REMAPPING THE KLN90B DISPLAY

1. Prerequisites

   - Blender https://www.blender.org/download/

   - xplane2blender plugin

   https://github.com/X-Plane/XPlane2Blender/releases

   -   KLN90B plugin installed with no cockpit.obj modified yet.

If you don't have them already stop reading and install them. Installing blender and plugins is not part of this tutorial.

2. Getting the snapshot of the aircraft panel

Start X-Plane and load your aircraft. Start it up and turn on any system you can think of that has some kind of display. Press ctrl+alt+shift+space. This will create a snapshot of everything that is drawn on the panel(almost everything, openwxr is an exception I know of that does not show). The file will be in /cockpit_3D/-PANELS-/ and will be called Panel_preview.png.

3. Determining where to put the display on the panel.png

Open the Panel_preview.png with the standard Paint in Windows or any other graphics edit software you are comfortable with (gimp, photoshop etc.). I will be using vFlyteAir Navion 205 panel as example. Here comes a little catch. X-Plane considers the x=0 and y=0 coordinates of the texture to be the lower left corner of the image and most of the graphical edit software considers this to be the top left corner. To workaround this without doing math it is enough to flip the image vertically
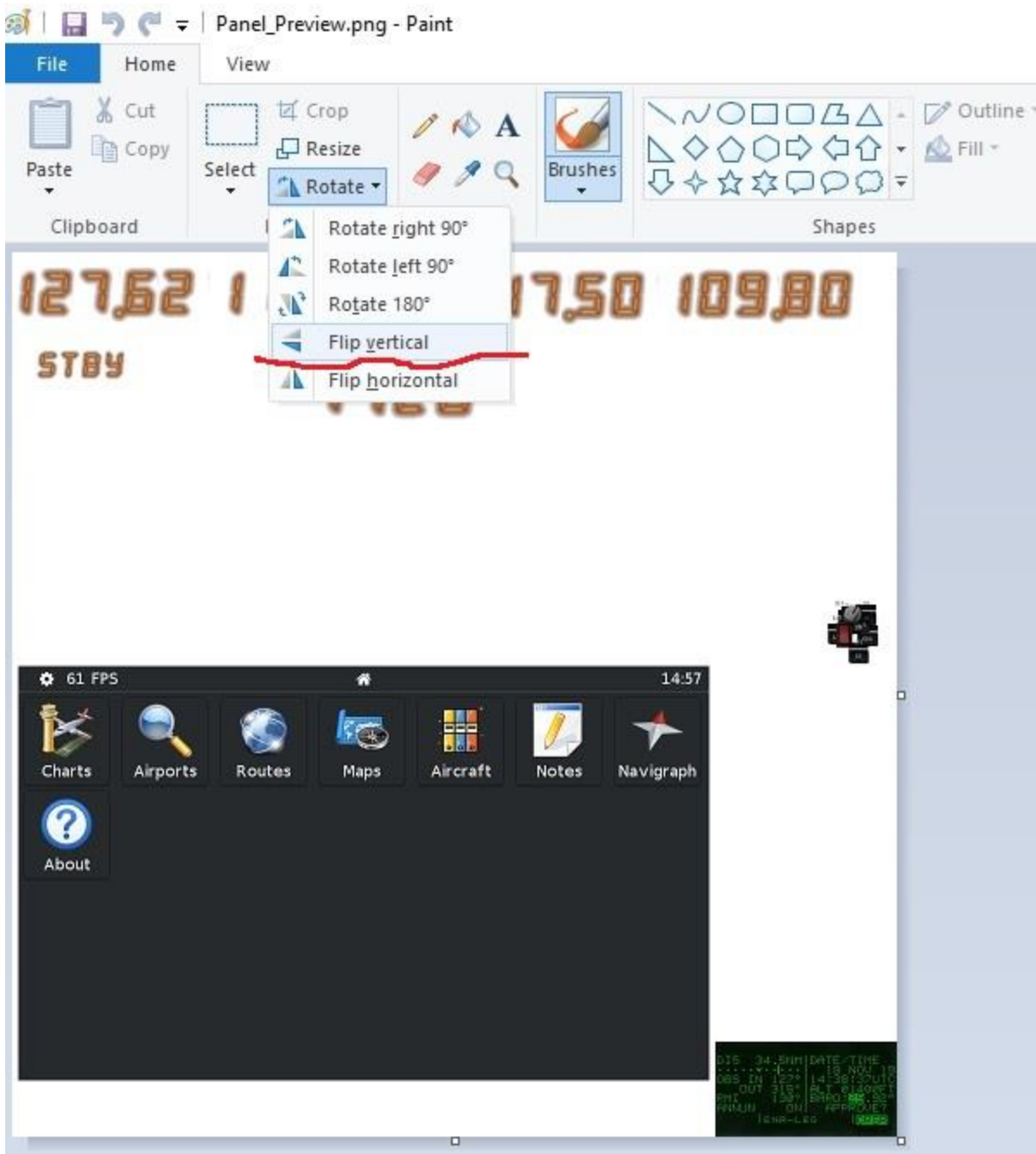
After flipping the image, the pointer coordinates shown in Paint lower left corner will be correct for x-plane. With the selection tool place your pointer on some empty space that has more than 210x110 pixels free. The pointer position will be where the kln90b display lower left corner will be placed. Remember to think flipped. Going down will be actually going up in x-plane. Now press the mouse button and drag a rectangular selection just to make sure that the place you have selected has at least 210x110 pixels free space.
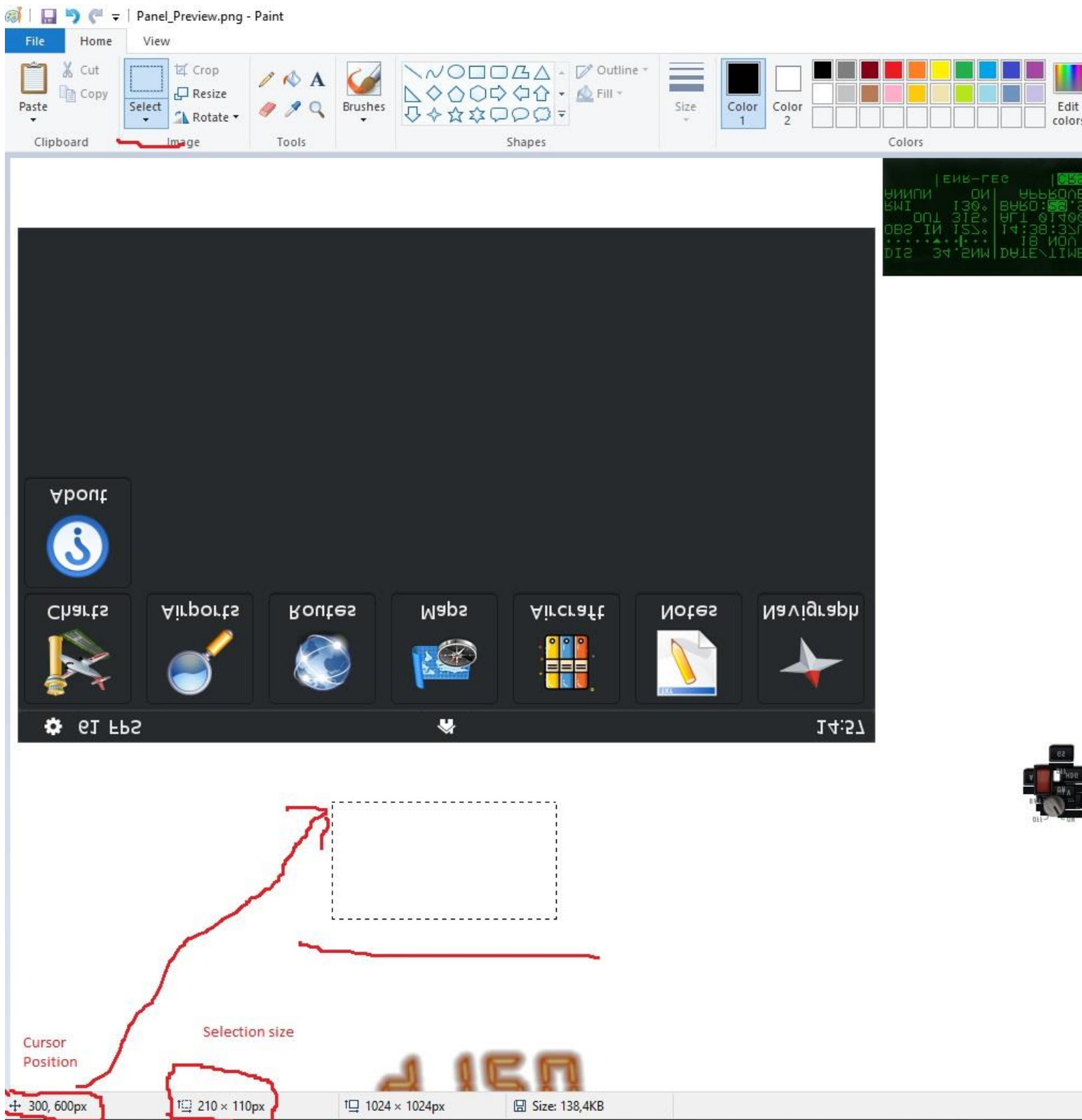
Now open main.lua file from plugins\KLN90B\data\modules and look in the beginning of the file for lines:

