

MICROMOUSE MAZE

The maze is a platform of $\frac{3}{4}$ in finish grade interior plywood screwed to a 2"x4" pine sub-frame. Panels 1, 2, 3 and 4 are 2 meter x 1 meter. Panel 5 is 1 meter square.

Screws are inserted from the bottom in "toe-nail" fashion through the 2"x4" into the plywood. The 2"x4" sub-frames are assembled with #10x2 1/2" screws into the ends of the 2x4. At least 2 screws should be used at each connection. Holes should be pre-drilled and counter-sunk slightly.

The plywood top is drilled with an array of $\frac{1}{4}$ " holes on 18cm centers. Precise drilling locations is facilitated by a template used with a plunge router and $\frac{3}{8}$ " guide.

Posts and fences are made of suitable hardwood. Poplar or maple are good choices.

Posts are located at each $\frac{1}{4}$ " hole in the plywood surface. 289 holes. Posts are inserted into holes with dowels extending from the base. Dowels allow replacement of broken posts without disassembling the frame. Note: Not all $\frac{1}{4}$ " dowels will be .250 " like a drill or router bit. Use a caliper to measure the stock. $\frac{1}{2}$ " square stock is used for the posts. There are sources of accurately square material. Posts have slots on each of the four long sides. The slots locate the fence sections in the center of the post. Care should be used in machining these slots. If slots are too wide or deep, strength is lost in the connecting surfaces.

Fence sections slide into slots on posts to hold them in place between posts. The total number of fence sections varies with layout but should not exceed 290.

Note: Dimensions are for reference only. Verify dimensions with trial fit.

The plywood and sub-frame may be disassembled for moving. The frame is bolted together from 5 individual sub-frames. Frames 1, 2 and 3 are bolted together. Sub-frames 4 and 5 are bolted together then these two sections are connected. The shape of the sub-frames were designed with the shapes to allow assembly. Each plywood surface has dowels located on the mating edges of adjacent panels. These force the top to have a minimal "lip" at the intersection of the plywood panels. Small irregularities may be removed by sanding.

Fences and posts are painted flat white with flat red tops. The plywood is painted flat black. These are specified in rules.