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What is TunerView?

TunerView is a Realtime Datalog and Dash/Display application for Android phones and tablets available on Google Play Store. App uses Bluetooth to connect to the supported ECU's.

- **Supported ECU's:**
    - Crome QD2 *(Honda™ OBD1)*
    - Crome QD2 with Moates Demon *(Honda™ OBD1)*
    - Crome QD3 (*Honda™ OBD1)*
    - eCtune *(Honda™ OBD1)*
    - ECUMaster EMU
    - Neptune *(Honda™ OBD1)*
    - Neptune RTP *(Honda™ OBD1)*
    - Neptune RTP Listen Only *(Honda™ OBD1)*
    - KTuner R1 *(Honda™)*
    - KTunerFlashV1.2 *(Honda™)*
    - KTunerFlashV2 *(Honda™)*
    - Hondata S300 V3 Bluetooth (*Honda™ OBD1)*
    - NismotronicSA *(Nissan™)*
    - NismotronicSA Listen Only *(Nissan™)*
    - GUFB with Moates QuarterHorse *(Ford™)*
    - CBAZA with Moates QuarterHorse *(Ford™)*
    - OBD1 0D definition with Moates Autoprom *(GM™)*
    - Moates SuperLogger
    - OBD2 ELM327 *(Limited for a few parameters currently)*

- Crome QD2, QD3, eCtune and Neptune is Eprom based application and Bluetooth needs to be connected to the CN2 port inside the ECU.
- Listen Only protocol can be used when another device like a laptop used for the communication and the app only listen to this communication and not sending requests.

First Start

- **Permissions**

  TunerView app requires some permissions which needs to given on the first start.
  - **Location** *(GPS data to record coordinates)*
  - **Contacts** (*Only getting Google ID to match with the protocol purchase and save it to offline usage)*
  - **Storage access** *(Save video and log files to the storage)*
  - **Camera** *(Recording video with overlayed gauges)*
  - **Record audio** (*Audio recording for the videos)*
  - **Phone Calls** *(This is only used to check the the phone state and the status of ongoing calls)*
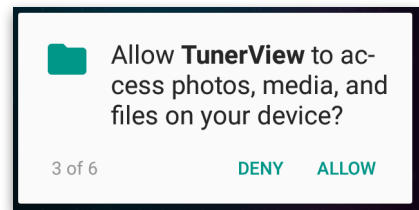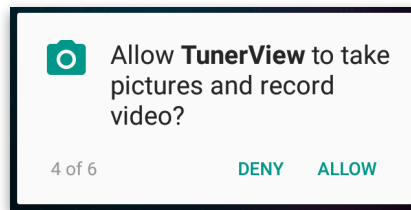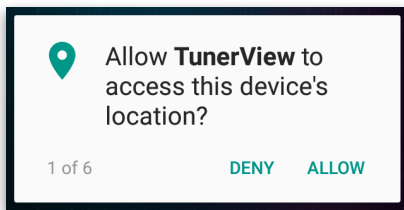
- **Protocol Purchase**

  The app is free to download but you have to purchase the protocol you want to use. Protocol prices are different. Some purchase will give you multiple protocol. For example if you purchase the KTuner protocol, you will get KTunerR1, KTunerFlashV1.2 and KTunerFlashV2 protocol. After you purchased the protocol the first thing is need to do to make sure the correct protocol is selected. To do that on the main screen swipe right from the left edge of the screen, hit Setup -> Set Datalog Parameters -> Datalog Protocol and select the one you want to use.
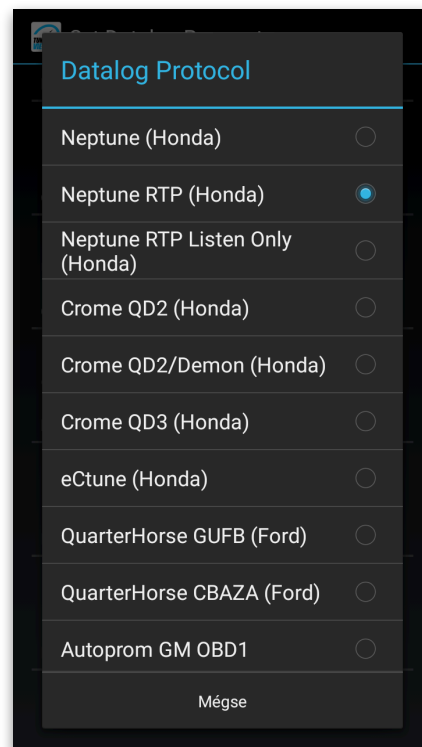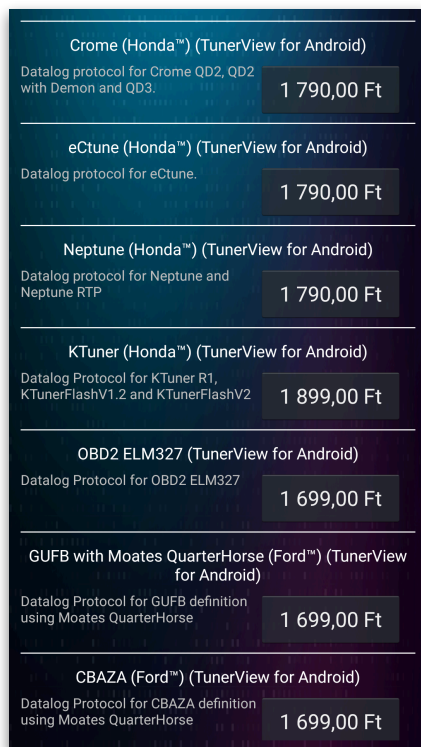
Using TunerView

- **Main Menu**

You can access the main menu by swiping right from the left edge of the screen. The menu items are the following:

- **Connect / Disconnect** *(Connecting/Disconnecting to/from an ECU)*
- **Camera Mode / Dash Mode** *(Switching between Camera mode and Dash mode)*
- **Open Log** *(Viewing or Sharing the recorded CSV log files)*
- **Record to CSV** *(Start or Stop recording to CSV file)*
- **Set Colors** *(Changing the gauge and text colors)*
- **Switch Layout** *(Switching to a different layout)*
- **Setup** *(Setting Protocol,Display,Camera and other parameters)*
- **Store** *(Protocol Purchase menu)*
- **Neptune Menu** *(DTC codes. Only available using Neptune protocol)*
- **KTuner Menu** *(Start/Stop onboard logging, Flashing back to stock or Flashing tunes stored on the KTuner Unit. Only available using KTunerFlashV1.2 protocol)*
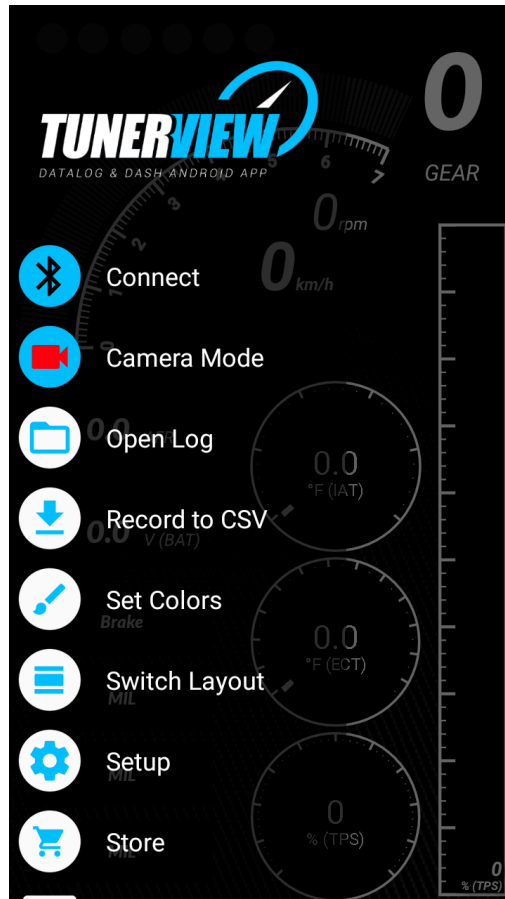
- **Setup Menu**

You can set most of the main parameters in the Setup menu.

