



**NEW VINTAGE USA
DETROIT**

SQUAREBODY BFG GAUGE INSTRUCTIONS



**NEW! SEE FIRST 4 PAGES FOR OUR
QUICK START GUIDE!**



[POWERTRAIN SPECIFIC
INSTALL GUIDES](#)



[F.A.Q.
PAGE](#)



[ONLINE
TROUBLESHOOTING
GUIDES](#)

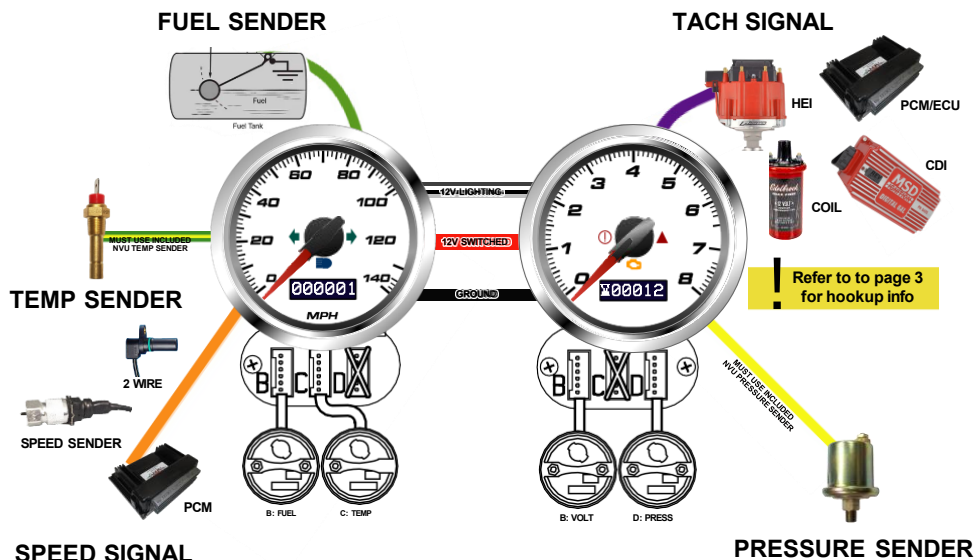


[TECH VIDEO
PAGE](#)

NEW VINTAGE USA RAPID INSTALL GUIDE

We designed this guide to help you get your gauges installed without getting into the Aux Features. A detailed guide can be found in the Phoenix Big Book Install Guide.

- **Begin Installation by mounting your Temp & Pressure senders and locating your Speed & Tachometer Signals.**



SPEEDOMETER & TACHOMETER SIGNAL TIPS

LT1: PCM Speedo may require 1K Pull up resistor of 12V switched & the signal wire. Set to 4000 PPM

LS: PCM Set Speedo to 4000 Pulses & Tach signal to 4 Cylinder (flip #5 switch to up position)

LT: Speed Signal: pin 14 (grey/blue) on transmission connector & Tach from coil + trigger Set to 1 Cyl

Coyote: Gen 1/2 used Ford Control Pack to output Speed & Tach, Gen 3 can grab Tach from Coil pack trigger wire and set to 1 CYL. GPS sender is best speed option for this application.

Tremec Speed Senders: These senders produce a very low voltage that is not capable of driving an Aftermarket Speedo. Best bet is to install a 3 Wire Powered sender like part # 99006-04. This would mount on the passenger side opposite of the factory 2 wire. Measured mile to AUTOCAL.

TEMP & PRESSURE SENDING UNIT INSTALLATION TIPS

LS ENGINES: have a location above the oil filter that may have a 1/8" NPT port, or one can be tapped. Its recommend to mount our TEMP SENDER in the water flow between the engine near the thermostat

OIL PRESSURE: Chevy Small Block engines and some Fords will require a short length of pipe to clear the manifold.

Your hardware store should have brass 1/8" NPT pipe nipple with a 45 or 90-degree elbow to accommodate the pressure sender.

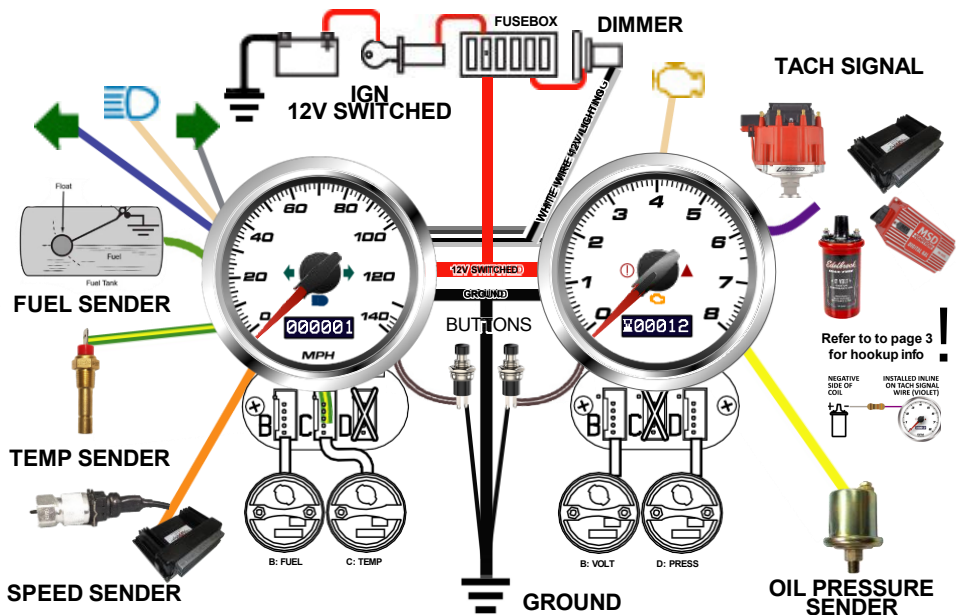
**If you received a 2 post Sender in your kit S:Signal & WR:Low pressure warning*

WIRING YOUR GAUGES

- Use a minimum of 20 gauge insulated, stranded wire, all connections should be connected with a crimp connection or solder and heat shrink.
- Keep speed signal wire(s) away from potential “noise” sources like ignition wires, tach signal wires, fan motors, pumps etc.
- Use a maximum of 5A fuse for the entire cluster, this is usually already in your fuse block
- Commonize wiring, ground power and lights can be common on all gauges and “daisy chained”

SIMPLIFIED GAUGE WIRING DIAGRAM

REFER TO BIG BOOK FOR MORE THROUGH DIAGRAMS



Frequently Asked Questions

Do my gauges have built in High Beam & turn signals?



