



DM-100 OBDII Touch OLED Gauge

DM-100 OBDII Touch User Guide (V2.0) May 16, 2013



A Silicon Valley California Company

DM-100 OBDII Touch Universal OLED Multi-Gauge User Guide

This Product has Patents Pending
Designed by PLX Devices Inc. in Sunnyvale, CA
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1 Introduction

Thank you for purchasing the DM-100 OBDII Touch, the world's most versatile gauge with plug and play OBDII capabilities. The DM-100 OBDII Touch enables you to take advantage of the latest and cutting edge technologies which are only employed in high end consumer electronics today. The Organic LED display offers excellent color contrast and unsurpassed viewing angles that far exceed that of traditional LCD displays. For your enjoyment, we've packed powerful features into the DM-100 OBDII Touch. Colors, gauge styles and data can all be customized along with many additional features. We hope that you enjoy our product as much as we enjoyed designing it.

1.1 Patents

PLX Devices Inc. currently has patents pending in the OLED display, user interface, digital logic architecture, sensor detection circuitry, and customizable gauge implementation.

1.2 Warnings

To prevent fire or shock hazard, do not expose this product to rain or moisture.

Do not operate this product under direct sunlight or in high temperatures. Damage and malfunction may occur.

Do not operate this product while driving. This may interfere with driving operations, resulting in an accident.

Do not use this product and its accessories in any way other than specified by PLX Devices. PLX Devices is not liable for accidents or damage cause by misuse of this product.

Do not tamper, disassemble, or modify this product. This may cause an accident, fire, electric shock, or product malfunction.

Do not operate this product without a protective fuse. (5-10 Amps)

1.3 Key Features

- 1) Plug and play OBDII 1996+ Vehicles
- 2) Daisy-chain up to 16 additional iMFD sensor modules
- 3) Built-in 4 programmable OBDII sensor modules
- 4) Color Organic LED technology (OLED)
- 5) 180 deg viewing angle
- 6) High contrast ratio
- 7) Multiple gauge styles (gauge, numeric, plot, 2 parameter, 4 parameter, custom)

- 8) Peak and hold (high and low)
- 9) Intelligent warning (4 parameter comparison)
- 10) Custom gauge design
- 11) 4 point capacitive sense touch screen
- 12) Custom wallpaper upload
- 13) Automatic sensor detection
- 14) Extruded aluminum construction

1.4 Package Contents

- 1) DM-100 OBDII Touch Control Module
- 2) HDD-100 52mm OLED Display with touch screen
- 3) Power wire with 2.1mm connector and cigarette adapter
- 4) 1ft Serial Cable
- 5) 6ft USB Cable
- 6) Users Guide

1.5 Software Requirements

The DM-100 comes with PC software. The PC software allows you to do the following

- 1) Upload 8 Wallpapers (160 x 128 pixels) to the DM-100
- 2) Upload Custom Gauges (100 Frames) to the DM-100
- 3) Update DM-100 Sensor Table (If new sensors are available, sensor table must be updated)

Minimum System Requirements:

Windows XP or higher operating system

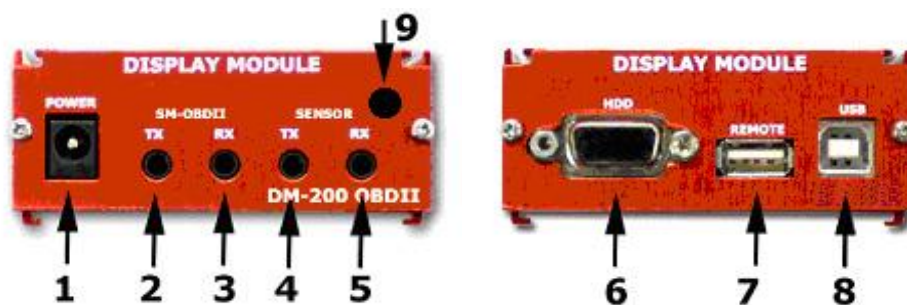
Pentium 4/Celeron 1GHz+

Athlon/Duron 1GHz+

512MB Ram

2 Overview

2.1 DM-100 OBDII Control Box



- 1) Connect to 12V-18V power source.
- 2) Output of SM-OBDII, Connect to additional Display Modules or loops back to sensor input (5)
- 3) Input of SM-OBDII, Connect from other sensor modules.
- 4) Connect to next Display Module(s) in chain
- 5) Connect to previous Display Module or last Sensor Module in chain
- 6) Connects to gauge head

- 7) Connect to touch screen interface on gauge head
- 8) Connect to USB port on PC for custom gauge, wallpaper, and sensor table upload
- 9) Connect to OBDII port in vehicle

2.2 Color OLED Gauge Head



- 1) 52mm (2 1/16") OLED Display for DM-100
- 2) Connect to Control Box HDD port. (DO NOT CONNECT TO COMPUTER'S MONITOR OUTPUT!)
- 3) Connect to Control Box Remote port.

2.3 Touch Screen Interface



*Note RIGHT and LEFT touch screen locations are slightly above the center line of the gauge.

In Gauge Mode:

While the DM-100 is in Gauge Mode, touch **Left – Right** to switch between the gauge parameters available. Touch **Up – Down** to switch between the type of gauge style you wish to view. Please refer to section (2.4) for more details how to navigate the menu system.

Touch and hold both **Left – Right** for 3 seconds to enter into the setup menu.

