Thor’s Arsenal Assembly Instructions

Thor’s Arsenal uses components on both sides of the board. The kit comes with all of the SMT components in place so the only construction necessary is on the top side of the board.

The order of assembly is intended to add components like the push buttons near the end of the process so they will not risk being damaged by the hot iron.

The assembly procedure is broken into 3 parts to make it easier to align the components. It is possible to do in fewer steps. It’s up to the builder to decide if consolidation would be beneficial.

Because of the density of the circuitry, a conical .8mm tip soldering iron is suggested.

Difficulty: beginner/intermediate.

1. Part 1 - Install rotary encoder and jacks
   1. Place rotary encoder into board.
   2. Place jacks into board.
   3. Temporarily assemble front panel to board to assure proper alignment of components using knurled nuts only at the upper-right and lower-left corners.
   4. Solder components and remove front panel.
2. Part 2 - Install push buttons:
   1. Place Push buttons SW1, SW2, SW3, SW4, SW6, SW7, SW8, SW9, SW10, SW11, SW12, SW13, SW14, SW15, SW16 and SW17 into board.
   2. Temporarily assemble front panel to board to assure proper alignment of components.
   3. Solder components and remove front panel.
3. Part 3 - Install display and LEDs:
   1. Install display header J5.
   2. Install J21 into the OLED display.
   3. Trim the leads of J21 flush with the top of the display board.
   4. Install rotary encoder and jacks:
   5. Install display.
      1. Install display standoffs into board. Nuts aren’t needed.
      2. Insert display into J5.
      3. Use wooden toothpicks to align display on standoffs. Insert toothpick from top and trim flush with display surface. (No standoffs were available that matched hole size on the display)
   6. Place LEDs using LED standoffs.
   7. Assemble front panel to board to assure proper alignment of components using all knurled nuts. This should be the final assembly.
   8. Solder LEDs.
   9. That’s all! You’re ready to test and calibrate.