- **YES, they are built into the Speedo & Tach dials, simply wire up as shown above to see them illuminate. We use a technique called "Dead fronting" to achieve this better than OE quality hidden indicator.**

Where are the lights in the 2" Gauges?

- **YES, they are built into the gauges circuitry! No need for bulbs!**

I am doing an LS install, do I need something special to mount the sending unit provided in my kit?

- **YES, you will need our LS Install kit to adapt Metric engine block to NPT thread of NVU senders.**

TACHOMETER CALIBRATION

TACHOMETERS SHIP SET TO 8 CYLINDER

Set according to your applications # of Cylinder found below



LS PCM: Tach Output wire
CDI BOX: Tach Output Wire
Coil on Plug: Trigger Wire



Standard Coil: Neg. Side of Coil
HEI Ignition: Dedicated Tach Output



NEGATIVE
SIDE OF
COIL

INSTALLED INLINE
ON TACH SIGNAL
WIRE (VIOLET)

**POINTS SYSTEMS, PERTRONIX OR UNBRANDED SYSTEMS
WILL REQUIRE ADDITIONAL INPUT
PROTECTION USING INCLUDED 1K RESISTOR INLINE.**



ADJUSTING THE CYLINDER SELECTION

To set the number of cylinders, hold in the button until the current setting is displayed. Scroll to the desired setting and hold until the confirmation message is visible. Select yes or no, and hold in the button until the setting is saved.

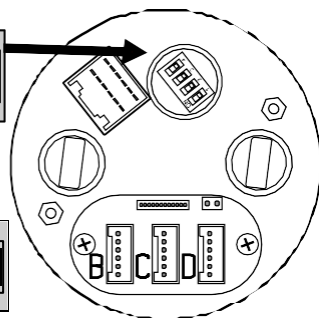
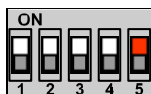
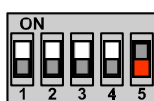


SETTING YOUR TACHOMETER DIPSWITCHES

The first 4 DIP-switches have no effect on the tachometer #5 controls the input protection, please see below to prevent damage. Switch position shown in red for clarity.

CDI, HEI, AFTER MARKET
EFI STANDARD IGNITION,
POINTS (**USE 1k RESISTOR**)

LS ENGINES: This enables
the built in 10K pull up resistor



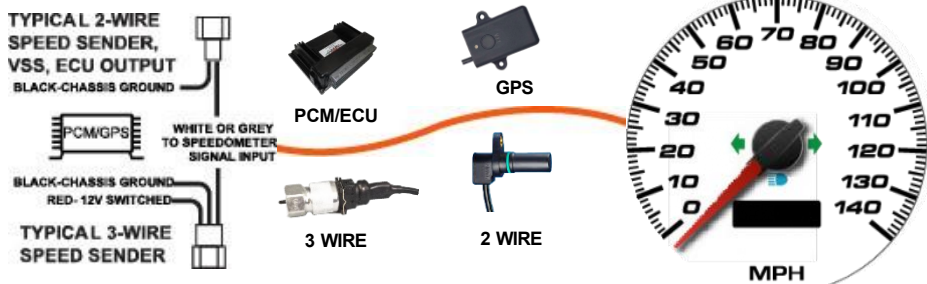
Rear of Gauge

(Switches located Under black plug)

SPEEDO & FUEL CALIBRATION

SPEEDOS SHIP SET TO 16,000 PULSES

Set according to your applications puleses or AUTOCAL



AUTOCAL MEASURED MILE DRIVE

To enter AUTOCAL hold in the button before Key on, click button until AUTOCAL setting is displayed. Hold the button and the gauge will display "READY TO DRIVE" Click the button and drive ONE MILE, Pull over and hold button to Save!

SETUP MENU	AUTO CALIBRATE	READY TO DRIVE? YES	COUNTING 16452	SET YES 21544	SAVED! 21544
---------------	-------------------	------------------------	-------------------	------------------	-----------------

MANUALLY ADJUST THE SPEEDO CALIBRATION

To set the number of Pulses, click button until the Manual Calibrate setting is displayed. Click to the desired Pule setting and hold until the confirmation message is visible. Select yes or no, and hold in the button until the setting is saved.

016000	016000	016000 SET Y/N	016000 SAVED!
--------	--------	-------------------	------------------

SETTING FUEL CALIBRATION

FORD/ GM PRE 65
0-30



GM 65-89
0-90



GM 90'S UP
40-250



FORD/MOPAR 65-86
73-10



FORD 87-UP
20-145



UNIVERSAL/SW
240-33



CUSTOM/EARLY
FORD 168-15



MOPAR 86-96
110-10

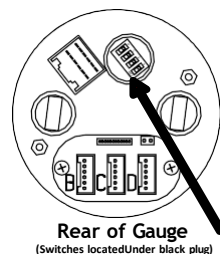


MOPAR 97-UP
220-20



Fuel Gauge Ohm range is easily adjusted, simply flip the dipswitches into the positions as shown on the back of your Speedometer

#5 Switch
(HAS NO FUNCTION FOR FUEL)



INTRODUCTION

Thank you for choosing NVU for your build. NVU style features and function will make your ride's dash look and act the part you always wanted it to. NVU instruments are designed, coded, built and programmed right here in the Motor City, Detroit , MI USA and feature a 5- year warranty. Please take the time to read through this booklet and feel free to contact us with any questions you have before, during and after installation.