- **Set Datalog Parameters**
  - **Datalog Protocol** *(Select the datalog protocol)*
  - **GPS Log** *(Turning on/off GPS usage)*
  - **O2 Sensor** *(Honda OBD1 stock O2 input parameters, NismotronicSA O2 parameters)*
    - **O2 Sensor Type** *(Select pre-defined O2 sensor)*
    - **O2 Offset (Volt)** *(Voltage offset for the O2 input)*
    - **O2 Decimals** *(Set how many decimal you want to see)*
    - **Use Custom Wideband** *(You can set custom O2 input parameters)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter AFR Minimum** *(Minimum value on Voltage minimum)*
      - **Enter AFR Maximum** *(Maximum value on Voltage maximum)*
      - **Unit for Custom O2** *(Displayed unit)*
  - **MAP Sensor** *(Honda OBD1 MAP Sensor parameters)*
    - **MAP Sensor Type** *(Select pre-defined MAP Sensor)*
    - **Use Custom MAP Sensor** *(You can set custom MAP input parameters. Use the same unit what you chosen for the pressure unit)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter MAP Minimum** *(Minimum value on Voltage minimum)*
      - **Enter MAP Maximum** *(Maximum value on Voltage maximum)*
  - **Parameters for Neptune/eCtune**
    - **TPS Sensor** *(Throttle Position Sensor parameters for TPS correction)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter TPS Minimum**
      - **Enter TPS Maximum**
    - **ELD Input** *(ELD input parameters)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter Value Minimum** *(Minimum value on Voltage minimum)*
      - **Enter Value Maximum** *(Maximum value on Voltage maximum)*
      - **Enter Unit** *(Displayed unit)*
    - **EGR lift, D12 Input** *(D12 Input parameters)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter Value Minimum** *(Minimum value on Voltage minimum)*
      - **Enter Value Maximum** *(Maximum value on Voltage maximum)*
      - **Enter Unit** *(Displayed unit)*
    - **B6 Input** *(B6 input parameters)*
      - **Enter Voltage Minimum**
      - **Enter Voltage Maximum**
      - **Enter Value Minimum** *(Minimum value on Voltage minimum)*
      - **Enter Value Maximum** *(Maximum value on Voltage maximum)*
      - **Enter Unit** *(Displayed unit)*

- **Parameters for Neptune RTP** *(Parameters for the analog Inputs on the RTP board)*
  - **Input 1**
  - **Input 2**
  - **Input 3**
  - **Input 4**
  - **Input 5**
- **Parameters for Nismotronic** *(Parameters for the analog Inputs on the NEMU board)*
  - **Input 1**
  - **Input 2**
  - **Input 3**
  - **Input 4**
- **Parameters for ECUMaster** *(Parameters for the analog Inputs on the ECUMaster)*
  - **Input 1**
  - **Input 2**
  - **Input 3**
  - **Input 4**
- **Parameters for the AEM EMS** *(Parameters for the AEM EMS V1/V2)*
  - **ADCR11**
  - **ADCR13**
  - **ADCR14**
  - **ADCR17**
  - **ADCR18**
  - **ADCR15**
  - **ADCR16**
  - **ADCR08**
- **Parameters for SuperLogger** *(Parameters for the Moates SuperLogger board)*
  - **ADC0**
  - **ADC1**
  - **ADC2**
  - **ADC3**
  - **ADC4**
  - **ADC5**
  - **ADC6**
  - **ADC7**
- **Bluetooth AutoConnect** *(This function allow you to automatically connect to your bluetooth device each time when you start the app. You must select auto connect in the connect menu on first connection the save the device address)*
- **Bluetooth Settings**
  - **Bluetooth AutoConnect** *(This function allow you to automatically connect to your bluetooth device each time when you start the app. You must select auto connect in the connect menu on first connection the save the device address)*
  - **AutoConnect Delay** *(Delay between two reconnect time. Don't set it too low. Default is 2000msec)*
  - **AutoConnect Timeout** *(Number of AutoConnect tries)*
- **Display Settings** *(Units and Brightness settings)*
  - **Heads Up Display Mode** *(It will rotate the gauges to use it as a Heads Up Display. On some cars it will require a special foil on the windscreen)*
  - ***Max RPM displayed on the gauges***
  - **Units**
    - **Temperatures** *(Set Temperature Unit)*
    - **Pressure** *(Set Pressure Unit)*
    - **Speed** *(Set Speed Unit)*
  - **Speed Offset in %** *(Set Speed offset)*
  - **Display Brightness %** *(Set Display Brightness)*
- **Camera** *(Set camera parameters for Recording)*

- **Use reverse landscape** *(Use this if you camera picture direction not matches with the gauges)*
- **Mute notifications while Recording** *(All notification can be muted so it's not disturbing the recording. This function not working on all device)*
- **Focus Mode** *(Select the camera focus mode. Selectable modes different on each device)*
- **Video Size** *(Select recording resolution. The default is 640x480 and selectable resolution is different on each device)*
- **Lock Exposure** *(Camera will lock the exposure when start recording)*
- **Lock Whitebalance** *(Camera will lock white balance when start recording)*
- **Encoding BitRate** *(Select Encoding quality)*
- **Turn Off Sounds** *(Some layout have special and/or easter egg sound effects. You can turn these off)*

- ***Connecting to the ECU***

You can connect to an already paired Bluetooth device, or you can pair it with the app. Select **Connect** in the Main Menu. A window will open and on the left side you will see the already paired Bluetooth device. Simply select the device you want to connect. If you want to connect to that device automatically, mark the Auto Connect.
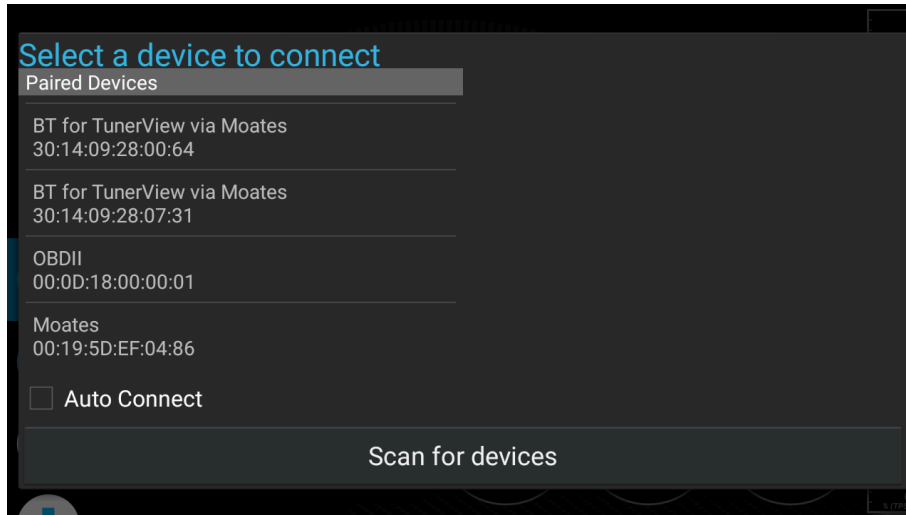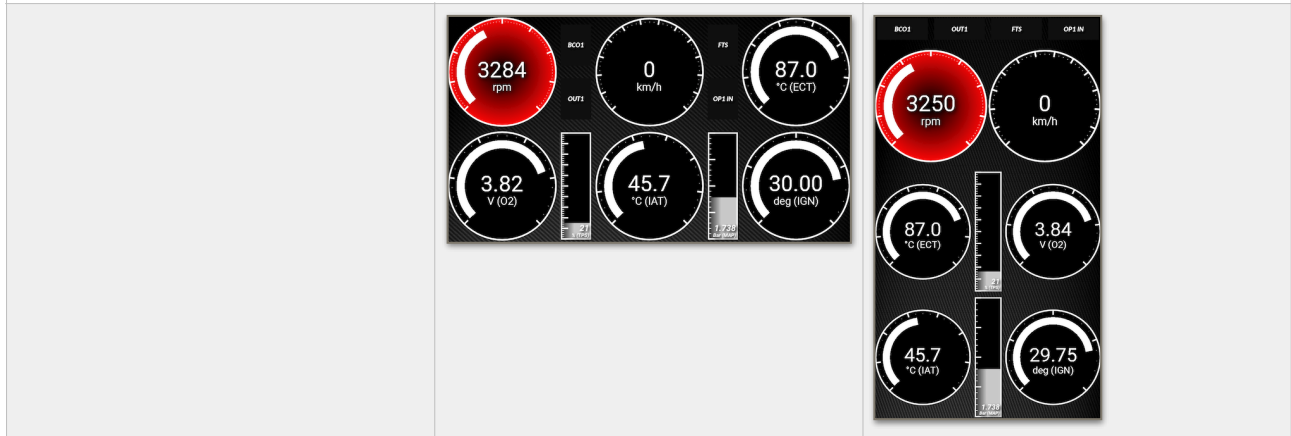

If you want to pair a device hit the Scan for devices button at the bottom. All available devices will appear on the right side. Select the device you want to connect. If the device requires a pairing PIN a pop-up will appear and you have to enter the PIN code.
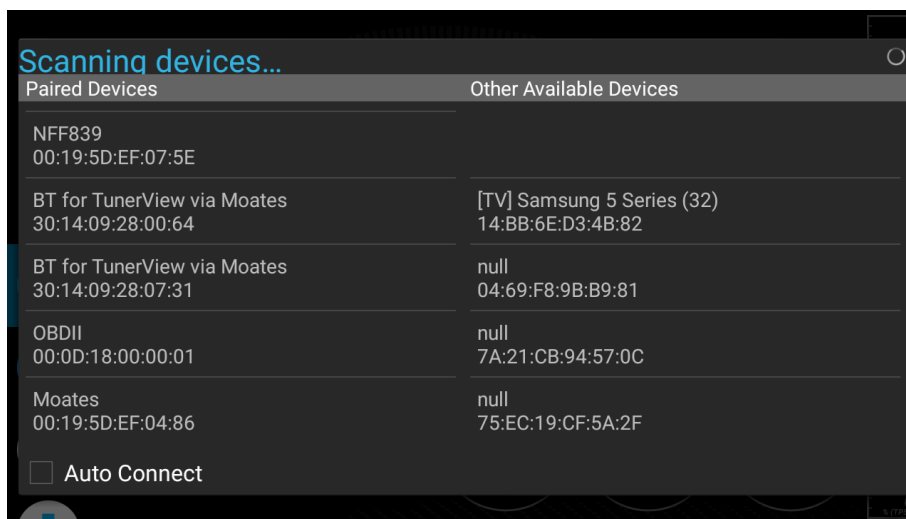
- **Layouts**