OBDII Sensor Mode:

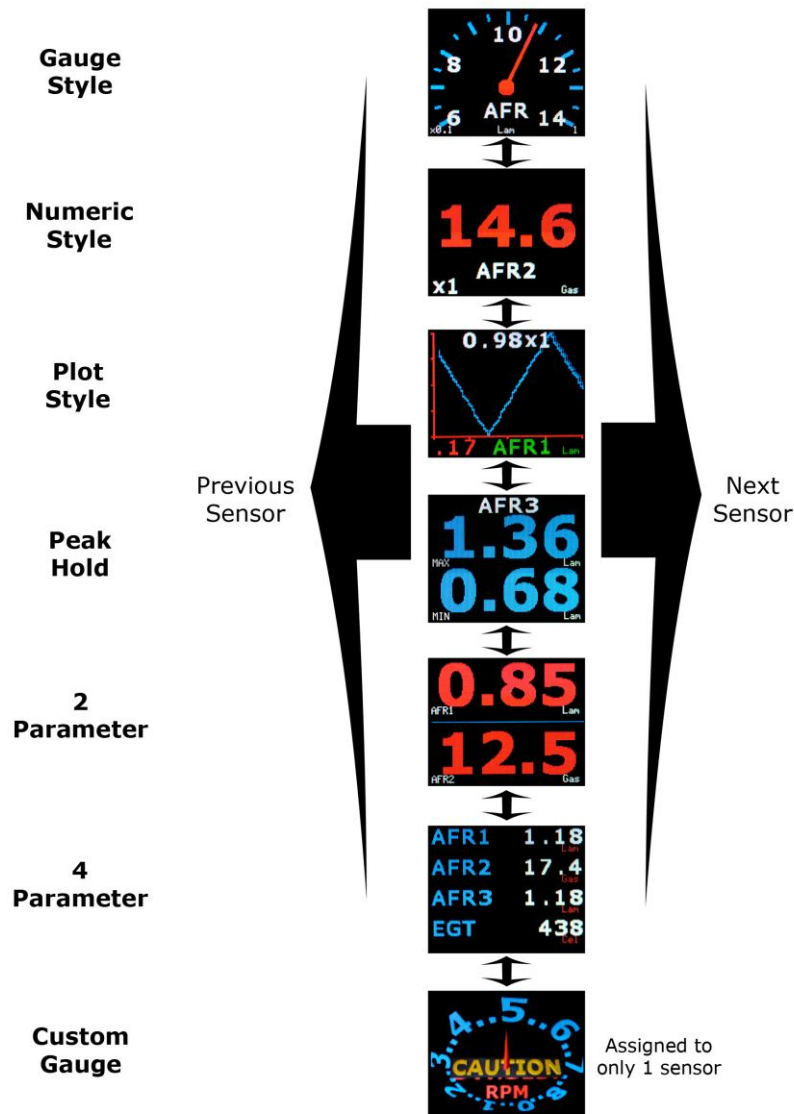
While the DM-100 is in Sensor Mode, touch **Left – Right** to switch between pages. Please refer to section (2.4) for more details how to navigate the menu system.

Setup Mode:

While in the DM-100 is in Setup Mode, follow the arrows on the screen to navigate and setup your gauge. At any time, touch and hold both **Left – Right** for 3 seconds to enter and exit the setup menu.

2.4 Navigating the Menus

2.4.1 Gauges



2.4.2 OBDII Parameters

VIEW OBD 2 DATA >	THOTL 100% RPM 2500 MPH 27 ELOAD 80% TIMNG -10'	AIRFL 50.0 INTPR 1.4 AIT 100' WATER 50' FUELP 10	STFB1 +56% LTFB1 +32% STFB2 +14% LTFB2 +17% OBDT EOB	O21B1 0.14 O22B1 0.25 O21B2 0.10 O22B2 0.40 FUELS NU	BAROP 10 ABSLD 80% FUELL 56% FRP 27 AMBTP 100'	C1S1 100 C2S1 100' C1S2 100' C2S2 100' ECUVT 14.4
-------------------------	---	--	--	--	--	---

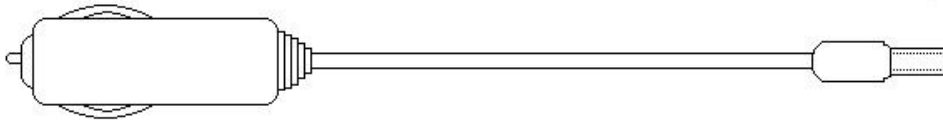
3 Hardware

3.1 Connecting Power

Option 1: Using the Cigarette Lighter Power

This option is ideal if your cigarette lighter power is only ON when your ignition key is turned. In some vehicles, your cigarette lighter power is always ON. Leaving your DM-100 OBDII unit always powered on will drain your vehicle's battery quickly. If this is the case for your vehicle, we recommend option 2.

Plug the 2.1mm power plug to the DM-100 control box where indicated 'POWER.' Plug the cigarette lighter adapter connector into your cigarette lighter power plug in your vehicle.



Option 2: Hardwire your power connection

WARNING! CONNECTING THE DM-100 IN REVERSE POLARITY WILL DAMAGE THE UNIT! CHECK CONNECTIONS BEFORE POWERING ON. DAMAGE TO THE DM-100 WILL VOID YOUR WARRANTY.

The DM-100 accepts 12-18V DC for power. Connect the negative wire (black) to your vehicle's ground. This is usually the negative terminal of your automobile's battery. Connect the positive wire (red) to your vehicle's ignition power. This power is only supplied when your key is turned passed a specific position and is off when your key is removed. Your power connection must be capable of supplying at least 1 amp of current. A 5 Amp fuse is recommended for safety. Plug the 2.1mm power plug to the DM-100 main control box where indicated 'POWER.'