TABLE OF CONTENTS

INTRODUCTION	2
FEATURES	3
SPEEDOMETER SETUP.....	4
SPEEDOMETER SIGNALS AND SENDERS	11
TACHOMETER SIGNALS	12-1/2
TACHOMETER SET-UP	13
ANALOG MINOR GAUGE SENDERS AND SIGNALS	17
AUXILLARY INPUTS	18-21
WIRING DIAGRAMS	
THE BACK OF YOUR GAUGE: WITH DATA PORTS	22
6 GAUGE KIT PROG SPEEDO AND TACH	23-24
THE BACK OF YOUR GAUGE: WITHOUT DATA PORTS	25
QUADZILLA	26
SPEEDOMETER AND QUAD GAUGE KIT	27
SPEEDO/TACH COMBO WITH QUAD GAUGE	28
3-1 GAUGE KIT	29
STANDALONE SPEEDOMETER WITH OLED SCREEN	30
STANDAOLNE TACHOMETER WITH OLED SCREEN	31
STANDALONE SPEEDO/TACH COMBINATION GAUGE	32
DUAL GAUGES	33
DIP SWITCHES AND SETTING RANGES	34
ANALOG INPUT (RESISTANCE) 2-1/16" GAUGES	35
ANALOG INPUT (TRANSDUCER, 0-5v) 2-1/16" GAUGES	36
TROUBLESHOOTING BASICS	37
AIRCORE 2-1/16" INSTRUMENTS (SHORT SWEEP)	38-39



NEW VINTAGE USA
21840 WYOMING PL STE. A
OAK PARK, MI 48237
VOICE: 248.850.5482
FAX: 248.565.8291

www.newvintageusa.com
service@newvintageusa.com

NVU PHOENIX PLATFORM PLUG-AND-PLAY FEATURES

NVU Plug and play instruments are available in kits that have externally driven 2-1/16" gauges. The speedometer and tachometer are the master (driver) gauges and use data ports on the back to run the minor gauges. This simplifies installation and wiring dramatically not only saving time installing, but also prevents the need for troubleshooting loose connections, mis-wiring, etc. This system is analog driven and requires no additional boxes, driver or data inputs to operate.

Features from the standard Phoenix platform instruments are carried over to make installation and use easier with more features than ever. Plug and play system features:

Minor gauge "Plug and Play" – plug it in the master gauge- no more individual wires!

Phoenix features in addition to PNP :

Speedometer:

Odometer

Trip Odometer

Service mileage

Performance timers with 0-60, 1/8 and 1/4 mile functions

User settable (one time only in the 1st 100 miles) odometer mileage

Voltmeter display

One auxiliary input

Peak speed

MPH/Km/h toggle

Overspeed warning

Easy set-up menus

Digital filtering

GPS ready

Deadfronted (invisible when off) turn signals and hi beam indicators

Tachometer:

Sequential shift alert

Hourmeter

Service hours

Up to 2 additional auxiliary inputs

Peak RPM

Digital filtering

1,2,4,6,8,10,12 cylinder settings (custom options/ranges available)

Signal sources include, GM PCM, Coil, CDI box or other pulsed output

Deadfronted (invisible when off) warning indicators

PHOENIX SPEEDOMETERS

NVU Phoenix platform speedometers offer features found in complete clusters, OE instrument systems and data loggers, all in a standalone unit. While all of the features listed in this manual are available, they are not all required to be used. You can use your speedometer simply as a way to monitor your speed or as a performance meter, its up to you. Some of the advanced features of the ---

- Phoenix platform speedometers:
- OLED high resolution display
- Drive-a mile self calibration
- Integration with OE and aftermarket speed signal and PCM outputs
- GPS input compatible
- Overspeed warning display (AMP Plug and commercial models)
- MPH/KPH speed toggle
- Performance meter 0-60, 1/8 and 1/4 mile times/speed capture

Connections:

Speedometers are offered in either a studded or AMP plug connection. All of the wires on the AMP plug may be used depending on the application, check further in the manual for more details.

Terms when using the booklet:

Scroll: Pressing and releasing of the remote button to move through menu options.

Short push: Briefly holding the remote button and releasing it

Long Push: Holding in the remote button for 1 sec. or until a menu display changes.

With all of the features packed into NVU Phoenix platform speedometers, we had to divide them up into different menus. Your speedometer has a main "RUN" menu, and a "SETUP" menu. The RUN menu utilizes the features used during normal operation. The SETUP menu stores all of the items that are set-up during the installation process. (Items can be changed any time after if desired) and are separate to prevent inadvertently changing them during normal use.

During installation please contact NVU for questions/concerns, our qualified tech staff can help get you going.



NEW VINTAGE USA
21840 WYOMING PL STE. A
OAK PARK, MI 48237
VOICE: 248.850.5482
FAX: 248.565.8291

www.newvintageusa.com
service@newvintageusa.com

AUTOCAL (DRIVE A MILE SELF-CALIBRATION) QUICK SET-UP

Check that your digital input filter is set to the proper input setting (see more later in manual if needed) all NVU speedometers are shipped with the input set on HIGH (suitable for most applications) with 16,000 PPM

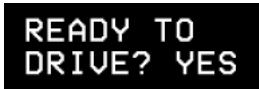
Enter the setup menu by holding in the remote button and turning on the key (start vehicle)

A black rectangular screen with the text "SETUP MENU" in white, uppercase letters. To the right of the text is a white icon of a wrench and a screwdriver crossed.

Scroll to auto calibrate (3RD ITEM)

A black rectangular screen with the text "AUTO CALIBRATE" in white, uppercase letters.