components = {

  KLN90_panel {

```
    position = { 814, 0, size[1], size[2]}
  },
}
```

The first 2 numbers in the position table (814, 0) tell the plugin where to draw the lower left corner of the display. Replace them with the coordinates of the cursor from Paint (300, 600 in the demo case) and save the file.

Load X-Plane and your aircraft, then open the kln90b 2D window (Plugins->KLN90B/MD41->Toggle KLN90B Window) and start it up to display something. The 2D popup should work fine, else you messed something up. Click somewhere outside the window to return focus to x-plane and press ctrl+alt+shift+space again. Now the Panel_preview.png should show the kln90b display drawn at the new position.
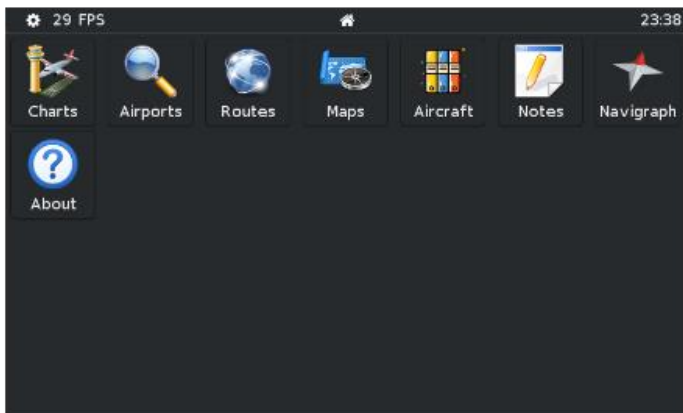