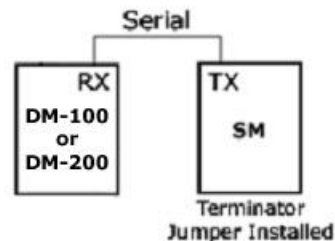
The unit is working properly when the OLED screen turns on within 10 seconds. If your gauge does not turn on, check your power connections and gauge connections.

3.2 iMFD Daisy Chain

The iMFD architecture allows you to connect up to 16 Display Modules and 16 Sensors in a daisy chain format. **Please keep in mind that the DM-100 Touch has 4 SMs built-in.** The 4 built-in SMs can be programmed up to 26 different combinations. See section (3.3).

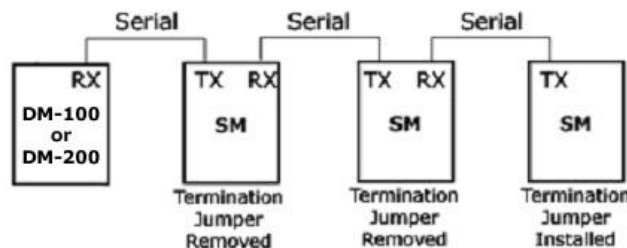
Basic Setup:

The most basic setup is to have one DM-100 and one Sensor Module connected in the iMFD chain. Make sure that the sensor module has the termination jumper **INSTALLED**. Use the 1ft serial cable provided to make the connection. **Again please note that your DM-100 Touch Already has 4 built-in SMs.**

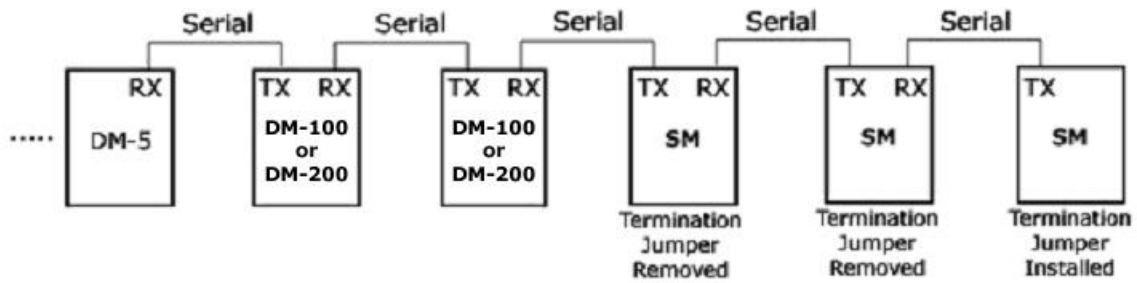


Multiple Sensor Setup:

If you have more sensor modules, simply connect them in between the DM-100 and the Sensor Module. Make sure that any subsequent sensor modules added to the iMFD daisy chain **MUST** have the termination jumper **REMOVED**. Use the 1ft serial cable provided to make the connections.



If you have more Display Modules, such as the DM-100, DM-200, DM-6, DM-5 AFR, DM-5 EGT, and etc. Simply connect them to the left of the DM-100/200 in the above diagram.



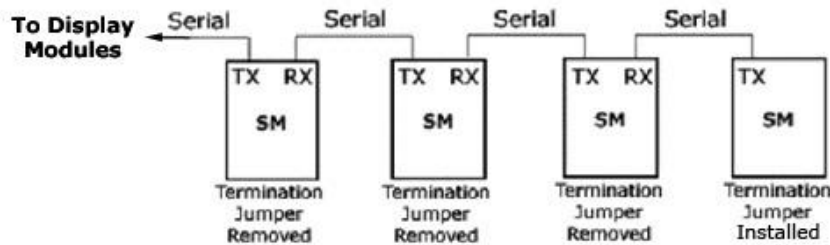
3.3 Programmable SM-OBDII

Your DM-100 Touch includes two products in one. It combines a DM-100 and 4 programmable SM-OBDII modules into one product.

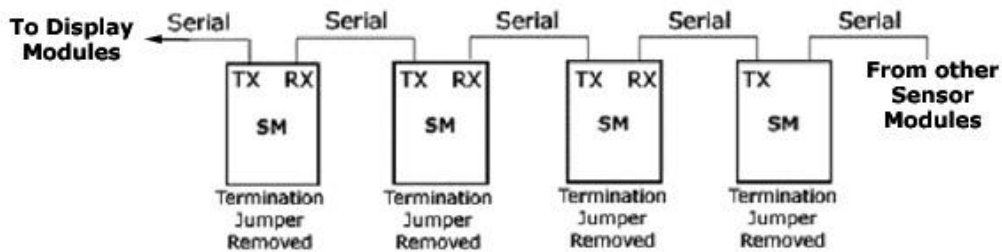


3.3.1 Termination

There are 2 options, Terminated and NOT Terminated. When the SM-OBD is **terminated**, it resembles the following diagram



When the SM-OBD is **NOT Terminated** it resembles the following diagram.



3.3.2 Data Polling

Data Polling means that the SM-OBDD 'gets' an updated value from the vehicle's ECU (Engine Control Unit). You can choose to turn ON or OFF Data Polling for Sensors 1,2,3,4. **The more sensors you have set to ON, the slower the refresh rate will be.** It is recommended that you turn on data polling only on sensors you wish to monitor, for maximum performance. By default, your unit comes preset with sensor 1,2,3,4 data polling ON.