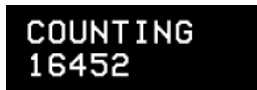
Hold button until screen displays ready to drive? YES

A black rectangular screen with the text "READY TO DRIVE? YES" in white, uppercase letters.

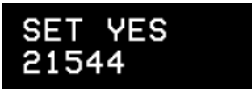
Hold in button until display shows counting 0

A black rectangular screen with the text "COUNTING 0" in white, uppercase letters.

Drive exactly one mile(or KM), speed does not affect accuracy. You may or may not see action on the speedometer before or during calibration. **Display will start counting with the digits below increasing.** This is the speedometer counting the number of pulses it is receiving from the signal source. If the display does not count, check your signal source or input filter, the speedometer is not reading a signal

A black rectangular screen with the text "COUNTING 16452" in white, uppercase letters.

At the end of the mile (or KM) (vehicle can be moving or stationary) Hold the button in until SET YES appears

A black rectangular screen with the text "SET YES 21544" in white, uppercase letters.A black rectangular screen with the text "NO PULSES!" in white, uppercase letters.

If **NO PULSES is displayed**, a signal was not read by the speedometer. Check your input filter selection and speed signal. See page 37 for signal troubleshooting. See page 11 for signal types. See page 9 for filter settings.

Hold in button until SAVED! Appears

A black rectangular screen with the text "SAVED! 21544" in white, uppercase letters.

The speedometer is now calibrated. Pressing the button will take you through the rest of the setup menu features. To resume normal operation turn off the key (vehicle) and restart.

INSTALLATION BASICS:

- Use a minimum of 20 gauge insulated, stranded wire, all connections should be connected with a crimp connection or solder and heat shrink.
 - Keep speed signal wire(s) away from potential “noise” sources like ignition wires, tach signal wires, fan motors, pumps etc.
 - Use a maximum of 5A fuse for the entire cluster, this is usually already in your fuse block
- Commonize wiring, ground power and lights can be common on all gauges and “daisy chained”

SPEEDOMETER OPERATION MENUS

With all of the features packed into NVU Phoenix platform Speedometers, we have divided them into different menus. Your speedometer has a main “RUN” Menu, and a “SETUP” menu. The RUN menu utilizes the features used during normal operation. The SETUP menu stores all of the items that are setup During the installation process. Items can be changed any time after, if desired, And are separate to prevent inadvertently changing them during normal use.

RUN Menu Functions

Features can be accessed in the run menu during normal operation with the key on. To scroll to the various displays in the OLED screen, use a short push or tap of the remote button.

MAIN ODOMETER: Displays total distance travelled in miles or kilometers depending on the model. This display does not show tenths.



TRIP METER: Displays current trip distance
Press and hold the button and the odometer will reset to 0. This display will show tenths and will not have any zeros in front of the distance travelled.



RUN MENU-CONTINUED

Service – This is used to see when your next service interval is due (Oil Change, Tire Rotation...) The interval is set in the SETUP MENU in the next section. This screen is to display the interval remaining.



SERVICE
003000

When the service interval has been reached, the SERVICE REQUIRED warning will display at vehicle startup. The interval can be reset in the SETUP menu.



SERVICE
REQUIRED

MPH : This will display your current Miles per Hour you are traveling



122 MPH

KPH: This will display the current Kilometers per Hour you are traveling



100 KPH

Peak SPEED: This will display the highest speed achieved since last reset Press and hold the button and the odometer will reset to 0.



100 PEAK
MPH

Performance Timers- Displays 1/4 and 1/8 mile time and trap speed as well as 0-60 time. Enter the performance mode you wish to measure, Hold the button until the dialog to start is displayed, enter yes to start or no to reset. Start driving. (Professional driver only on a closed course)

SETUP MENU

The setup menu contains menus used for functions not used during normal operation. These features are in this sub-menu to avoid inadvertently changing them during normal operation.

While the vehicle is off press and hold the button. Turn the vehicle on. The odometer will display "SETUP MENU" Short pushes on the button will scroll through these, long hold of the button will select the item. . To exit the SETUP menu turn off the vehicle and restart. You may operate the speedometer in setup mode if required the speedometer will operate to make fine tuning easier.



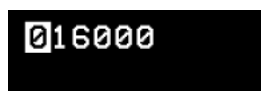
SERVICE RESET (Push and hold button to enter) This is used to reset service interval if you have saved any (Oil Changes, Tire Rotations, Tune Ups...) You can Set service intervals later in this menu (Service Set section). Short push to scroll, long push to select



MANUAL CALIBRATE: (Push and hold button to enter) Manual calibration of the speedometer is used to manually enter the pulse setting. You must know the pulse setting of the speed signal to use this feature. Common uses are on OE (pre-configured) senders, GM PCMs GPS senders. Note: using this method will usually get you close enough and fine tuning or auto calibration may be required. Although many speed senders are standard output, various gear ratios and tire sizes will change the pulse settings depending on the vehicle build. The speedometer will accept between 2,000-250,000 PPM. See next page for a chart with common pulse settings.



To enter the manual calibration mode, hold the button until the current pulse setting is shown. NVU ships all speedometer with a 16,000 PPM setting. If the number shown is not 16,000 the speedometer has already been auto-calibrated by the end user. If the pulse count shows zero, the previous autocal attempts resulted in not receiving a speed signal, check you sender and input filter.



Continued, next page:

MANUAL CALIBRATE, CONTINUED:

The current pulses will be shown, with the first number highlighted. To change that number short push scrolling will increase the digit. Stop on the number required and hold the button to select the next number and follow the same sequence until all numbers are correct and your are on the last digit to the right



The final dialog box will display asking to set. Select Y to accept, N to cancel. Hold the button on Y and the setting will be saved. The speedometer is now manually calibrated.



AUTO CALIBRATE

This feature allows the speedometer to automatically calibrate the speedometer by driving a measured mile (or kilometer). See quick setup earlier in this manual for instructions.