4. Remapping the 3D display in Blender

Open blender and load the click_regions.blend file that is in objects/kln90b. Open a UV editor space and select the kln90b display in the 3D space. Press "tab" to enter "edit mode" and the mapping of the display should appear in the UV editor space. Now click on "Open" to load the panel_preview.png as reference.
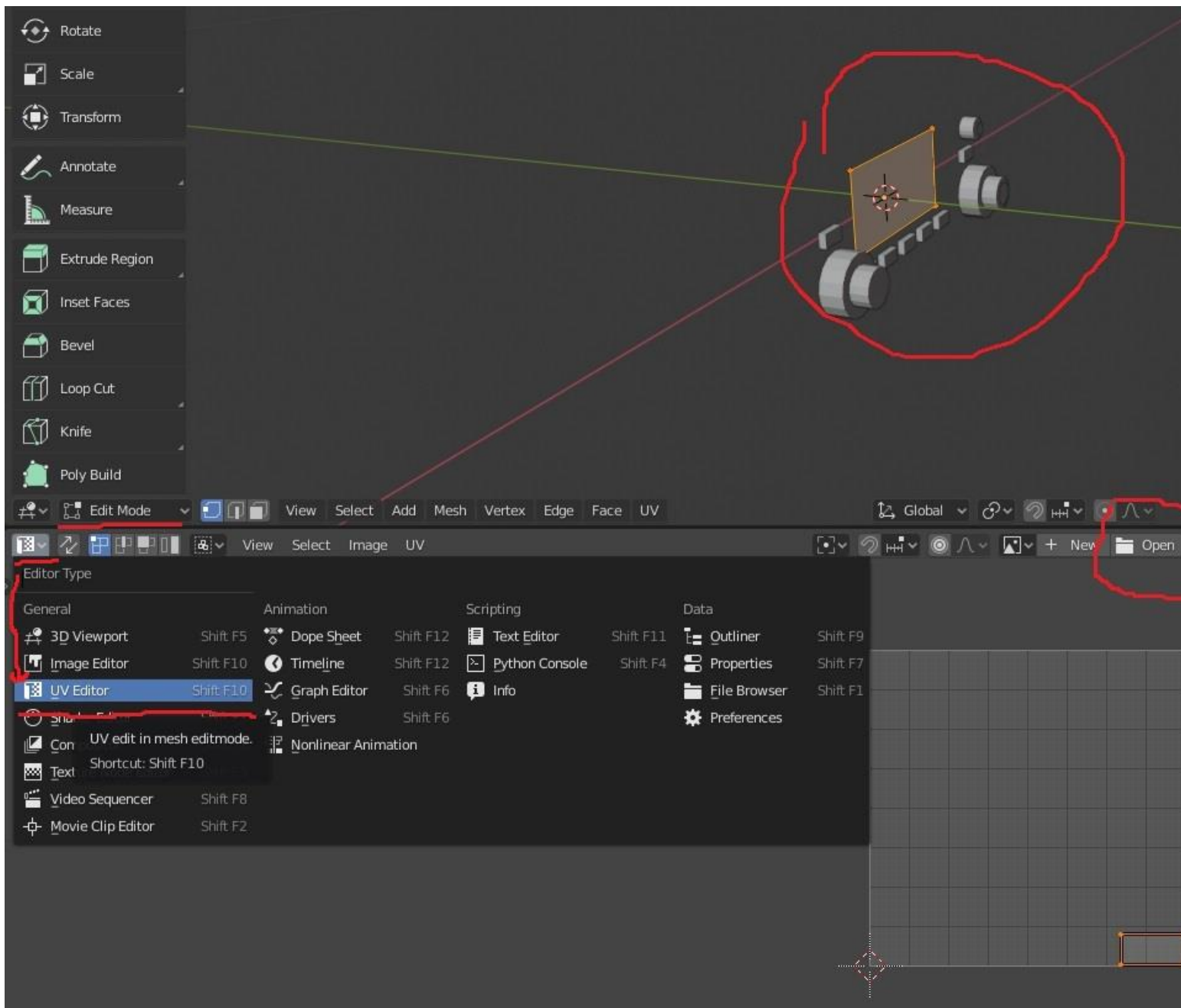

Find the panel_preview.png and after the file is loaded select "face selection" mode in the UV editor. Click on the rectangle to select it and press G to move it over the image of the display. You can press X or Y to restrict the movement to X or Y axis. If your panel is not 1024x1024 the map should be scaled to size using the