For example, if you have your SM-OBDDII set to:

Sensor1 = RPM
 Sensor2 = Throttle Position
 Sensor3 = Vehicle Speed
 Sensor4 = Timing

And

Sensor1 Data Polling = ON
 Sensor2 Data Polling = ON
 Sensor3 Data Polling = ON
 Sensor4 Data Polling = ON

RPM, Throttle Position, Vehicle Speed and Timing will all be monitored. However, the refresh rate of each sensor is divided into 4. If you only wish to monitor RPM and nothing else, by setting

Sensor1 Data Polling = ON
 Sensor2 Data Polling = OFF
 Sensor3 Data Polling = OFF
 Sensor4 Data Polling = OFF

Will lead to higher performance for sensor 1.

3.3.3 Programming Sensors Modules

Each sensor module can be programmed into any of the available OBDDII sensors. Lists of the sensors are below and can be programmed in the following setup menu. Keep in mind that your vehicle may not support all the sensors listed below.

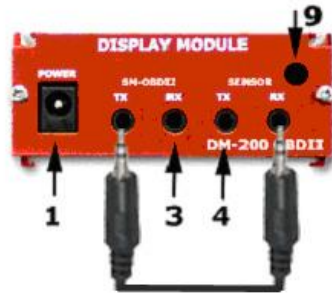
- | | |
|--|---|
| 1) ABS THROTTLE (Absolute Throttle Position) | 14) FUEL PRESSURE |
| 2) ENGINE RPM | 15) O2VOLTAGE 1B1 (Narrowband O2 Sensor Voltage 1 Bank 1) |
| 3) VEHICLE SPEED | 16) O2VOLTAGE 1B2 (Narrowband O2 Sensor Voltage 1 Bank 2) |
| 4) ENGINE LOAD | 17) O2VOLTAGE 2B1 (Narrowband O2 Sensor Voltage 2 Bank 1) |
| 5) TIMING | 18) O2VOLTAGE 2B2 (Narrowband O2 Sensor Voltage 2 Bank 2) |
| 6) INTAKE MAP (Manifold Absolute Pressure) | 19) FUEL LEVEL |
| 7) INTAKE MAF (Mass Air Flow Sensor) | 20) CAT TEMP 1B1 (Catalytic Converter Temperature 1 Bank 1) |
| 8) STFUEL B1 (Short Term Fuel Trim Bank 1) | 21) CAT TEMP 2B1 (Catalytic Converter Temperature 2 Bank 1) |
| 9) LTFUEL B1 (Long Term Fuel Trim Bank 1) | 22) CAT TEMP 1B2 (Catalytic Converter Temperature 1 Bank 2) |
| 10) STFUEL B2 (Short Term Fuel Trim Bank 2) | 23) CAT TEMP 2B2 (Catalytic Converter Temperature 2 Bank 2) |
| 11) LTFUEL B2 (Long Term Fuel Trim Bank 2) | 24) ECU VOLTAGE |
| 12) AIR INT TEMP (Air Intake Temperature) | 25) ABS ENG LOAD (Absolute Engine Load) |
| 13) COOLANT TEMP | 26) AMB AIR TEMP (Ambient Air Temperature) "AMB AIR TEMP"; |

3.4 Setup Sensors

Sensors are automatically detected when the gauge starts up. Detected sensors are arranged in the order of the iMFD daisy chain connection. Up to 16 sensors can be detected and displayed on the DM-100 OBDII Touch.

3.5 Special Note about the DM-100 OBDII Touch

If you wish to detect sensors from the SM-OBDII, you MUST connect the TX from the SM-OBD to the RX of Sensors with the supplied 1ft serial cable. See diagram below. Be sure, you set the SM-OBDII to TERMINATED. See section (3.3) for more information.



4 Standard Gauges

4.1 Analog Gauges (Graphical)



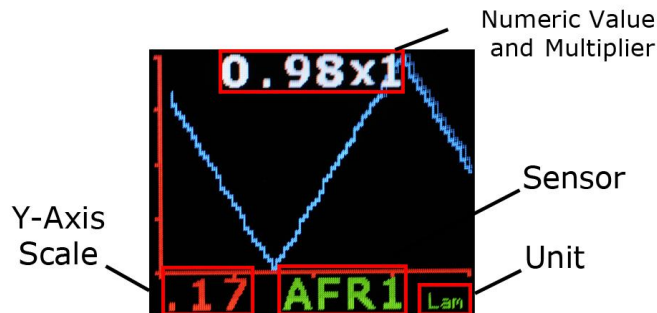
Analog gauges represent sensor data the same way a typical needle gauges does. Touch LEFT - RIGHT to switch between sensors. Touch DOWN button to switch to digital gauges.

4.2 Digital Gauges (Numeric)



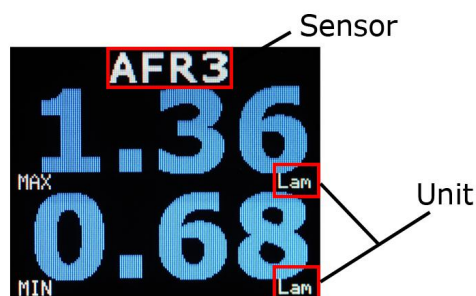
Digital gauges represent sensor data in large numeric form. Touch LEFT – RIGHT to switch between sensors. Touch DOWN to switch to plot gauges. Touch UP to switch to analog gauges.