INPUT FILTER:

The digital filter in the speedometer is used to properly read the signal from virtually any pulsed source. Enter the filter by holding the button. Scroll to the filter selection desired, refer to the chart below. Select L, M or H (Low, Medium, High). Hold the button to select FILTER, set yes or no, hold to select, saved! Will display to indicate a successful session. You can change this at any time to adjust as needed or to experiment for the best results for your application.



SOURCE	TYPICAL PPM	SIGNAL TYPE	INPUT FILTER SET
GM PCM (ALL)	4,000	5-12V HALL EFFECT	5V=M, 12V=H
AFTERMARKET 3 WIRE	16,000	12V HALL EFFECT	H
AFTERMARKET 2 WIRE	8,000 OR 16,000	AC SINEWAVE	L
OE 2 WIRE (GM)	40,000	AC SINEWAVE	L
NV4500	108,000	AC SINEWAVE	L
TREMEC	16,000 OR 40,000	LOW AC SINEWAVE	L
GPS SENDER	8,000 OR 16,000	VARIES	5V=M, 12V=H

SETUP MENU, CONTINUED

OVERSPEED Available on AMP-Plug and commercial Units only. The overspeed warning will display and flash an overspeed warning on the OLED display

OVERSPEED!

To set the overspeed enter the setup menu and scroll to overspeed. Hold in the button to enter the menu. The current setting will be displayed:

OVERSPEED



**SET SPEED
150 YES**

To change the overspeed setting, scroll to YES, then hold the button, the current warning level will be shown with the first digit highlighted. To change the digit, tap the button to increase the number. To move to the next number, hold the button until the next is highlighted. Proceed with the same procedure until all 3 digits are changed. On the last number hold until the display shows the speed and set? YES. The saved speed will be shown. If there is an error you can select NO or turn off the gauge and no changes will be made. To have the warning be inoperable, set the warning level to zero.

150



050



**050
SET? YES**



**050
SAVED!**

SET ODOMETER:

The set odometer function is a one-time setting that the end user can change during the first 100 miles of operation. The user can set the mileage to the existing vehicle mileage to maintain a proper vehicle record. Once the mileage passed 100 miles, the feature will no longer be available. To enter the set odometer menu, scroll to set odometer and hold in the button. You will see one time set ? yes. Hold in the button.

**SET
ODOMETER**



**ONE TIME
SET? YES**

000000 will be shown with the first digit highlighted. To change the digit, tap the button to increase the number. To move to the next number, hold the button until the next is highlighted. Proceed with the same procedure until all digits are changed. On the last number hold until the display shows the mileage set YES? Hold in the button and SAVED! Will appear. Turn off and restart the vehicle, mileage is now set.

000000



020500



**020500
SET YES?**



**020500
SAVED!**

SPEED SIGNALS AND TYPES OF SPEED SENDERS

In general, there are going to be 3 types of speed senders:

HALL EFFECT: 3 wires, power, ground signal. This is usually a cable-replacement type. Our GPS speed senders are also hall effect.

2-WIRE A/C SINEWAVE: These can be OE integrated into the transmission or a cable replacement style. 2 wires, one is the signal, one is ground, which are reversible. **YOU CANNOT SPLIT A 2 WIRE SIGNAL TO RUN 2 ITEMS** (speedo, cruise)

ECU/CONTROLLER: If you are using a PCM or controller to run your automatic transmission, it will have a speed signal coming out, it will vary from manufacturer to manufacturer. Check out our Tech tip article from the QR code below for details.



[SPEED SENDER TECH PAGE](#)



[POWERTRAIN SPECIFIC
INSTALL GUIDES](#)



[ONLINE
TROUBLESHOOTING
GUIDES](#)



[TECH VIDEO
PAGE](#)



**GM Style
screw-on
speed sender**



**Ford Style
screw-on
speed sender**



**Integrated
speed sender**



**Typical speed
sender location**



**PCMs computers,
ECM**

ANALOG MINOR GAUGE SENDERS AND SIGNALS

Senders are the part of the gauge system that send a signal to the gauge to be possible, then displayed on the dial face. There are 4 types of senders, resistance bases pressure, temperature and level (fuel), voltage input pressure transducers, and pulsed speed inputs.

TEMPERATURE SENDERS Signal type is resistance to ground. Resistance DECREASES as temperature rises. All NVU Phoenix temperature gauges use a High-Match temperature sender. The sender will read between 500-1000 ohms at room temperature. Both low and high read gauges use the same sender. **You must use this sender with NVU gauges, OE senders will not operate properly. Do not use Teflon tape to seal, we recommend liquid sealer for a good ground.**

PRESSURE SENDERS are resistance to ground signal. All NVU pressure senders are possible,, 0-100 PSI regardless of the pressure range.

PRESSURE TRANSDUCERS Send a voltage signal to the gauge to be read and are not senders.. possible, a linear .5V-4.5V signal can be read by any transducer gauge. There are typically 3 wires to the transducer, signal, ground and 5V power (from the gauge or module).

FUEL LEVEL SENDERS are also resistance to ground. A float arm rotates on a rheostat in the fuel tank and changes the resistance as the float arm moves. This is also available in a tube type sender. The ranges can be various depending on the OE manufacturer. You **ALWAYS** need to match the fuel gauge to the sender.. Use a stock sender, if possible, to make things easier on yourself. Please see DIP switch settings in this booklet (PAGE 34) for a full listing of stock ranges.



[ALL ABOUT SENDERS
TECH ARTICLE](#)



[FUEL SENDER TECH
ARTICLE](#)

THE BACK OF YOUR GAUGE PROGRAMMABLE WITH OLED SCREEN AND PORTS

All programmable speedometers and tachometers with an OLED screen of any size are master gauges that can drive minor functions. The minor gauges are driven directly by the master and no additional connections are required.