S key. I do not recommend changing the aspect ratio of the display uv map. Just move and scale. Do not try to cover the whole green area of the display, Just the text with some margin on top and bottom.
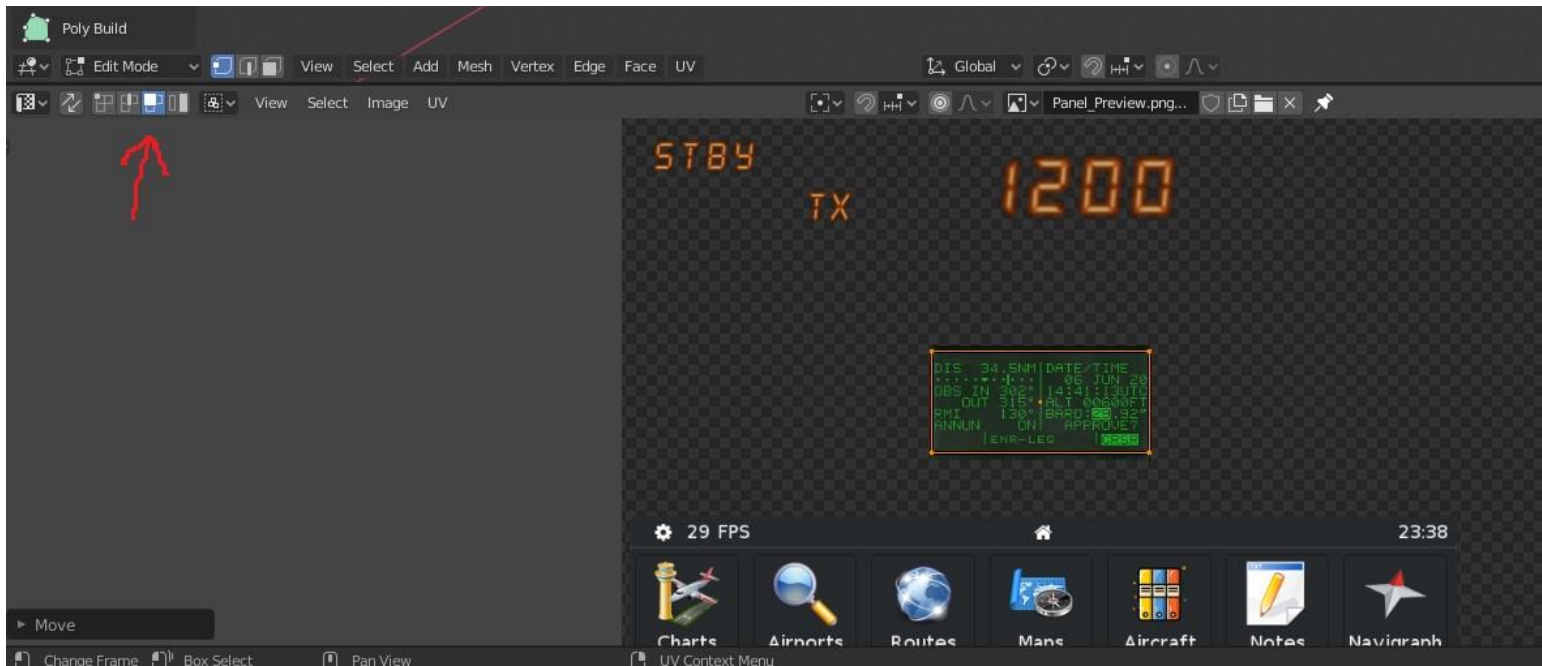
After you are happy with the result go to export. Do not change anything else, just press on the export button.