The app have more than 15 layout. All of them works in both Landscape and Portrait mode and also on Recording mode. To select a different layout swipe to access the Main Menu and select the **Switch Layout** menu. A selection window will appears and simply select the layout you want to use.
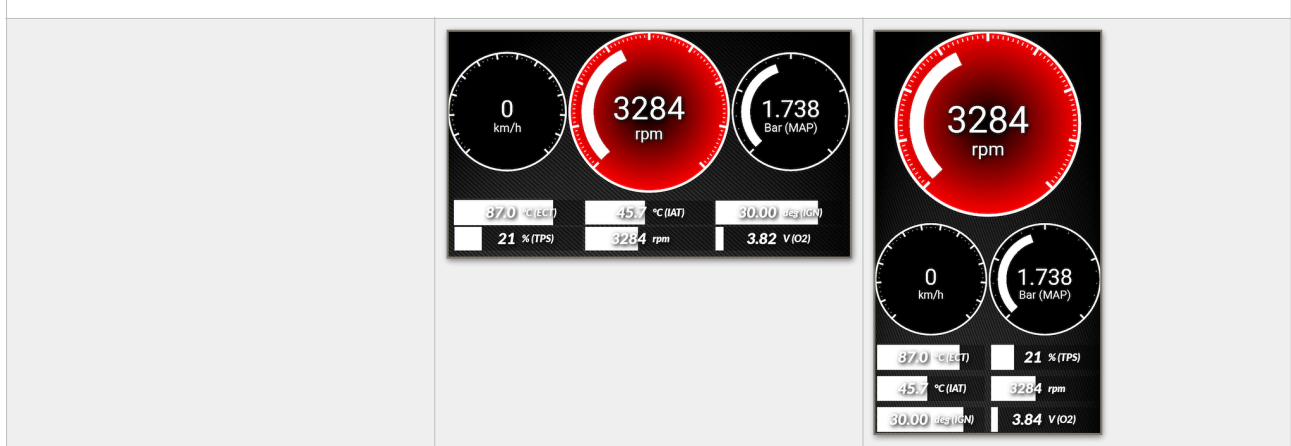
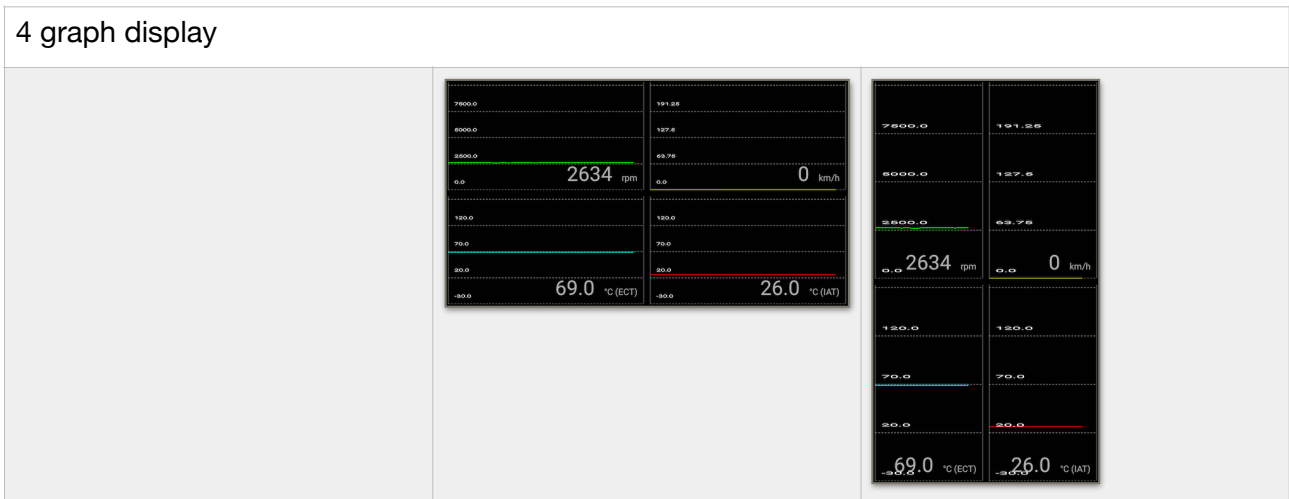| 6 analog style gauge, 2 vertical bar and 4 LED (LED's only available on specific protocol) |
|---|
| |

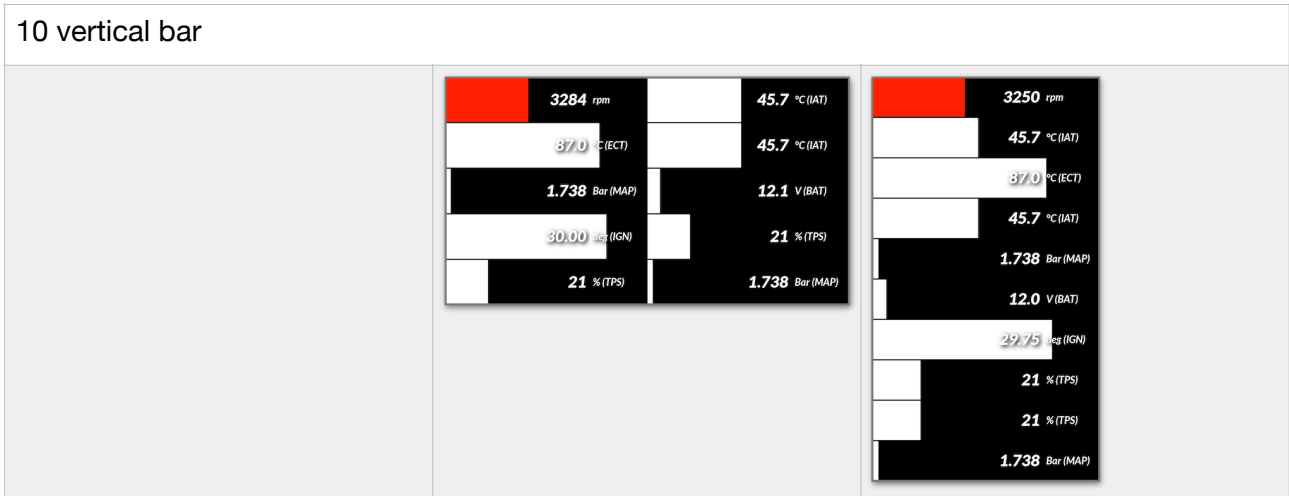| 1 large analog style gauge with speed and gear (Gear display only available on specific protocol) and 5 digital gauge and 4 LED (LED's only available on specific protocol) |
|---|
| |

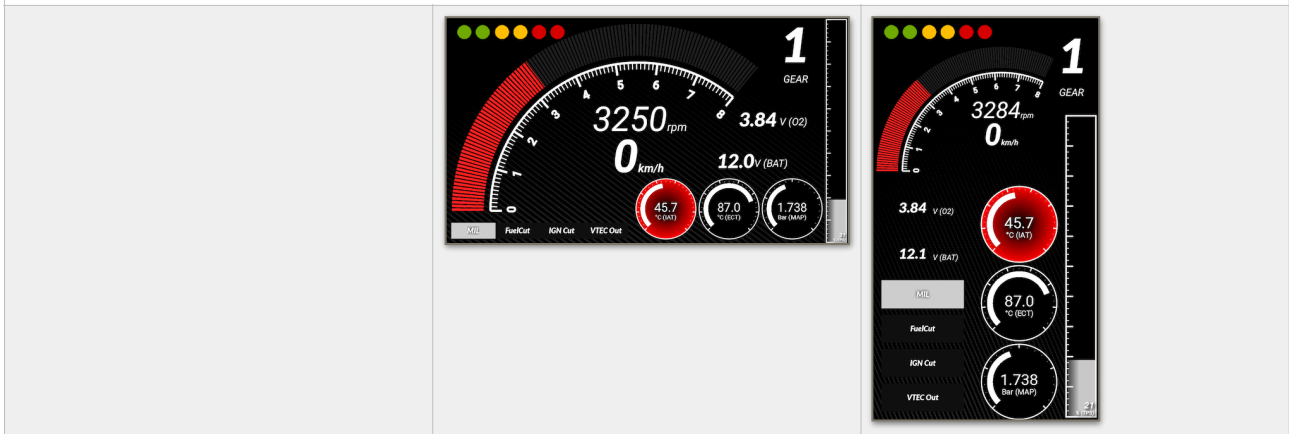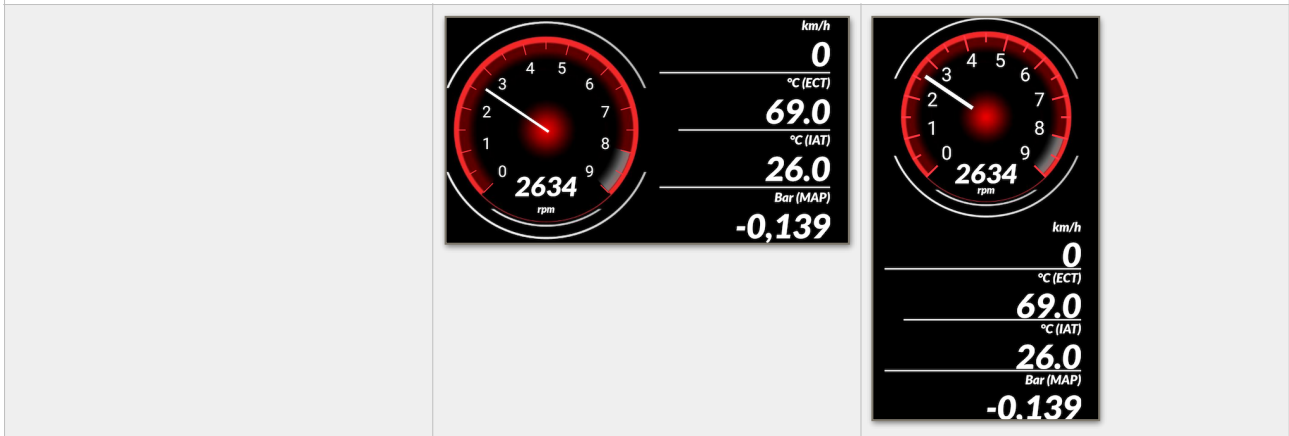| 3 analog style gauge and 6 vertical bar. |
|---|
| |

