Chosen displays:

Head unit 🡪 <https://www.aliexpress.com/item/1005003546521274.html?spm=a2g0o.order_list.0.0.113a18027d7S57>

Center console 🡪 <https://www.aliexpress.com/item/4000393713339.html?spm=a2g0o.order_list.0.0.113a18027d7S57>

OLD DISPLAY ROLES

|  |  |  |
| --- | --- | --- |
| Media display | HVAC display | Center console display |
| Media | Aircraft map | Subsystem status list |
| YouTube/internet | HVAC display (mimic BRZ buttons with touch screen) | Error diagnosis (look into errors and pull DTC/ABS/SRS codes) |
| Radar/Lidar/Aircraft | Navigation |  |
| Map/error notifications | Car diagnostics |  |
|  | Sound board |  |
|  | AI camera grid |  |

DISPLAY ROLES – Media display

* Split into two halves 🡪 bigger half on left side (probs about 2/3 or display horizontal)
  + Left half:
    - Navigation 🡪 android auto hopefully if I can figure out how it works otherwise imma come up with some special solution but typing addresses on the display is not an option
      * Add speed warning
    - Detailed countermeasure status
    - Detailed AI status
      * Real time cams
      * Real time surroundings data
    - Detailed OBD diagnostics
  + Right side
    - Media (music mostly, maybe integrate soundcloud)
    - General countermeasure overlook (radar, lidar, and aircraft callouts)
    - AI cams can take over (when changing lanes for example)
* General UI to be controlled by steering wheel buttons though some temporary solution will be needed until I can get a newer steering wheel.
* UI controlled in levels the first of which here is highest:
  + At the highest level, left and right selects either the left or right half of the display whereas up and down changes what is displayed on the selected side. Enter is used to enter a given side and control it at a lower level where the back key can be used to exit out of the lower level.
  + The screen level depends on what screen is being interacted with and these will need to be determined later. Pressing the media keys on left of steering wheel should force media screen to pop up temporarily before it times out and the previously displayed screen returns to the top. Individual screen interactions listed here:
    - Nothing to show lol
  + Originally, I will lock the display with navigation and media screens on each half from left to right but these will be expanded with time when I get the steering wheel

DISPLAY ROLES – Center console display

* Bar across top showing overall status of vehicle
  + Similar to DJI bar atop screen
  + Shows either Nominal, Warn, or Error
  + Pressing on bar shows a dropdown tray with detailed diagnostic information
  + Swiping back from bottom upwards hides bar but scrolling must be enabled within the popup drawer
* Ideally have multiple ‘tabs’ at bottom of screen that can change the main section of the display
* Possible sections for display:
  + Diagnostic screen, normally show diagram of car with different colours that highlight any potential issues with the car (wheels can turn yellow or red for example due to low tire pressure or other issues)
    - User can tap on red portion of car to jump to advanced screen which highlights issue
    - User can also scroll down from car to view individual status list (all qualities or measurable things about the car are shown on left of list and right side includes reading or words like ‘nominal’/’warn’. Furthermore, add colour to readings to display whether they are within acceptable margins)
  + Setting screen (change button mappings, for example a paddle shifter could trigger a sound from soundboard but can be remapped to cancel radar jamming)

Useful links:

Google maps API: <https://abhiandroid.com/programming/googlemaps>

More google maps: <https://developer.here.com/documentation/android-premium/dev_guide/topics/map-guidance.html>