4.3 Plot Gauges



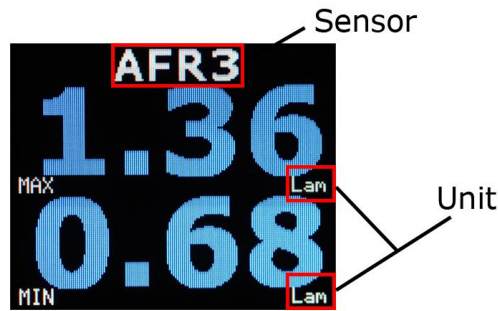
Plot gauges represent sensor data in a real-time graphical form. The sensor data is plotted on the y-axis and time is plotted on the x-axis. Touch LEFT – RIGHT to switch between sensors. Touch DOWN to switch to peak-hold. Touch UP to switch to numeric gauges.

4.4 Peak and Hold



The DM-100 can detect both minimum and maximum values. The peak and hold function works in any gauge mode, and you are not limited to having to remain on this screen for the DM-100 to memorize the peak values. Touch LEFT – RIGHT to switch between sensors. Touch DOWN to switch to 2 parameter view. Touch UP to switch to plot gauges.

4.5 Two Parameter Gauges



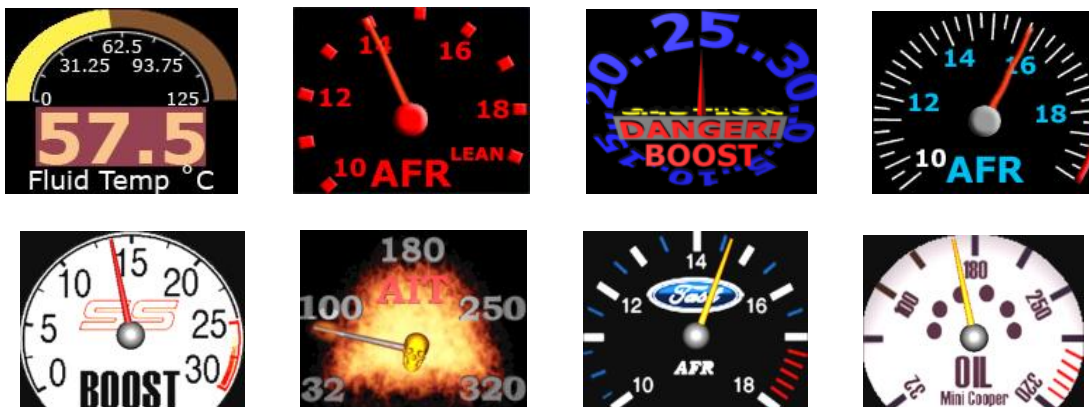
2 parameter gauges represent sensor data by showing 2 sensors simultaneously on the same screen. Touch LEFT – RIGHT to switch between sensors. Touch DOWN to switch to 4 parameter view. Touch UP to switch to peak and hold gauges.

4.6 Four Parameter Gauges



4 parameter gauges represent sensor data by showing all 4 parameters simultaneously on the same screen. Touch LEFT – RIGHT to switch between sensors. Touch DOWN to switch to custom gauge view. Touch UP to switch to 2 parameter gauges.

4.7 Custom Gauge



For standard users:

Please visit our online custom gauge database located here

<http://plxdevices.com/customgauges/>

You will need to install the USB device drivers and the DM-100/200 Utility before you can upload your custom gauge. The files are located here

http://plxdevices.com/product_info.php?id=MULTDM100TOUCH

For advanced users:

This option is not recommended unless you have experience with graphic design.

Steps to creating and uploading your own custom gauge:

1. Set the custom gauge to your desired sensor from the setup menu.
2. Determine the measurement range for 0th frame through the 99th frame
3. Design your gauge
4. Upload your design to the DM-100

The DM-100 gives you the capability of designing your own gauge from the PC and uploading it to the DM-100. You can do this in Photoshop or any other image processing software you have. You will need **100 images or "frames" of (160 x 128 pixels) in JPG, BMP, TIFF or GIF format**. Each image corresponds to a specific measured value to your custom gauge parameter. For example, if your custom gauge is set to WAT (water temperature from the SM-FluidTemp) with the units set to "Cel" (Celsius). Toggle to the corresponding analog gauge to determine your minimum and maximum range.

Notice that on the bottom left of the above analog gauge reads 0 and the bottom right reads 16 (160 Deg because of the x10). This tells you the minimum and maximum range of your custom gauge. Custom gauges simply displays the corresponding "frame" or image which is associated to the measured value in the analog gauge.

0th frame = 0 Deg C
 1st frame = 1.6 Deg C
 2nd frame = 3.2 Deg C
 .
 .
 .
 98th frame = 158.4 Deg C
 99th frame = 160 Deg C

When you create your 100 images, make sure you create your 0th frame to depict a reading of 0 Deg C, your 1st frame to depict a reading of 1.6 Deg C, your 2nd frame to depict a reading of 3.2 Deg C and so on until your 99th frame depicts a reading of 160 Deg C.

When you name the files on your PC, it is suggested you name them in the according fashion.

YourFilename000.jpg
 YourFilename001.jpg

YourFilename002.jpg

.
.
.

YourFilename098.jpg

YourFilename099.jpg

Once you've successfully made or obtained your 100 frames, you will need to use DM-100 Utility PC software (available from the PLX website) to upload your custom gauge to the DM-100. You can do this by connecting the DM-100 to your PC with the supplied USB cable. The DM-100 must be powered on and toggled to the setup mode "Connect to PC" for successful uploading to occur. Please refer to the DM-100/200 Programmer users guide included on the CD for details how to upload your design.

You will need to install the USB device driver (available from the PLX website) for Windows to properly detect the DM-100.

