Clock Enclosure Assembly

This document details how to assemble the clock wooden enclosure.
List of Parts
The kit should include the following parts…

<table>
<thead>
<tr>
<th>Part</th>
<th>Quantity</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bottom</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Left side</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Right side</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Back</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LED board</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Separator 5&quot;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Separator 3&quot;</td>
<td>1</td>
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<tr>
<td>Separator 2&quot;</td>
<td>1</td>
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<tr>
<td>Separator 1&quot;</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Philips Screw</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Rubber feet</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Tools & Material
The only tools you need are a philips screwdriver and sand paper. A mallet and clamps are nice to have but not mandatory.

You'll need some wood glue to glue the parts together and hot glue or epoxy to glue the circuit board on the back panel and the front screen in place.

Before we start
There are hundreds of different woodworking techniques to glue and finish a project like this one. In this tutorial I will guide you through a very simple way of doing it.

Preparing the pieces
Before you start assembling the clock, use the provided sandpaper to clean any excess wood in the glue joints and in the 1/8in slots.
Dry Fit

I heartily recommend you to do a dry fit before to apply any glue. No glue is used in the following pictures. Once you are comfortable with the process, disassemble the enclosure and put it back together with glue.
A small arrow has been engraved on the 2” piece. This arrow must point toward the top side of the clock. This will assure a perfect alignment for the 1” piece.
**Gluing**
Glue all the joints and assemble the enclosure as in the dry fit. Remove any glue excess with a towel.

**Sanding**
Sand the joints flush with the surface. Sand the whole box to prepare for finish.

**Finish**
This is the time to apply the finish on your clock. You can use whatever type of finish you want! You can paint it, apply a varnish or lacquer or simply finish with some natural oil.

**Install the front screen**
First remove the blue protective plastic from the back of the screen.

Than, apply a small quantity of glue on the wood enclosure and drop the Plexiglas screen into place.
Attach the circuit to the back panel

I am using hot glue to attach the circuit to the back panel of the clock. You could also use epoxy or superglue.

The circuit must be glued to the back with the power connector facing the cord hole on the left of the panel and the white button facing the cord hole on the bottom of the panel.
Installing the LED strip

The LEDs have to be installed in a specific order, starting with the inner most LED, the one closest to the circuit board. The first two LEDs are placed in the 1x1 squares. The third LED is placed in the 2x2 square. LEDs 4 and 5 are placed in the 3x3 square and finally, the last 4 LEDs are placed in the 5x5 square.
I am securing the LEDs with hot glue to resist movement but this should not be necessary for your clock.

**Securing the back panel**

Before you close the back of the clock, make sure you connect the power adapter to the circuit.

To close the back of the clock, slide the top of the back panel in the slot in the top of the clock. Then, push the panel into place and secure it with the philips screw.
Rubber Feet (optional)
Your kit comes with 4 self adhesive rubber feet. Stick the feet to the bottom of the clock.

Remove the front protective film
At the end you can safely remove the front screen protective film.