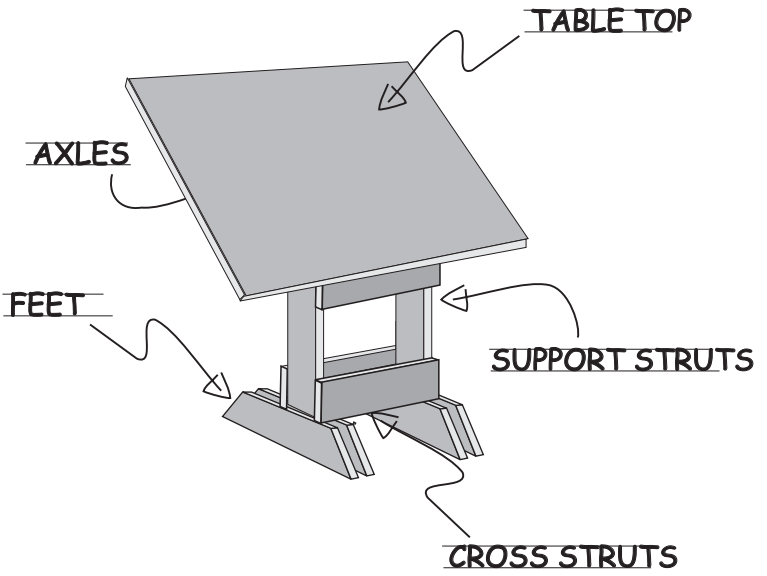
INSTRUCTIONS FOR THE CONSTRUCTION OF A DRAFTING TABLE.



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for the interview for the position of
Technical Documentation Coordinator
at Milltronics Limited.
Thursday May 7, 1998

MATERIALS	TOOLS
Compass	2 4'x1"x3"
Pencil	4 3'x1"x3"
Sandpaper (medium and fine)	4 2'x1"x3"
Drill	1 2'x1"x6"
Drill bits (1/4" & 5/16")	3/4" plywood 2'x3'
Try Square	2 1/4" bolts
Mitre Box	2 1/4" nuts
Mitre Saw	1 1/4" wing nut
Robertson #6 Screwdriver	6 1/4" washers
Protractor	
Tape measure	
Square	

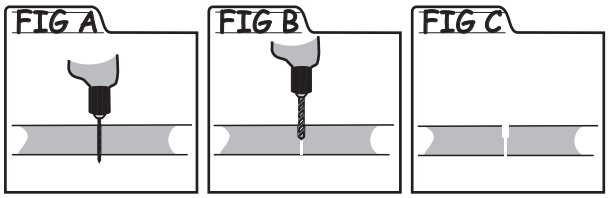
TECHNIQUES YOU'LL NEED TO KNOW

COUNTERSINKING

Countersinking is a process where two holes of different sizes and depth are made on the same spot on a piece of wood. This is done to allow a woodscrew to be set into the wood so that it won't protrude, or split the wood when being tightened.

You can buy special drill bits to do it easily, but I recommend using two separate bits.

First, drill all the way through the wood with a 5/16th bit (See FIG A). Then drill to the depth of about a quarter of an inch with a 1/4 inch drill bit (See FIG B). This will result in a hole like the one in the diagram (See FIG C).



STEP 1 - SUPPORT STRUTS

FIG 1

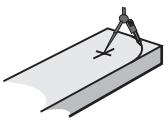


FIG 2

FIG 3

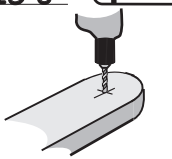
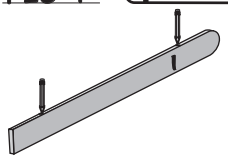


FIG 4



Choose a 4 foot 1x3

Mark a spot that is 1" from one end, and 1.25" from the edge.

Set COMPASS for 1.25". Placing the point of the compass on the mark, draw a semi-circle on the end of the piece of wood. (See FIG 1).

With a KEYHOLE SAW, cut along line (FIG 2).

Sand edges.

Drill 1/4" hole through mark (FIG 3).

Set piece of wood on edge. From uncut end, measure two lines at 2.75" and 29.25" (FIG 4).

Flip wood to expose other edge, and mark two more lines at the same measurements.

Repeat Step 1 on another 4 foot 1x3.

STEP 2 - FEET

FIG 5

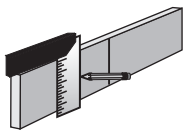


FIG 6

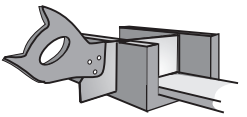
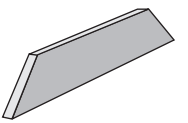


FIG 7



Choose a 3 foot 1x3

From one end of the piece of wood, measure and mark two lines at 8" and 10.75". Using a TRY SQUARE, draw lines across the width of the wood (FIG 5).

Place one end of the piece of wood in a MITRE BOX, and use a 45 degree angle to cut through the wood (FIG 6).

Repeat for the other end of the plank.

Sand edges.

Repeat Step 2 on 3 more pieces of 3 foot 1x3's.