4 graph display
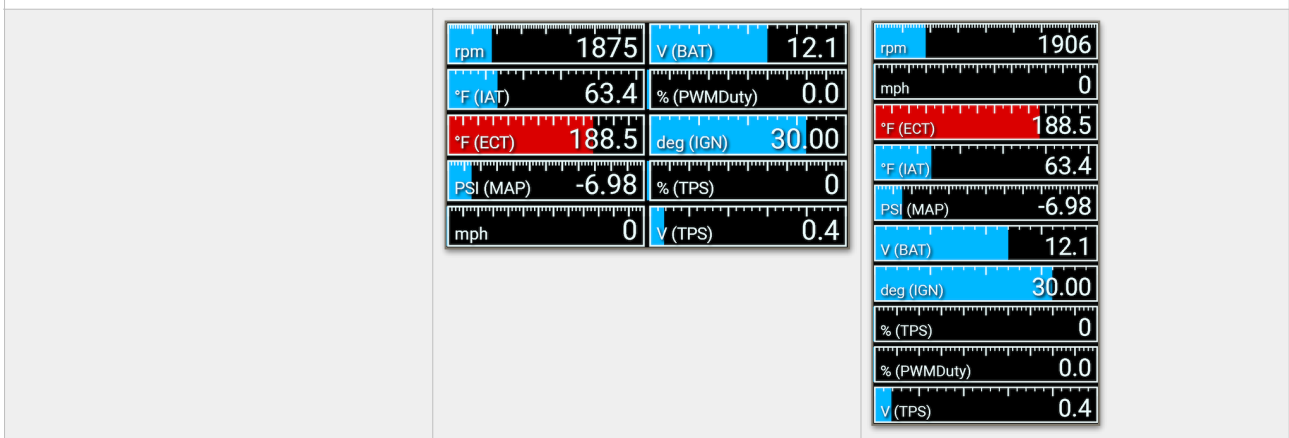
10 vertical bar

1 large rpm bar with rpm and speed text, 3 analog style gauge, 2 extra text display, 1 vertical bar, gear indicator and 4 LED.
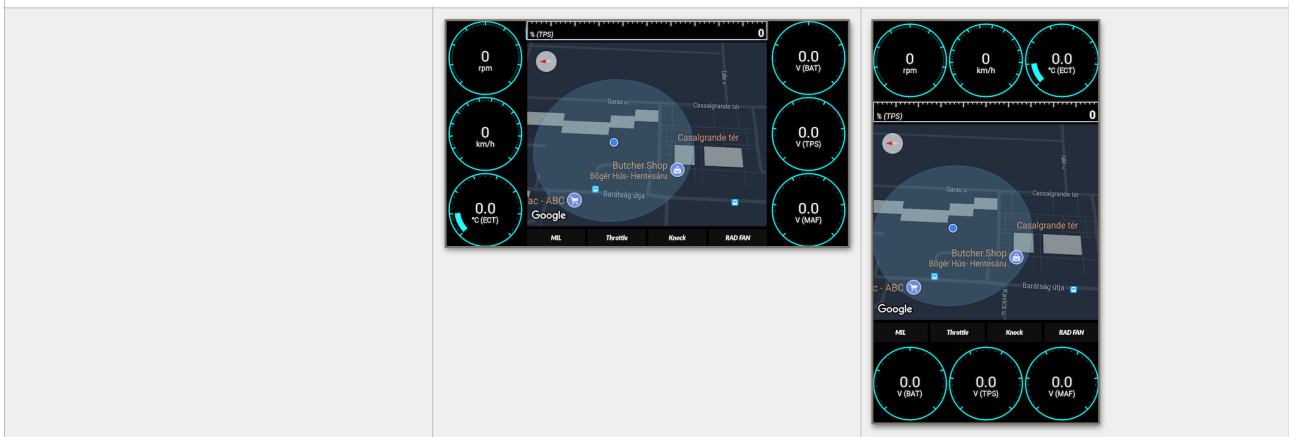
1 large analog gauge and 4 text display

10 vertical bar

1 large Google Maps display, 1 horizontal bar, 6 analog style gauge and 4 LED

1 large RPM gauge with gear indicator, 10 text display and 4 LED
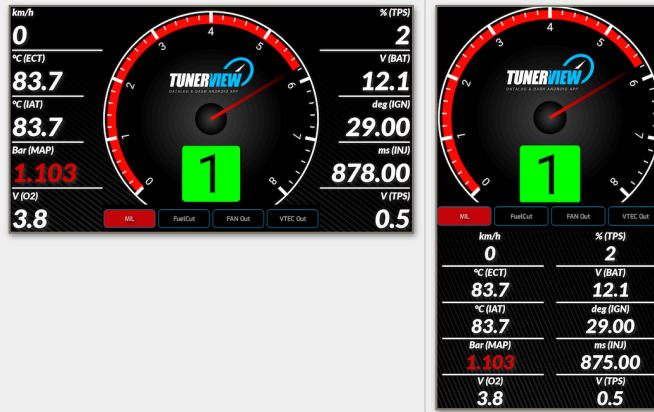
Back To The Future style layout with 9 text display and 4 LED
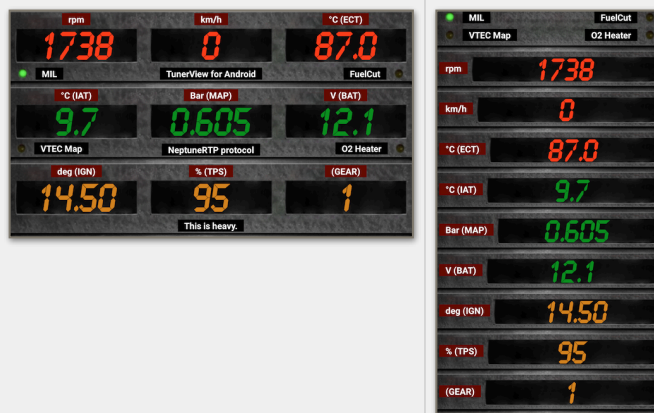
Knight Rider style layout with large RPM gauge and 6 horizontal bar

6 analog style gauge
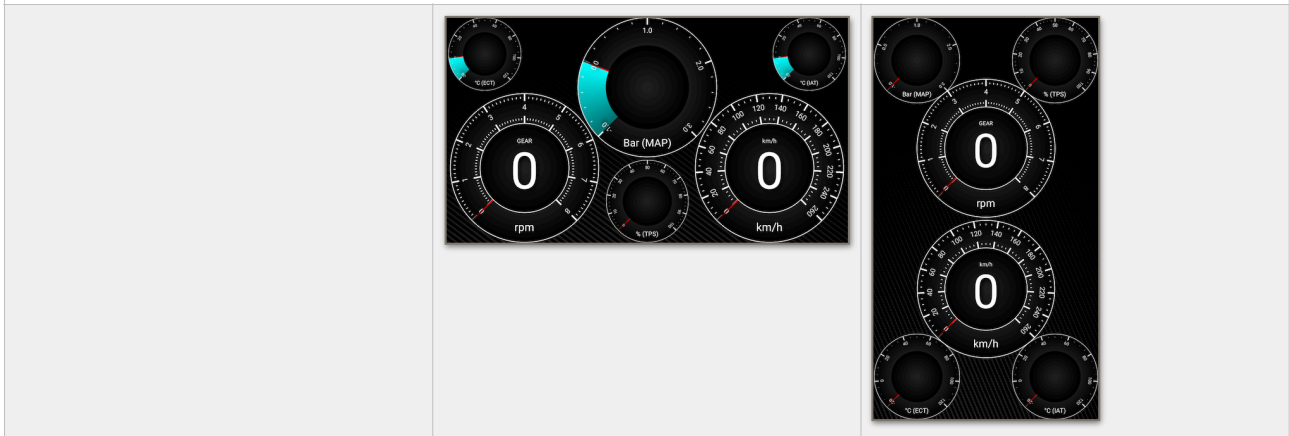
6 analog style gauge