AMP PLUG SOCKET :

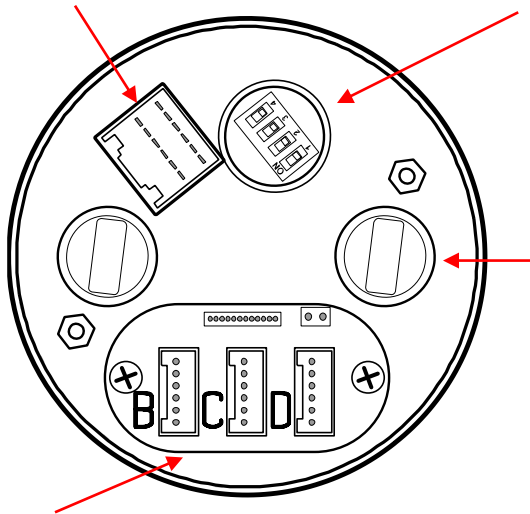
USE the NVU universal AMP plug and wire as shown in the proper diagram. NVU uses the same plug for all gauges so some wires may not be used in your application.

DIP SWITCHES:

Used to adjust fuel range on speedometers. See fuel gauge chart later in this booklet. Remove the black plastic cover to access this if needed. See DIP switch settings later in this booklet

LIGHT SOCKETS:

The sockets hold NVU bright white LED 194 bulbs. They are replaceable if needed. If you need to replace a bulb, the LEDs are polarity sensitive and have to be installed properly to operate. If you find the bulb will not light, turn it 180 degrees and reinstall. LEDs are not dimmable using a standard dimmer. Wire into your parking lamp circuit and use an LED dimmer if required



DRIVER SOCKETS:

This applies to 5 and 6 gauge kits with NVU PNP technology. 2, 3 and 4 gauge kits will not use the driver features. Refer to each wiring diagram. Plug the appropriate gauge into the socket and it will function through the master driver unit.

The B, C and D pins are used to connect the 2-1/16" gauges through the master gauge. All functions and lighting are done through this plug. Refer to the wiring diagram for each kit for proper wiring. Below is each plug's function and its corresponding input wire color. Pins C and D are the same on the speedo and tach.

SPEEDOMETER:

B: PROGRAMMABLE FUEL (GREEN WIRE) Connects to your fuel sender. The input is programmable, please see the fuel gauge DIP switch settings on page 34

C: WATER TEMPERATURE (YELLOW/GREEN WIRE) Connects to the NVU temperature sender.

D: OIL PRESSURE (YELLOW WIRE) Connects to NVU pressure sender .

TACHOMETER:

B: VOLTS No input wire required, internal to gauge

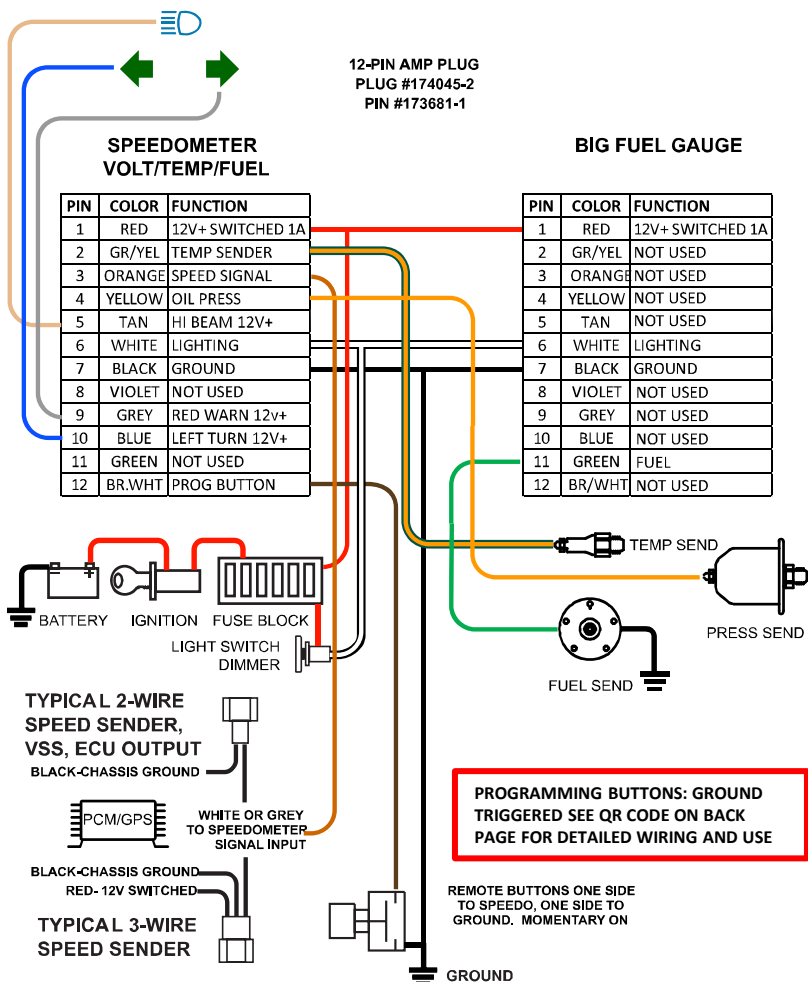
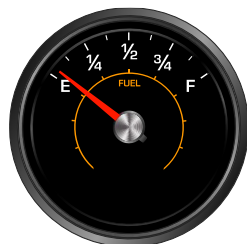
C: WATER TEMPERATURE (YELLOW/GREEN WIRE) Connects to the NVU temperature sender.

D: OIL PRESSURE (YELLOW WIRE) Connects to NVU pressure sender .