5 OBD II Sensors

The DM-100 OBDII in the OBDII Sensors Mode displays sensor information in a page format. To navigate to this mode, please refer to section (2.4) navigating the menu system. By pressing the "RIGHT" and "LEFT" button, toggles between the 5 available pages.

Page1:

Sensor	Standard Units	Metric Units
Throttle Position	%	%
Engine Speed	rev/min	rev/min
Vehicle Speed	MPH	KMH
Engine Load	%	%
Engine Timing	Degrees	Degrees

Page2:

Sensor	Standard Units	Metric Units
Air Flow Rate (MAF)	LBS/min	grams/sec
Intake Pressure (MAP)	inHG	Kpa
Air Intake Temperature	Fahrenheit	Celsius
Water Temperature	Fahrenheit	Celsius
Fuel Pressure	PSI	Kpa

Page3:

Sensor	Standard Units	Metric Units
Short Term Fuel Trim Bank1	%	%
Long Term Fuel Trim Bank1	%	%
Short Term Fuel Trim Bank2	%	%
Long Term Fuel Trim Bank2	%	%
OBD Type	Type	Type

Page4:

Sensor	Standard Units	Metric Units
Narrowband O2 Sensor Voltage Sensor 1 Bank 1	Volts	Volts

Narrowband O2 Sensor Voltage Sensor 2 Bank 1	Volts	Volts
Narrowband O2 Sensor Voltage Sensor 1 Bank 2	Volts	Volts
Narrowband O2 Sensor Voltage Sensor 2 Bank 2	Volts	Volts
Fuel System Status	Open or Closed	Open or Closed

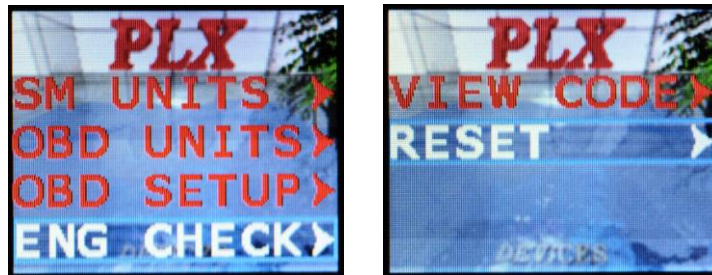
Page5:

Sensor	Standard Units	Metric Units
Barometric Pressure	inHG	Kpa
Absolute Engine Load	%	%
Fuel Level	%	%
Relative Fuel Pressure	PSI	Kpa
Ambient Air Temperature	Fahrenheit	Celsius

Page6:

Sensor	Standard Units	Metric Units
Catalytic Converter Bank 1 Sensor 1	Fahrenheit	Celsius
Catalytic Converter Bank 2 Sensor 1	Fahrenheit	Celsius
Catalytic Converter Bank 1 Sensor 2	Fahrenheit	Celsius
Catalytic Converter Bank 2 Sensor 2	Fahrenheit	Celsius
ECU Voltage	Volts	Volts

6 Engine Check



6.1 Viewing Trouble Codes

This mode views your trouble codes. A typical trouble code looks like the following

P0171

First Character – System

The first character identifies the system related to the trouble code.

P = Powertrain
 B = Body
 C = Chassis
 U = Undefined

Second Digit - Code Type

The second digit identifies whether the code is a generic code (same on all OBD-II equipped vehicles), or a manufacturer specific code.

- 0 = Generic (this is the digit zero -- not the letter "O")
- 1 = Enhanced (manufacturer specific)

Third Digit - Sub-System

The third digit denotes the type of sub-system that pertains to the code

- 1 = Emission Management (Fuel or Air)
- 2 = Injector Circuit (Fuel or Air)
- 3 = Ignition or Misfire
- 4 = Emission Control
- 5 = Vehicle Speed & Idle Control
- 6 = Computer & Output Circuit
- 7 = Transmission
- 8 = Transmission
- 9 = SAE Reserved
- 0 = SAE Reserved

Fourth and Fifth Digits

These digits, along with the others, are variable, and relate to a particular problem. For example, a P0171 code means P0171 - System Too Lean (Bank 1). To lookup your particular code, visit http://www.obd-codes.com/trouble_codes/

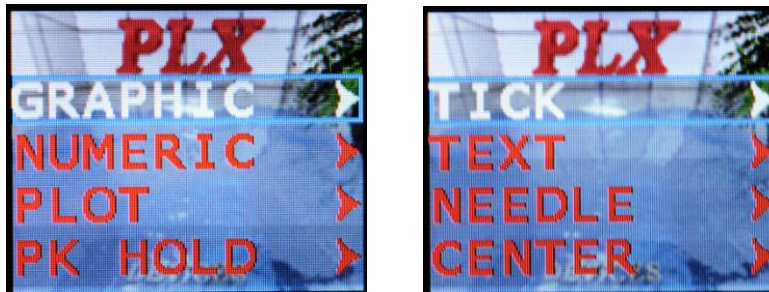
6.2 Resetting Trouble Codes

This mode is used to clear your engine check light. The process should take approximately 5 seconds.

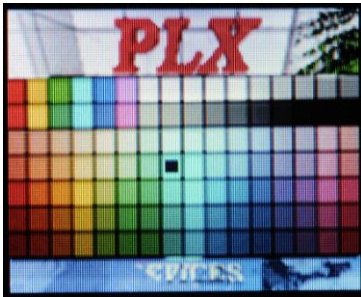
7 Setup

To enter setup mode, press the "down" button while you're in the View OBDII Sensor Data menu. This will take you to the first setup menu option.