6 large digital display with min/max values
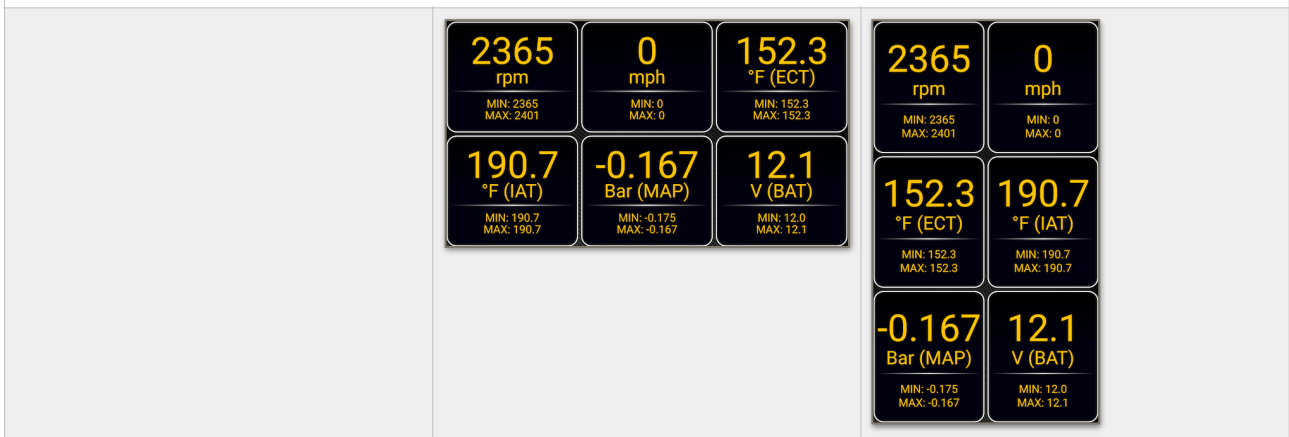
Drag display with acceleration measurement
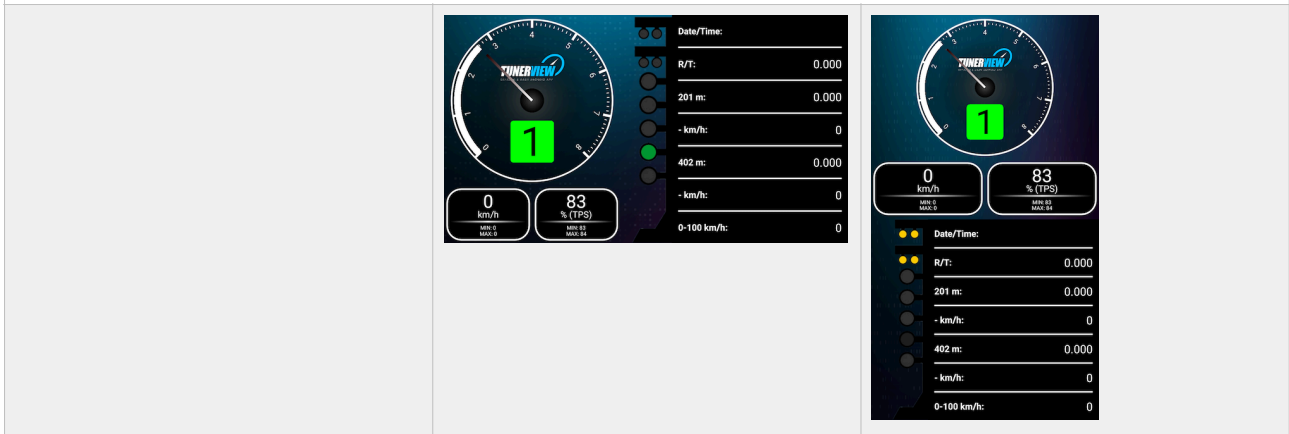
8 analog 1/4 display
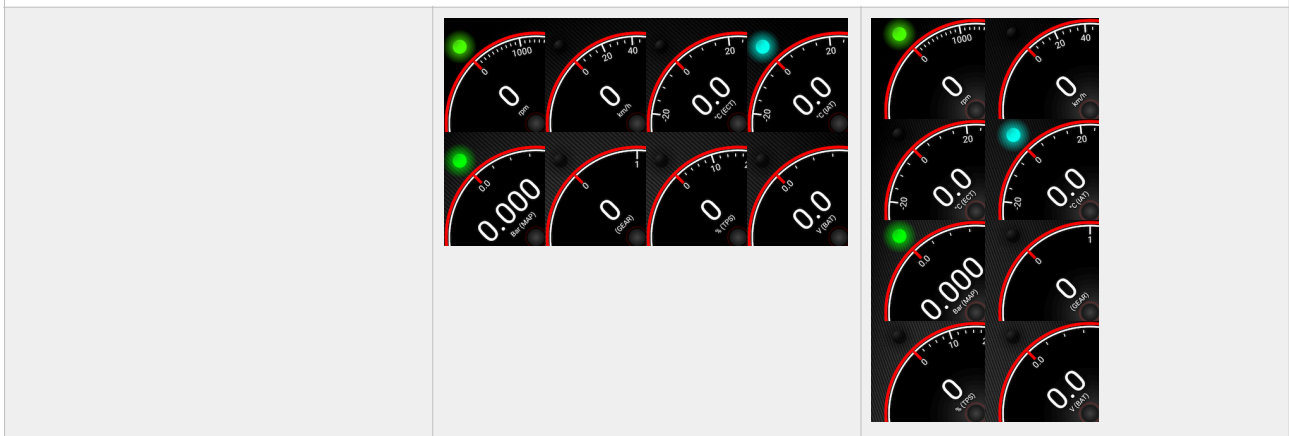
5 analog and 4 bar display
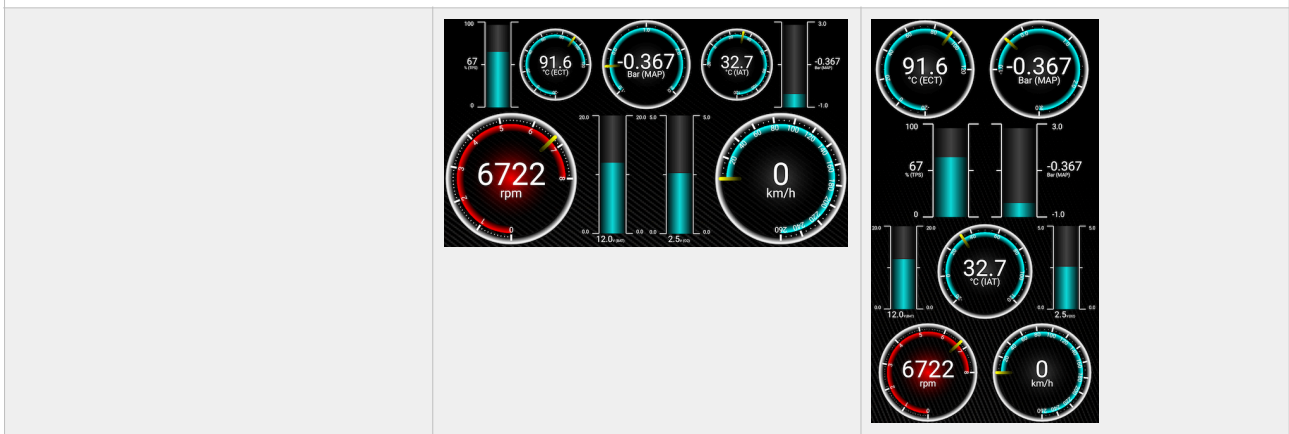
5 analog and 4 bar display
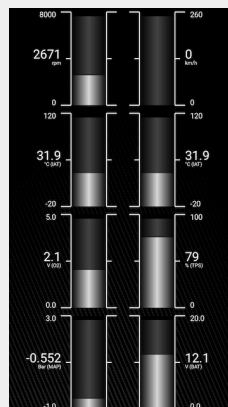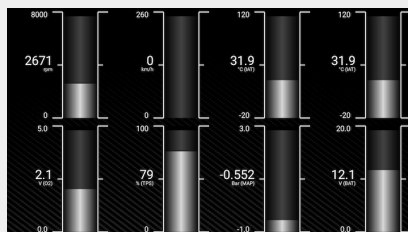
Aventador style display

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- **Gauge Parameters and warning limits**