6 GAUGE KIT PROGRAMMABLE SPEEDO AND TACHOMETER WITH OLED SCREENS

MASTER GAUGE WIRING

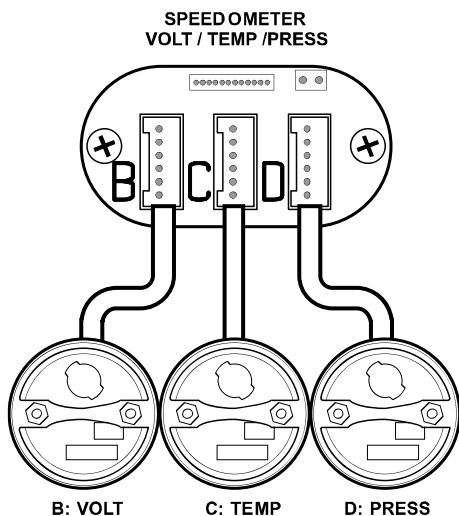
All programmable speedometers and tachometers with an OLED screen of any size are master gauges that can drive minor functions. The minor gauges are driven directly by the master and no additional connections are required. Wire as shown below and plug the minor gauges into their appropriate plug (B,C,D) on the back of the master gauge.



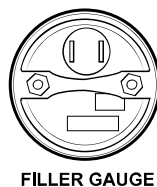
MINOR GAUGE WIRING 6 GAUGE KIT

All programmable speedometers and tachometers with an OLED screen of any size are master gauges that can drive minor functions. The minor gauges are driven directly by the master and no additional connections are required. Wire as shown below and plug the minor gauges into their appropriate plug (B,C,D) on the back of the master gauge.

Follow the diagram below to properly plug the minor gauges into the master units.



The filler gauge is empty and has an LED to illuminate it at night, the only purpose it serves to look cool and fill up the empty space on the dash (if required). YES! You can use an add-on gauge if you would like for boost, Fuel press, AFR, whatever you like!



WARNING:
DO NOT DISCONNECT OR RE-CONNECT MINOR GAUGES
WITH POWER ON, THIS WILL BLOW THE DRIVER CHIP.

The B, C and D pins are used to connect the 2-1/16" gauges through the master gauge. All functions and lighting are done through this plug. Refer to the wiring diagram for each kit for proper wiring. Below is each plug's function and its corresponding input wire color. Pins C and D are the same on the speedo and tach.

SPEEDOMETER:

B: VOLTS Connects to voltmeter and reads voltage internally.

C: WATER TEMPERATURE (YELLOW/GREEN WIRE) Connects to the NVU temperature sender. You must use NVU temp/pressure senders for the gauges to operate properly.

D: OIL PRESSURE (YELLOW) Connects to the provided NVU oil pressure sender. You must use NVU temp/pressure senders for the gauges to operate properly.

FUEL GAUGE: Pre-set to 0-90 Ω and no additional outputs are available. This is a fully dampened gauge so the pointer will react slowly to prevent issues with fuel slosh!

THE BACK OF YOUR GAUGE PROGRAMMABLE WITH OLED SCREEN WITHOUT PORTS

All programmable speedometers and tachometers with an OLED screen of any size are WITHOUT PORTS ON THE BACK Are the same units as with ports except the plugs are not used on this particular model. This is usually in a 2 gauges kit or a standalone order where driven instruments are not used. The programming, setup and features are the same on all models of NVU instruments with an OLED screen.

AMP PLUG SOCKET :

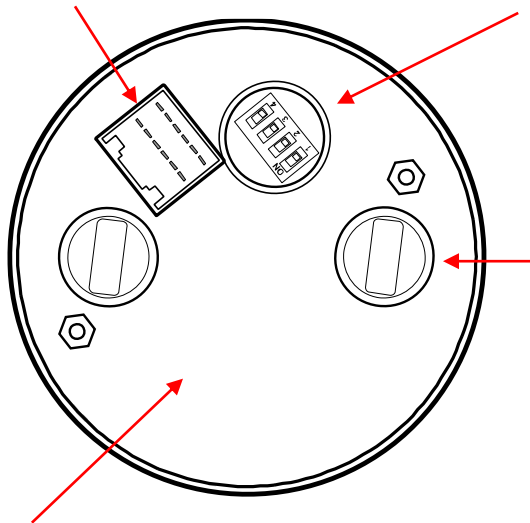
USE the NVU universal AMP plug and wire as shown in the proper diagram. NVU uses the same plug for all gauges so some wires may not be used in your application.

DIP SWITCHES:

Used to adjust fuel range on speedometers with ports, quad gauges, dual gauges and 3-1 gauges. Please use the driven unit with the fuel function to set the switches. See DIP switch settings on page 34.

LIGHT SOCKETS:

The sockets hold NVU bright white LED 194 bulbs. They are replaceable if needed. If you need to replace a bulb, the LEDs are polarity sensitive and have to be installed properly to operate. If you find the bulb will not light, turn it 180 degrees and reinstall. LEDS are not dimmable using a standard dimmer. Wire into your parking lamp circuit and use an LED dimmer if required



NO DRIVER PORTS:

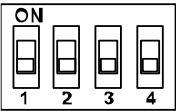
Standalone gauges (speedometers, tachometers, quad gauges and 3-1 sets do not have driver ports. The ports mentioned previously are used on kits with remote 2-1/16" gauges. All features are shared between both models.

STANDALONE GAUGES NOT IN KITS:

If installing a gauge normally in a kit (quad gauge, etc) wire as shown in the diagram, ignoring the other gauge(s) in the kit. All standalone instruments operate on their own independently from one another.

