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### 1. Introduction

- This display is the newest edition, can now connect to ECU and TCU without changing the firmware, this works by the unit reading the device and detecting what device is connected.
- The screen is now updated to a 2.2 Ince lcd.
- New upgraded microprocessor with many new features to come.
- This display can also be used as a diagnostic display, it displays device information and all real-time information from the connected device.

### 2. Connections



### 2.1. <u>Comms (6Way)</u>

• 6Way connects to the ECU or TCU's comms connector and communicates with the device to receive real-time data.

### 2.2. <u>Power (Red)</u>

• The red wire is the 12V power in and must be connected to the ignition power to power the display if the key is turned.

### 2.3. Ground (Black)

• The black wire is the earth that must be connected to any nearby ground connection.

### 2.4. Lights (Yellow)

• Yellow wire is connected to the lights, this changes the brightness of the display when driving at day or night. This is a 12v input. Brightness can be changed and saved for both day and night modes.

### 3. Display's

- 3.1. <u>ECU</u>
  - 3.1.1. Device Info Display

Hardware Type	Venus3		
Firmware Type	ECU		
Hardware Class	Advance		
Firmware Number	28		
Firmware Version	V3.7		
Serial Number	016 040 055 134		

- This display's the following information from the ECU connected
  - 1) Hardware Type
  - 2) Firmware Type
  - 3) Hardware Class
  - 4) Firmware Number
  - 5) Firmware Version
  - 6) Serial Number

### 3.1.2. Diagnostic Display (display's all real-time data)

REVS	1000
MAP	0.49
TPS	28
LAM	77
WAT	65
AIR	18
POT	Off
BAT	11.3
INJ	7.2
ALT	Off
FUEL	Off
TIME	22

- This display's all real-time information from the ECU connected
  - 1) Revolutions
  - 2) MAP Sensor (BAP)
  - 3) TPS Sensor (%)
  - 4) Lambda (%)
  - 5) Water Temp (C)
  - 6) Air Temp (C)
  - 7) POT Input
  - 8) Battery Voltage (V)
  - 9) Injection Time (m/s)
  - 10) Altitude (Bar)
  - 11) Fuel Time (m/s)
  - 12) Timing (o)

#### 3.1.3. Graphic info



- This display's some real-time information from the ECU connected
  - 1) Revs
  - 2) Map (Bar)
  - 3) TPS (%)
  - 4) Lambda (%)
  - 5) Water Temp (C)
  - 6) Battery Voltage (V)

3.1.4. Block Info



- This display's some real-time information from the ECU connected
  - 1) Revs
  - 2) MAP
  - 3) TPS
  - 4) Lambda
  - 5) Water Temp
  - 6) Air Temp
  - 7) POT
  - 8) Battery Volts
  - 9) Injection time
  - 10) Altitude
  - 11) Fuel Time
  - 12) Timing

- 3.2. <u>TCU</u>
  - 3.2.1. Device Info Display

Hardware Type	Orion2			
Firmware Type	TCU			
Hardware Class	Ultimate			
Firmware Number	1			
Firmware Version	V3.6B			
Serial Number	106 161 230 166			

- This display's the following information from the TCU connected
  - 1) Hardware Type
  - 2) Firmware Type
  - 3) Hardware Class
  - 4) Firmware Number
  - 5) Firmware Version
  - 6) Serial Number

#### 3.2.2. Diagnostic Info Display

REVS	2700		
SPEED	50		
TPS	15		
OIL	49		
GEAR	4		
GEARMAX	4		
SHIFTER			
MAPNO			
BUTTONS			
BAT	11.3		
SHIFTVAL	167		
POTVAL	0		

- This display's all real-time information from the TCU connected
  - 1) Revs
  - 2) Speed (Km/h)
  - 3) TPS (%)
  - 4) Oil Temp (C)
  - 5) Gear
  - 6) Gearmax
  - 7) Shifter Position
  - 8) Map Number
  - 9) Buttons Pressed
  - 10) Battery Voltage (V)
  - 11) Shifter Value
  - 12) Pot Value

#### 3.2.3. Graphic Display



- This display's some real-time information from the TCU connected
  - 1) Revs
  - 2) Speed
  - 3) Battery Voltage
  - 4) Up Switch
  - 5) Down Switch
  - 6) Oil Temp
  - 7) Shifter Position
  - 8) Gear
  - 9) Gearmax

### 4. Programming

- A Note to program or reflash the display the 6Way comms cable must be disconnected form any device because the programing cable and the comms cable uses the same UART connection to the display.
  - 1) Connect the Spitronics USB cable to the display using the included 6pin male connector.
  - 2) Hold the right button on the display in while powering the display, this will enable the bootloader mode on the display.
  - 3) **Open the "SPI Disp**lay Flash.bat" file.
    - 🛐 SPI Display Flash.bat
  - 4) Select the correct "COM" port the display is connected to.



5) The display will now update with the firmware selected.

### 5. Buttons





### 5.1. Brightness (Left Button)

- This is to change the display's brightness, the brightness will change as long as you hold the button down.
- It will change from dim to bright and will reset to dim.
- The display will automatically save the last brightness you left it on for day mode and night mode.

### 5.2. Display (Right Button)

- This button is to change the display to next info display.
- The display will automatically save the last info display you selected.
- This is also the bootloader pin.