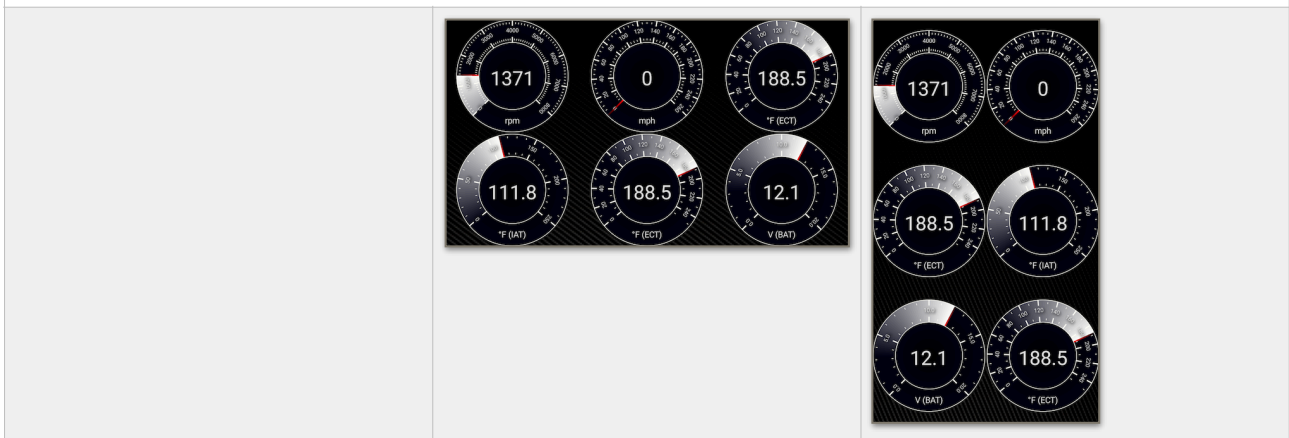You can change the displayed parameters and warning limits to almost each gauge by "touch and hold" on the selected gauge you want to modify. A window will appears where you can:
   - Select the displayed parameter
   - Set Low and High warning limits
   - Set Low and High warning colors

If the gauge value is lower than the low warning limit the gauge text or background will change to the low warning color. If the gauge value is higher than the high warning limit the gauge text or background will change to the high warning color. Some gauge don't have all the options.

- **Selectable parameters**
   - **Crome**
      - RPM
      - Speed
      - Engine Coolant Temperature
      - Intake Air Temperature
      - MAP
      - O2
      - Throttle Position
      - Battery
      - Ignition
      - Injector
   - **eCtune**
      - RPM
      - Speed
      - Engine Coolant Temperature
      - Intake Air Temperature
      - MAP
      - O2
      - Throttle Position
      - Battery
      - Ignition
      - Injector
      - ELD input
      - EGR input
      - B6 input
      - TPS Volt

- **ECUMaster**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - WBO AFR
  - WBO Lambda
  - Throttle Position
  - Battery
  - Ignition
  - Injector
  - EGT1
  - EGT2
  - Dwell Time
  - Knock Level
  - Gear
  - Baro
  - Injector Duty
  - ECU Temp
  - Oil Pressure
  - Oil Temperature
  - Fuel Pressure
  - Ethanol
  - Flex Fuel Temp
  - Fuel Pressure Delta
  - Fuel Level
  - Secondary Injector PW
  - Input1
  - Input2
  - Input3
  - Input3
  - GPS Speed

- **Neptune**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - O2
  - Throttle Position
  - Battery
  - Ignition
  - PA Sensor
  - Gear
  - ELD input
  - EGR input
  - B6 input
  - PWM Duty
  - Short Term Fuel Trim
  - Long Term Fuel Trim
  - Injector
  - TPS Volt
  - LED indicators:
  - Output 1
  - Output 2
  - Boost Control Output 1
  - Boost Control Output 2
  - Boost Control Output 3
  - Full Throttle Launch Active
  - Full Throttle Shift Active
  - Output1 Input Active
  - Output2 Input Active
  - Clutch Input
  - Secondary Maps
  - PWM Hi Active
  - VTEC Map
  - FuelCut
  - PSP
  - VTP
  - Service Connector
  - AC Switch
  - Brake Switch
  - AC Clutch
  - Evap Purge
  - Alternator Control
  - FAN Out
  - IAB Out
  - VTEC Out
  - O2 Heater Out
  - MIL Out
  - Ignition Cut Active
  - Anti-Theft Active
  - On Board Logging Active
  - Fuel Pump Relay Out
  - Starter Signal Switch

- **Neptune RTP**
  - All Neptune parameter
  - Input 1
  - Input 2
  - Input 3
  - Input 4
  - Input 5
- **KTuner R1**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - O2
  - Throttle Position
  - Battery
  - Ignition
  - PA_atm
  - ELD input
  - Gear
  - CAM Command
  - CAM Actual
  - Knock Count
- **KTunerFlashV1.2 and V2**
  - RPM
  - Speed
  - MAP
  - O2
  - Throttle Position
  - Engine Coolant Temperature
  - Intake Air Temperature
  - Gear
  - DBW
  - Battery
  - Ignition
  - CAM Command
  - CAM Actual
  - CAM EX Command
  - CAM EX Actual
  - Knock Control
  - Knock Retard
  - TurboC Pressure
  - TurboC Pressure Target
  - EWG Duty
  - EWG Position
  - EWG Target
  - DIFP
  - DIFP Target
  - 2nd Engine Coolant Temperature
  - 2nd Intake Air Temperature
  - STFTB1
  - LTFTB1
  - STFTB2
  - LTFTB2
  - Steering Angle
  - Acceleration
  - Brake Pressure
  - Ethanol

- **NismotronicSA**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - O2
  - Throttle Position
  - Battery
  - Ignition
  - Gear
  - PWM Duty
  - Injector
  - Input1
  - Input2
  - Input3
  - Input4
  - Load
  - MAF Volt
  - TPS Volt
  - Short Term Fuel Trim
  - Knock
  - ECT Fuel Trim
  - IAT Fuel Trim
  - Post Start Trim
  - Knock Fuel Trim
  - Nitrous Trim
  - ECT IGN Trim
  - IAT IGN Trim
  - TPS IGN Trim
  - Nitrous IGN Trim
  - Idle Timing
  - Target Idle RPM
  - AAC Valve
  LED indicators:
  - Throttle closed
  - AMB Temp Switch
  - PSP Switch
  - 5th Gear/Rear defogger
  - A/C Switch
  - Neutral
  - Cranking
  - Ignition ON
  - Knock Active
  - RAD FAN HS
  - RAD FAN
  - EGR
  - Wastegate solenoid
  - AC Comp
  - Fuel pump relay
  - AIV Solenoid
  - Set 2 maps
  - High Boost
  - ALT injectors
  - PIO Fuel Cut
  - ALT Maps
  - Nitrous Active
 - Clutch engages
  - Anti lag
  - MIL

- SCV
- Idle Timing
- Fuel Cut Active
- NB Lean
- Overboost
- **AEM EMS**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - O2
  - Throttle Position
  - ADCR11
  - ADCR13
  - ADCR14
  - ADCR17
  - ADCR18
  - ADCR15
  - ADCR16
  - ADCR08
- **Hondata S300 V3**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - O2
  - Throttle Position
  - Gear
  - Injector
- **GUFB**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - BARO Sensor
  - WBO2
  - Throttle Position
  - Battery
  - Ignition
  - TPS Volt
  - MAF Volt
  - O2 Left
  - O2 Right
  - Target AF Left
  - Target AF Right
  - ISCDC
  - KAM Fuel Trim Left
  - KAM Fuel Trim Right
  - Dashpot
  - Desired idle RPM
  - EGR Valve Position
  - Load
  - PctLoad
  - MAF Kg/hr
  - Injector PW Left
  - Injector PW Right

- **CBAZA**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - BARO Sensor
  - WBO2
  - Throttle Position
  - Battery
  - Ignition
  - TPS Volt
  - MAF Volt
  - O2 Left
  - O2 Right
  - Target AF Left
  - Target AF Right
  - ISCDC
  - KAM Fuel Trim Left
  - KAM Fuel Trim Right
  - Dashpot
  - Desired MAF for idle
  - Desired idle RPM
  - EGR Valve Position
  - Load
  - PctLoad
  - MAF Kg/hr
  - Injector PW Left
  - Injector PW Right
- **OBD2 ELM327**
  - RPM
  - Speed
  - Engine Coolant Temperature
  - Intake Air Temperature
  - MAP
  - Throttle Position

- **Changing Layout Colors**

You can customise almost all layout by changing the colors of display. Swipe to access the main menu and select the **Set Colors** menu. A window appears where you can select multiple colors. Most of the layout have gauge preview. Hit the Select button next to the color you want to change. You must hit the Save button on the bottom of the window to save the selected colors.

