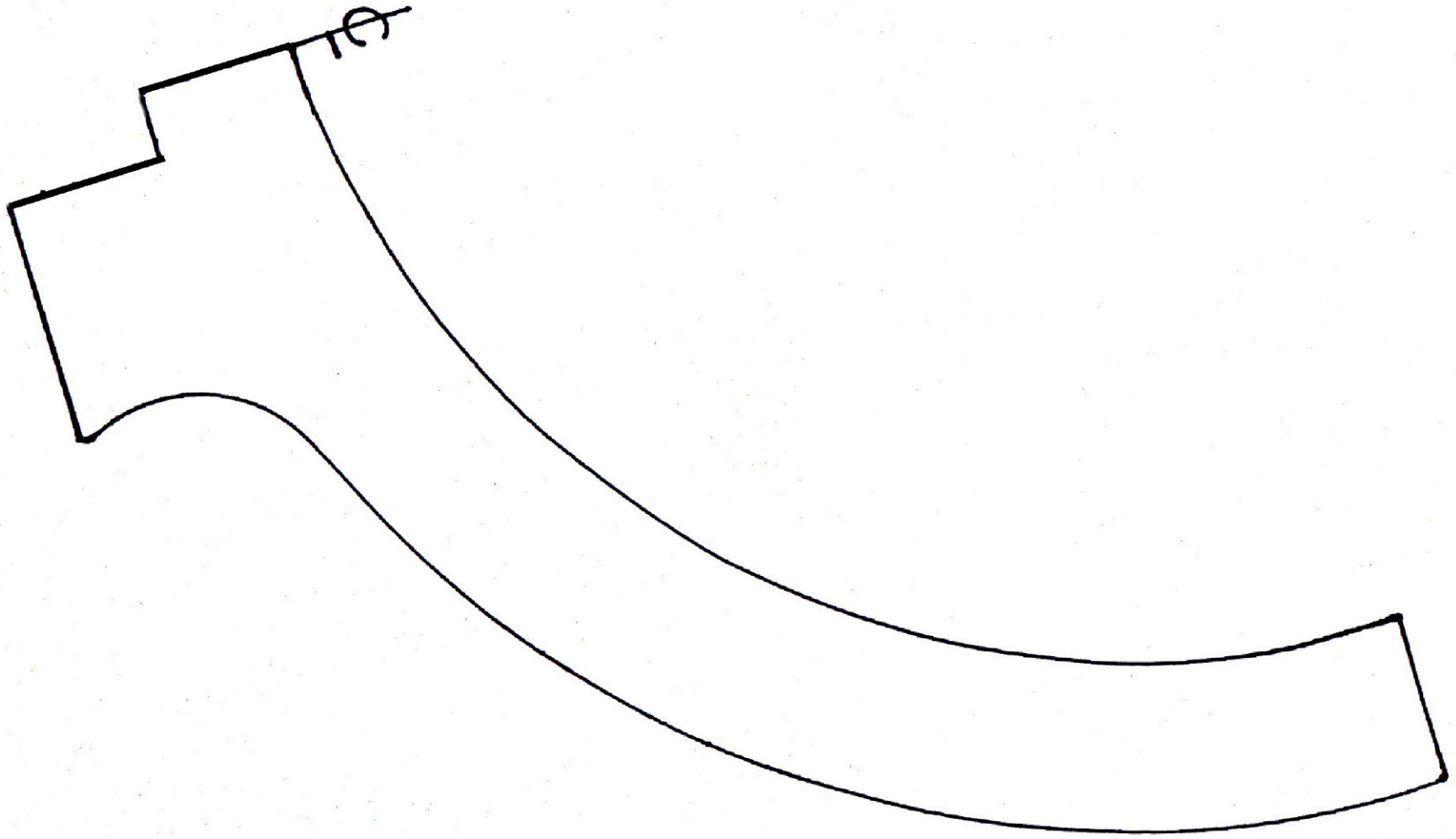
**FDT Plans**

**Pg. 3-A**

VER 1

# Upper Axial Arm - "Half Section"

Mark the Right half using this template, then flip template over horizontally and align at the Center Line. Now mark the left half to complete the full arm layout.



**FDT Plans**

**Pg. 3-B**

VER 1

# Lower Axial Arm - "Half Section"

Mark the Right half using this template, then flip template over horizontally and align at the Center Line. Now mark the left half to complete the full arm layout.