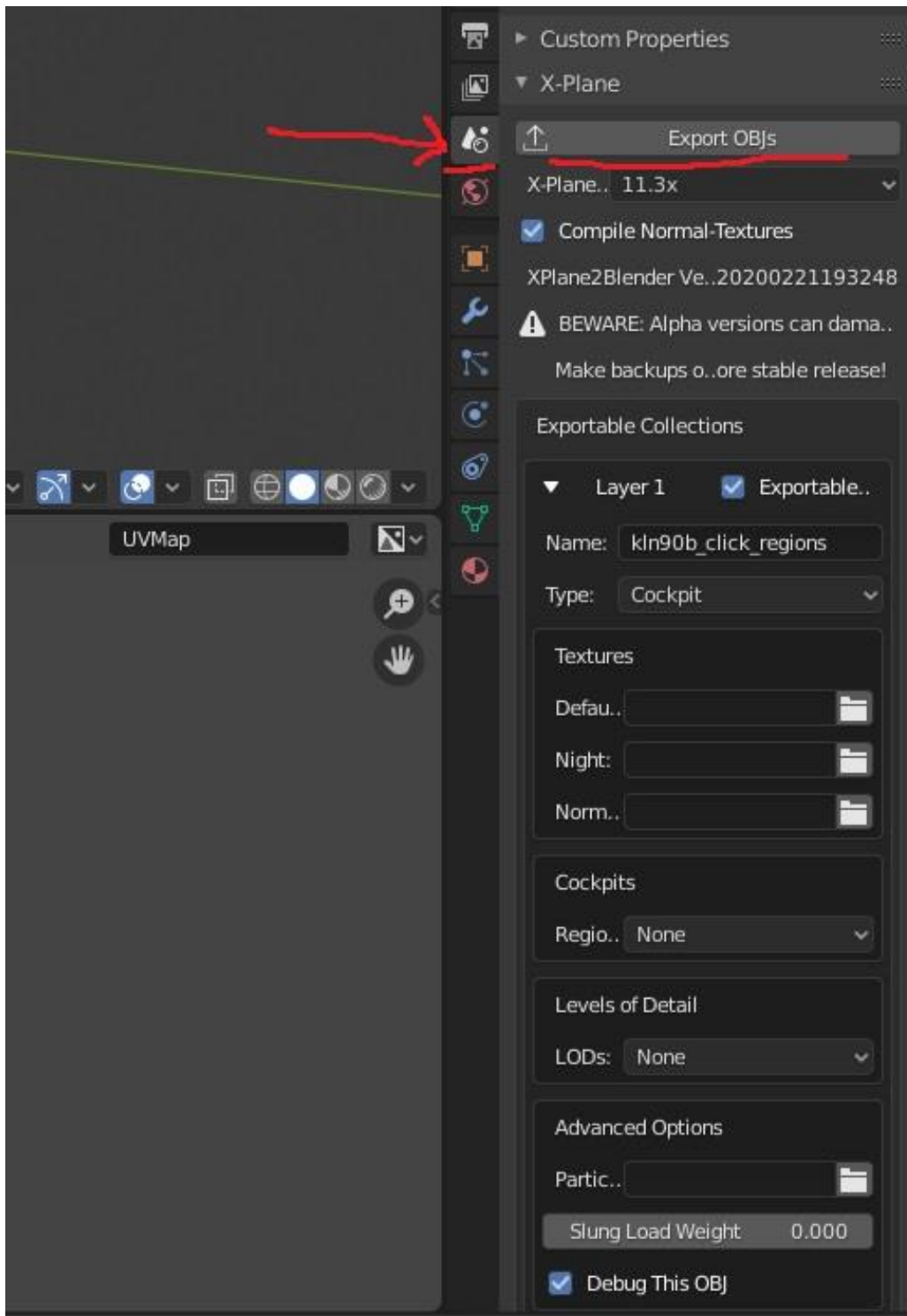
Now the kln90b_click_regions.obj should be regenerated with the new uv map for the display and is ready to be integrated in your cockpit.obj. Follow the procedure from the installation manual.

Good luck and share your work with others 😊