  - **Background color** *(Gauge background or layout background depends on the layout)*
  - **Scale color** *(Gauge scale color)*
  - **Text color**
  - **Progress color** *(Gauge progress indicator color)*
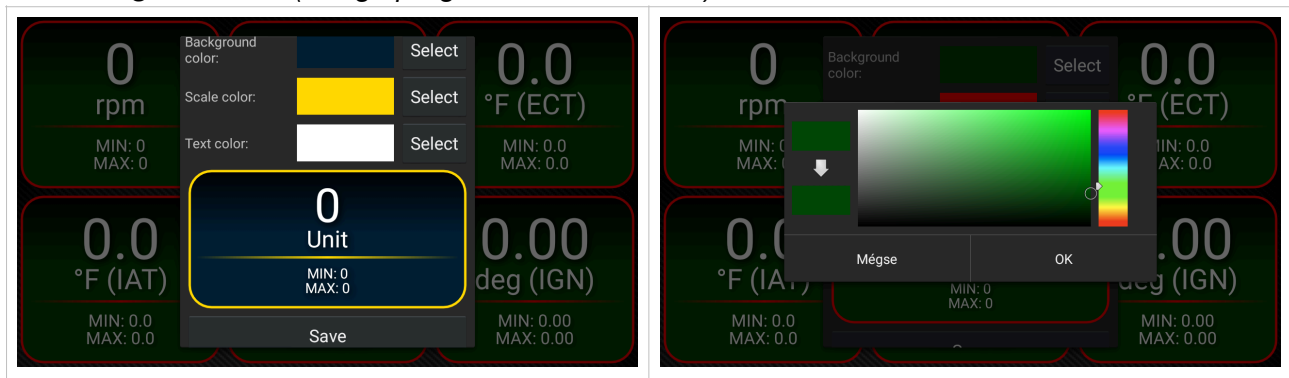
- **Video Recording**

You can use your phone camera to record a video with overlayed gauges. Swipe to access the Main Menu and select **Camera Mode**. The layout will change to have more space to the camera picture. When you hit the red circle record button the app starts recording. To stop the recording just "touch and hold" on the camera picture until the record button appears. The app records your phone's screen so if you don't mute the notification you will see all of them in the video too. If you want to go back to the normal display just swipe to access the Main Menu and select **Dash Mode**.
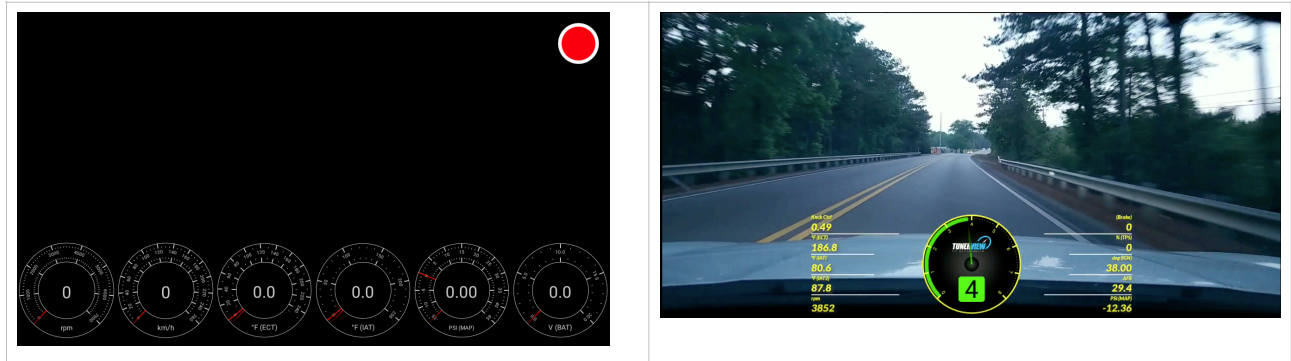
- **Logs**

You can save all your parameter to a CSV file if you select **Record to CSV** in the Main Menu. If you want to stop recording just select **Stop Record to CSV**. The CSV file will be saved on your phone memory storage under a TunerView folder with the following filename structure: *TunerView_MM-DD-YYYY_HHMM.csv*

If you want to open or share a log swipe and select **Open Log** in the Main Menu. If you select a log file a window appears with the following options.
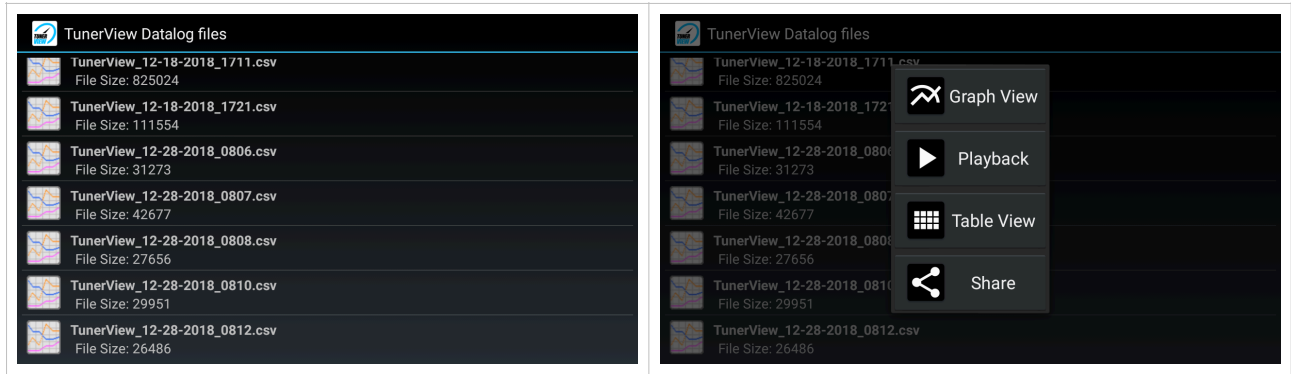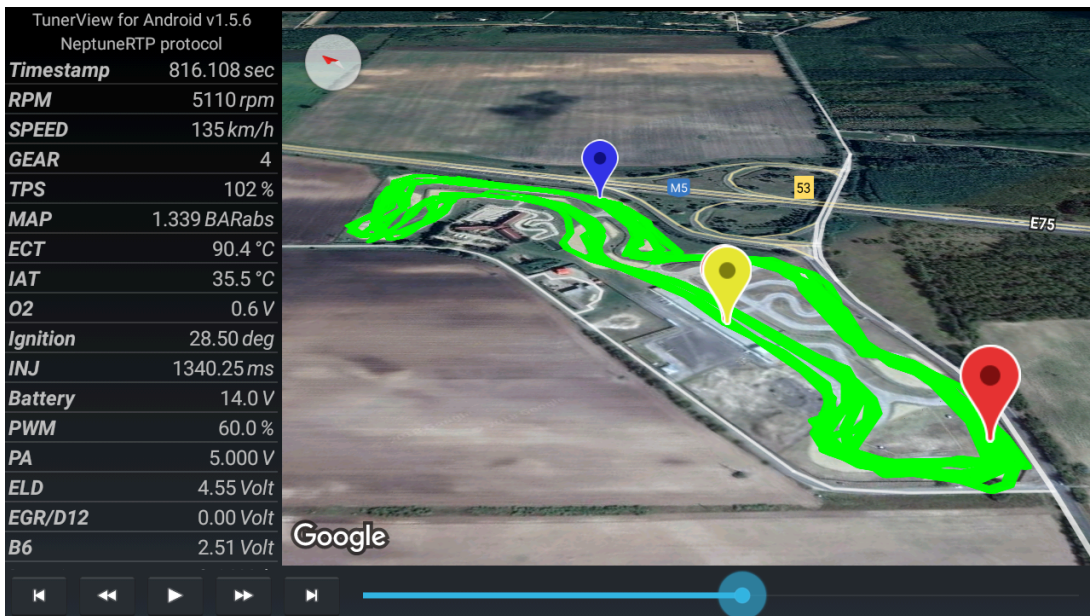
- **Graph View**
  Simple graph viewer with 4 parameter. You can change the parameter by selecting one of the button on the left side of the screen

- **Playback**
  On the playback screen you can see a Google Maps screen with a line drawn from the GPS coordinates. On the left side of the screen you can see all of the recorded parameters.

- **Table View**

    This log viewer allow you to watch your data in a 2D table. You can set the horizontal and vertical axis and the cell values with the buttons on the left side. The table will automatically fits to the min/max values of the axis.

X: MAP PSI / Y: RPM rpm / Cell: O2 AFR

	-12.3	-8.4	-4.5	-0.6	3.2	7.1	11.0	14.9	18.8	22.7	26.6
791		12.9	12.9								
982		12.8	12.9								
1173		12.4	13.5	13.2							
1365	29.4	12.4	12.4	13.2							
1556	29.4	15.8	15.8	12.3							
1747	29.4	12.7	29.4	12.4							
1938	29.4	12.6	12.8	12.8							
2129	29.4	14.5	14.1	12.8							
2321	29.4	15.1	15.0	14.1							
2512	29.4	15.1	15.2	11.7							
2703	29.4	14.4	14.7	13.9	14.1						
2894	29.4	12.8	12.9	13.7	13.9						
3085	29.4	12.7	12.9	13.7	13.8	12.0	12.0				
3277	29.4		13.5	14.3	14.5	13.7	11.7				
3468	29.4	15.2	14.2	14.0	14.2						
3659	29.4		13.8	14.0	13.9	14.3					
3850	29.4				13.9		12.8	11.3	11.3	11.3	
4041	29.4			14.2	14.2						11.9
4233	29.4	11.9	14.2	14.2	14.0						11.8
4424	29.4	11.6	13.7	11.6	13.9		11.8				11.8

- **Share**

    You can send/share your log file via the Android sharing system. It depends on what applications you have. You can upload the file to Google Drive, send it with Gmail…etc.