7.1 Customizing Colors

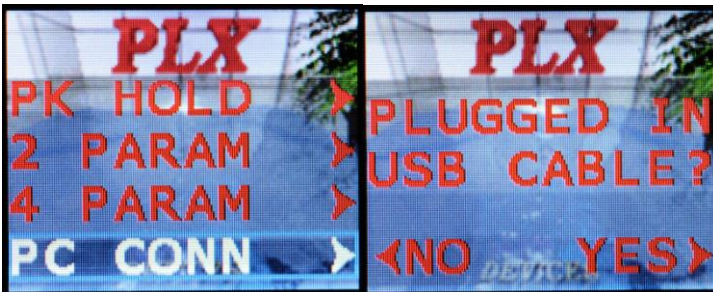


Each gauge style can be customized to any color and any wallpaper by navigating through the above menus.



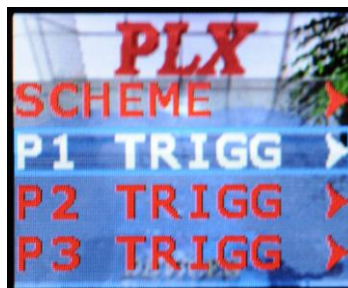
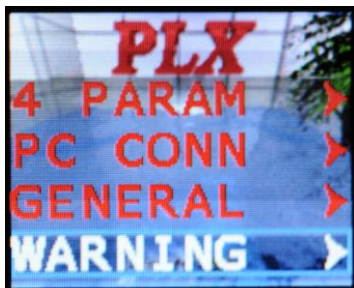
UP, DOWN, LEFT, RIGHT – Moves the cursor to select your desired color.
 LEFT – RIGHT (Simultaneously 3 seconds) – To exit the color palette.

7.2 Connect to PC



The DM-100 must be in this menu for the PC to communicate with the device. Toggle to this menu if you want to upload wallpapers, custom gauge, and/or update your sensor table.

7.3 Warnings



The DM-100 can monitor up to 4 parameters for warnings. The DM-100 monitors 4 parameters simultaneously and evaluates if any trigger points have been exceeded. If any of the 4 parameter trigger points have been exceeded then the DM-100 will evaluate if a warning message should appear on the display based on the 'scheme' setting. To better explain this feature, please take a look at an example.

Example: Parameter 1 is set to read AFR, Parameter 2 is set to read EGT, Parameter 3 is set to read Oil Temperature and Parameter 4 is set to read Boost. The trigger points are set to the following.

- Trigger point settings:
 (Parameter 1) AFR > 15.0
 (Parameter 2) EGT > 800
 (Parameter 3) Oil > 110
 (Parameter 4) BST > 15

Example:

If the DM-100 measures the following values and the 'scheme' setting is set to P1 OR P2, this means that if the Parameter 1 is TRUE OR Parameter 2 is TRUE, a warning will trigger. Parameter 3 and 4 are ignored.

Measured values:

(Parameter 1) AFR = 14.0 FALSE

(Parameter 2) EGT = 850 TRUE

(Parameter 3) Oil = 105 FALSE

(Parameter 4) BST = 20 TRUE

Since Parameter 2 is TRUE, a warning will trigger according to the above example.

What will happen if the scheme is set to P1 AND P2? This means that if Parameter 1 is TRUE AND Parameter 2 is TRUE, a warning will trigger. Since Parameter 1 is FALSE, a warning will not trigger. Parameter 3 and 4 are ignored.

What will happen if the scheme is set to P1 OR P2 OR P3 OR P4? This means that if any parameter 1-4 is TRUE, a warning will trigger. For this example, a warning will trigger.

What if the scheme is set to P1 AND P2 AND P3 AND P4? This means that all parameter 1-4 must be true to trigger a warning. For this example, a warning will not trigger.

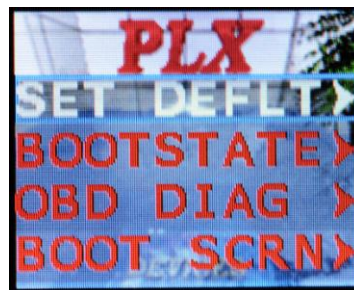
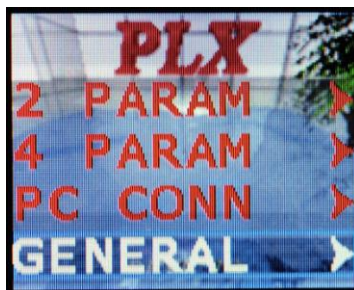
Several other scheme combinations are available for you to fully customize your warnings as they work on the same principal as the example above.

When a warning triggers, a flashing red and white background will appear with "WARNING" on the top of the screen. The parameter which is TRUE will also be displayed in the same format as 4 parameters gauges. This allows you to see the actual value measured instantaneously.

*Please note if you are in the OBDII Sensors Pages, Intelligent Warning is NOT monitored. It is ONLY monitored while in Standard Gauges.

*When a warning is triggered, touch RIGHT and LEFT (simultaneously for 3 seconds) will take you directly to the warning setup menu.

7.4 General Setup



7.4.1 Set Defaults

This option resets the DM-100 back to factory defaults. Custom wallpapers, custom gauge and sensor tables are NOT affected.

7.4.2 Boot State

This option allows you to set which gauge to be displayed when the DM-100 boots up for the first time.