STEP 3 - CROSS STRUTS

Choose a 2 foot 1x3

Countersink two holes 3/4" from either end of wood (See FIG 8).

Repeat for 3 other 2 foot 1x3's.

FIG 8

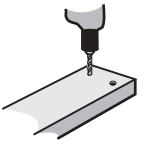
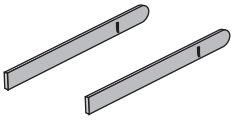


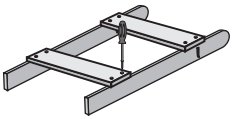
FIG 9



STEP 4
ASSEMBLING THE BASE

Take the struts from Step 1, and place them on your workspace on their edges roughly 2 feet apart (FIG 9).

FIG 10

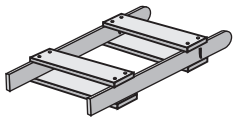


Choose one cross strut from Step 3.

Set Cross Strut on top of support Struts alligning top edges of wood with lines.

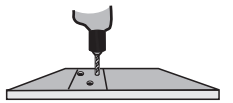
insert #6 1 1/4 woodscrew and fasten pieces together (FIG10).

FIG 11



Repeat process for all 4 cross struts. Fully assembled, it will ressemble FIG 11.

FIG 12

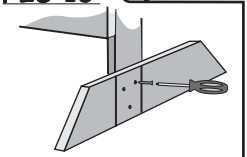


STEP 5 - ADDING THE FEET

Choose one of the feet from Step 2.

Countersink 3 holes in between the lines that you drew at the beginning of Step 2 (FIG 12).

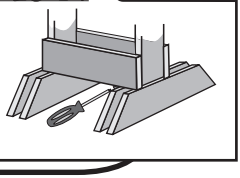
FIG 13



Using #6 1 1/4 woodscrews, attach foot to straight edge of assembled base (FIG 13).

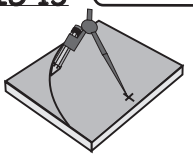
Repeat process for each of the feet, attaching one to each exposed width of the base supports. Make sure that the long ends of the feet all extend in the same direction (FIG14).

FIG 14



STEP 6 - THE AXLES

FIG 15



Choose a 2 foot 1x6.

Cut it in half so that you have two units that are roughly rectangular.

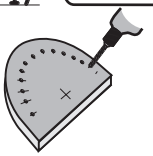
FIG 16

Choose one of these pieces of wood.

Along the long edge, mark a point that is 4" from the end, and 1" from the edge.

Using the COMPASS, mark two arcs from the center point, one that is 2.5", and the other at 3.75" (FIG15).

FIG 17



Using a KEYHOLE SAW, cut along the outer edge.

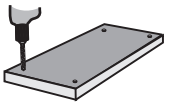
Sand all edges.

Using a PROTRACTOR, measure off the center point, adn mark points at 15 degree increments along the inner line (FIG 16).

FIG 18

Drill each of these points through with a 1/4" drill bit (FIG 17).

FIG 19



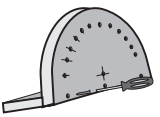
Drill out the center point with a 1/4" drill bit.

Countersink 3 holes 1/2" from the straight edge (FIG 18).

Cut a 1x3 6" long.

Countersink 4 holes, one in each corner (FIG 19).

FIG 20



Attach axle to one edge of this piece of wood, using 4 #6 1 1/4 woodscrews (FIG 20).

Repeat process for other axle.

STEP 7 - THE TABLE TOP

The top surface that you use for this drafting table should be at least 3/4" thick, and measure 3 feet by 2 feet.

Place the piece of wood on your workspace so that the long edge is towards you.

From the left edge, measure two points, one at 6.75" and the other at 10" (FIG 21).

Using a SQUARE, extend marks into lines that run the entire length of the table top (FIG 22). Repeat on right side.

From the top of the piece of wood, measure two marks at 8.5" and 16.5", and use a square to draw lines like in the previous set of instructions.

The series of lines that you've just drawn will intersect to form two rectangles (FIG 23).

Place one axle in each of these rectangles as shown in FIG 24.

Attach with #6 1 1/4 woodscrews.

Attach other axle in the same manner.

Choose a 2 foot 1x6.

FIG 21

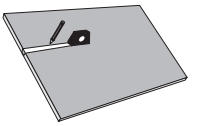


FIG 22

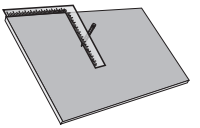


FIG 23

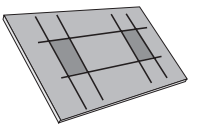
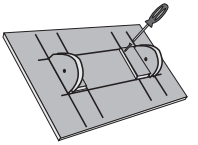
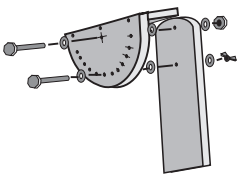


FIG 24



STEP 9 - FINAL ASSEMBLY

FIG 25



Place Base on its feet.

Balance table top on support struts so that the centre holes on the axles line up with the top hole on the support strut.

Attach bolt with washers through this top hole (FIG 25).

Attach bolt with wing nuts through the bottom hole.

Finished product will ressemble diagram to the right.