- **Neptune Menu**

Using Neptune protocol, you will able to check the DTC error codes by selecting the Neptune Menu in the Main Menu.
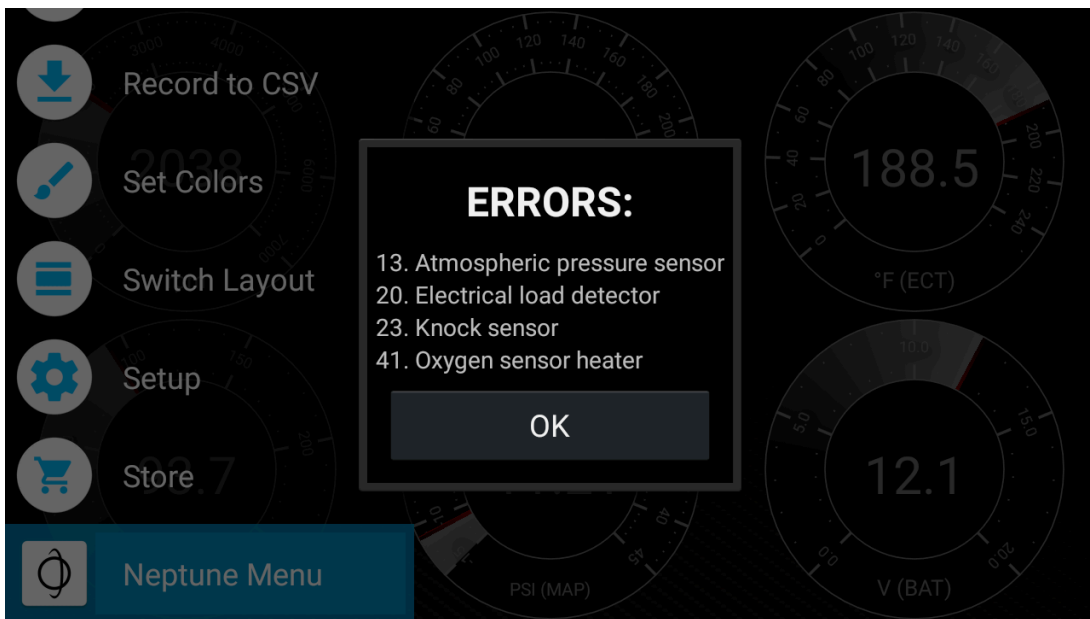
- **KTuner Menu**

If you using a KTunerFlash V1.2 you will able to flash the tunes stored on the unit. Swipe to access the Main Menu and choose the KTuner Menu at the bottom. In the KTuner flash screen you can access the Flashing menu by the same swiping from the left edge of the screen. Once you are connected the following options will appears in the menu:

- **Connect / Disconnect**
- **Start Onboard Logging** *(The V1.2 have Onboard logging option. You can access these logs with the KTuner software)*
- **Stop Onboard Logging**
- **Flash Factory** *(Flash back the factory software)*
- **Recovery Mode** *(If something goes wrong this option will appears and you need to put your ECU to Recovery Mode)*
- **Flash Tune 1…5** *(Flash the tune stored on your V1.2 device bank 1…5)*
- **Back** *(Quit from the Flash menu and going back to the Dash mode)*
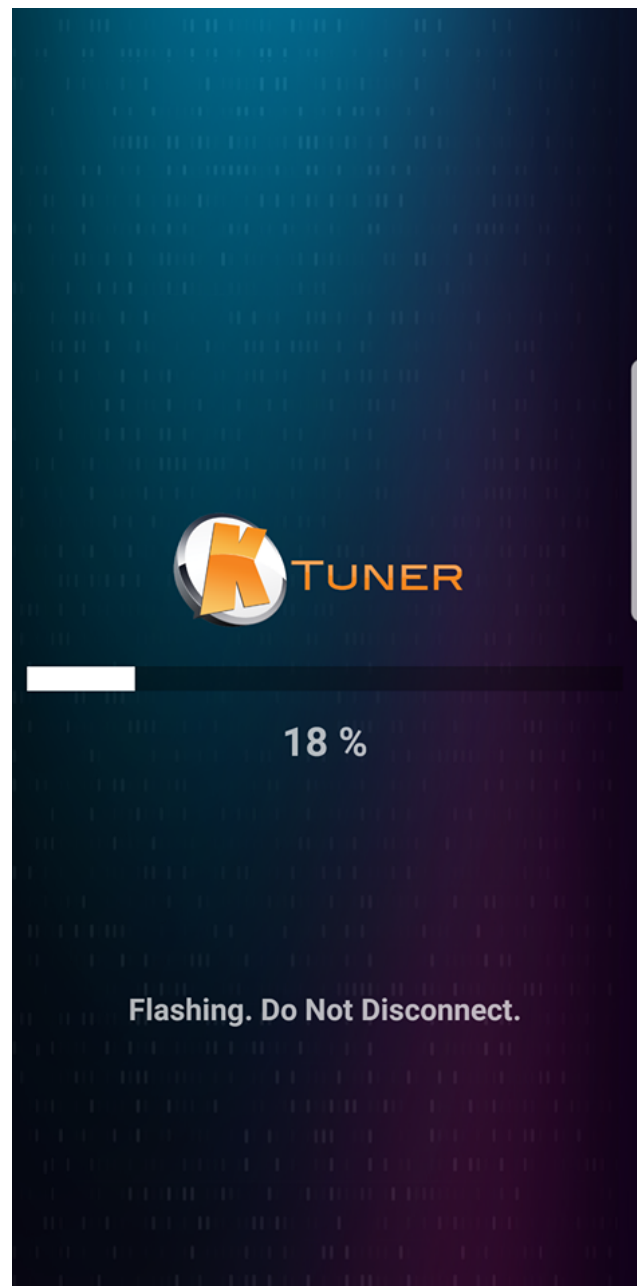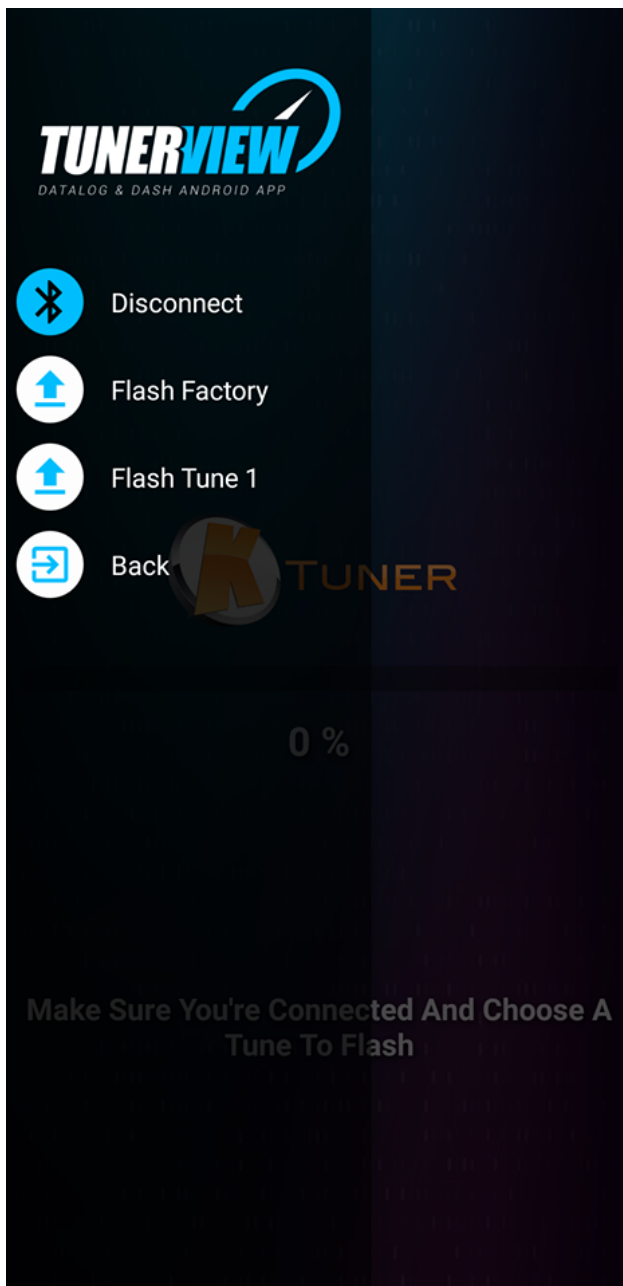
- **Drag Mode with Drag Layout**

Drag Layout can calculate acceleration from the ECU data. It has three mode and you can switch between these modes if you touch and hold on the calculation area. Also the app can save a Screenshot automatically what you can turn on/off in that menu.

- **Auto mode** *(When the car is not moving, the staging lights and a Get Ready text will appears and the countdown starts. It will measure Reaction Time)*
- **Start Button mode** *(When the car is not moving you need to hit the Start button to start the countdown)*
- **Always ON mode** *(Measuring starts automatically when the car starts moving after a complete stop)*

The app will show the following data:

- **Date/Time**
- **R/T** *(When the car is not moving you need to hit the Start button to start the countdown)*
- **1/8 mile**
- **1/8 mile trap speed**
- **1/4 mile**
- **1/4 mile trap speed**
- **0 - 60mph time**