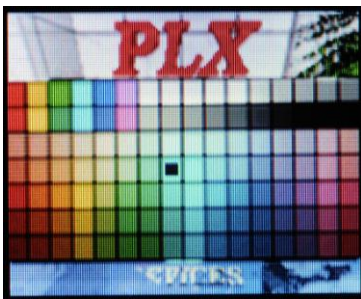
7.4.3 OBD Diag

In this mode, your DM-100 can be connected and controlled from the PC with additional 3rd party software.

7.4.4 Boot Screen

This option allows you to select from the 8 available wallpapers stored on the DM-100 to be displayed for 5 seconds during boot up.

7.5 The Color Palette



UP, DOWN, LEFT, RIGHT – Moves the cursor to select your desired color.

LEFT – RIGHT (Simultaneously 3 seconds) – To exit the color palette.

7.6 Wallpaper Backgrounds

Up to 8 wallpaper images can be uploaded to the DM-100. The DM-100 comes with 8 standard images; however you may use any color image formatted to the size of **(160 x 128 pixels)** as your wallpaper background. You may want to upload your company's logo, a picture of your vehicle, or any other image your imagination takes you. Your custom wallpaper can be uploaded to the DM-100 via USB port with the http://plxdevices.com/product_info.php?id=MULTDM100TOUCH. You have the option to select a different wallpaper background for analog gauges, digital gauges, plot gauges and 4 parameter gauges. The wallpaper image will automatically be superimposed under the gauges.

7.7 Sensor Table

As more sensor modules are available the Sensor Table must be updated for the DM-100 to properly interpret and detect new sensors. You will know if your sensor table needs to be updated if your DM-100 does not properly detect your new sensor module at boot up. The sensor table is stored in the flash memory of the DM-100 control box and can be updated by connecting to the USB port on your PC. The http://plxdevices.com/product_info.php?id=MULTDM100TOUCH, is used to upload the updated sensor table. Please refer to the DM-100/200 Utility user guide for more details.

8 Technical Specifications

8.1 DM-100 OBDII Touch Control Box

Physical Dimensions (Box)	4" x 2.875" x 1.125" (104mm x 75mm x 28mm) L x W x H
Power Consumption	1.5 Watts
OBDII/CAN Protocols	ISO-9141, VPW, PWM, KWP 2000, 11Bit CAN, 29Bit CAN
OBDII PIDs	30 PIDs
Compatible HDD	HDD-100 Touch
Processors	Custom PLX 32 Bit Processor, Custom PLX GPU (Graphics Processor Unit)
Operating Temperature	0 - 85 Deg C
Operating Voltage	10V-18V
Automatic Sensor Detection	YES
Human Interface	4 Position Capacitive Sense Touch Screen
PC Interface	USB 2.0
# Sensor Modules	1-32
Firmware Upgradeable	Yes
Enclosure	Extruded Aluminum

8.2 DM-100 Display

Physical Dimensions	2 1/16" (52mm) x 0.7" (18mm)
Display Technology	OLED 160 x 128 (20480 Pixels)
Color Depth	16 Bit
Viewing Angle	180 Degrees
Polarization	None (Viewable with polarized sunglasses)
Power Consumption	0.6 Watts Typical
Cable Length	6ft (~2m)
Operating Temperature	0 - 85 Deg C

9 Revision History

Version 1.0 (1/1/08)	Initial release
Version 2.0 (5/16/13)	Added additional information for DM-100 OBDII Touch

TERMS OF USE

PLX Devices Inc. does not guarantee product functionality with any ECU, data logger or other devices that uses the output signals. Implementation and integration of the PLX products with any other device(s) must be done at your own risk. Improper installation and usage may lead to engine damage. Mount and install PLX products in a location where it does not obstruct the driver's view and/or ability or safely control the vehicle.

LIMITED WARRANTY

PLX Devices Inc. warrants this product to be free from defects for 1 year from the date of purchase. If applicable, Oxygen sensors and other non-serviceable items are excluded from stated warranty. Serviceable goods must be determined by PLX Devices to be defective before any warranty or replacement is issued. PLX Devices' obligation under warranty shall be limited to repairing or replacing, under the discretion of PLX Devices, any part proven defective. This warranty is limited to the repair or replacement of parts in the manufactured good and the necessary labor done to affect its repair or replacement.

SERVICE UNDER WARRANTY

In the unlikely event that your PLX Devices hardware should fail during the warranty period, a Return Material Authorization number (RMA) must be first retrieved from PLX Devices Customer Support. Support can be contacted through email: plxsupport@plxdevices.com or by phone: 408-745-7591. All serviceable goods must be packaged securely with proof of purchase, RMA number, with all shipping charges prepaid and shipped to PLX Devices Inc. Goods returned under warranty must be received by PLX Devices Inc. within ten (10) business days after the RMA number has been issued. Goods received after this period is subject to fees for the service of repair or replacement. All repaired or replaced items shall be warranted for the remainder of the original product warranty.

RETURNS AND RESTOCKING FEE

A 15% restocking fee will apply to applicable PLX Devices products for refund. All returns are to be packed in original condition including packaging, documentation, manuals, and accessories. Returns that do not include all the accessories and components may be returned to the customer or charged on a per item basis. The customer assumes responsibility for product until receipt at PLX Devices Inc., shipping via an insurable carrier is recommended. Any unauthorized shipping charges will be billed to the customer or shipment will be refused.

DISCLAIMER

PLX Devices Inc. shall not be liable for direct, special, incidental, or consequential damages resulting from any legal theory including, but not limited to, lost profits, downtime, goodwill, damage, injury to persons, or replacement of equipment and property due to improper installation, integration and/or misuse of any PLX Devices Inc.'s product(s). This warranty applies to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 1 year warranty period.