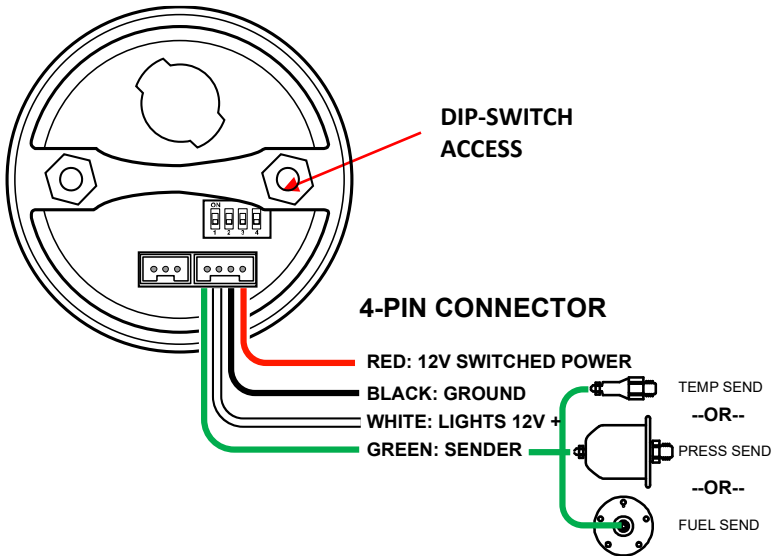
ANALOG INPUT MINOR GAUGES

DIP switches are used on the back of some of the gauges to set ranges for your application. This can be changes at any time but in general They are set at the factory or on-site during installation and are left in that position for the life of the vehicle. When setting DIP switches, ON should be in the up position.



FUEL GAUGE:

All fuel gauges are programmable by the DIP switches on the driver gauge or the 2-1/16" gauge itself. All fuel gauges and ranges are identical on all instruments. Set the switches as shown in the chart below for your application.

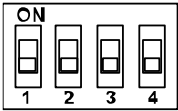


ANALOG INPUT	INPUT Ω	1	2	3	4
OIL PRESS 0-100 PSI	240-33	OFF	OFF	OFF	OFF
WATER TEMPERATURE	500-19	OFF	OFF	ON	ON
OIL/TRANS TEMP	500-19	OFF	ON	OFF	ON
VOLTAGE	10-18V	OFF	ON	ON	ON

SENDER TYPE MAKE/YEAR	RANGE E-F Ω	1	2	3	4
EARLY GM/FORD PRE-65	0-30	OFF	OFF	ON	OFF
GM 65-89	0-90	OFF	ON	OFF	OFF
GM 90S-UP	40-250	OFF	ON	ON	OFF
FORD/AMC/MOPAR 65-86	73-10	OFF	OFF	OFF	ON
FORD 87-UP	20-145	ON	ON	OFF	OFF
UNIVERSAL/SW	240-33	ON	OFF	OFF	OFF
CUSTOM/EARLY FORD	168-15	ON	OFF	ON	OFF
MOPAR 86-96	110-10	ON	ON	ON	OFF
MOPAR 97-UP	220-20	ON	ON	OFF	ON

ANALOG INPUT 0-5v OR .5-4.5V INSTRUMENTS

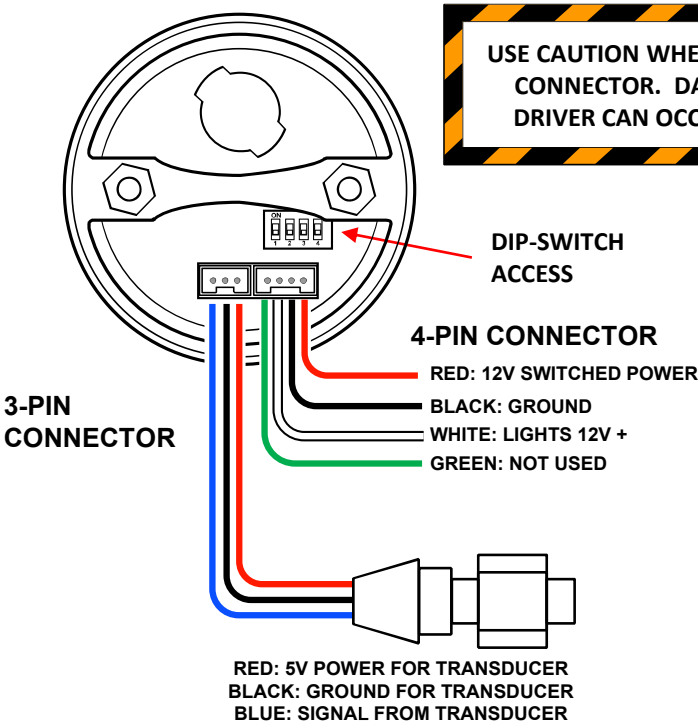
DIP switches are used on the back of some of the gauges to set ranges for your application. This can be changes at any time but in general They are set at the factory or on site during installation and are left in that position for the life of the vehicle. When setting DIP switches, ON should be in the up position.



2-1/16" 0-5V INPUT MINOR GAUGES

This applies to all standalone 2-1/16" gauges with a 0-5 or .5-4.5V input (transducer). The instrument will have BOTH a 4 and a 3 pin plug. The 3 pin plug will power your transducer. Please refer to the chart below for input DIP switch settings required for your application.

Transducers operate on .5-4.5V range. AFR and 0-5V output devices use 0-5V. The input for both ranges should be on the BLUE wire on the 3-pin harness. The GREEN wire on the 4-pin harness is not used.



VOLTAGE INPUT	INPUT Ω	1	2	3	4
TRANSDUCER	.5-4.5V	ON	OFF	OFF	ON
0-5 INPUT (AFR, OTHER)	0-5V	ON	OFF	ON	ON

Thank you for choosing New Vintage USA products. We strive to provide the finest quality and design components available on the market. If you need technical assistance, please call 248.850.5482 or email service@newvintageusa.com.

New Vintage USA 5-Year Warranty:

New Vintage USA warrants all merchandise against defects in workmanship and materials for 60 months. After the 60 month period, a pro-rated service fee of no more than 50% production costs may be applied. This warranty applies to all instrumentation products, excluding senders. The warranty does not apply to a product used in a manner for which it was not designed, or if it has been altered in any way.; New Vintage USA LLC is not responsible for any damage or costs associated with any product that has been purchased. This is a limited warranty as identified in the Magnuson-Moss Warranty Act of 1975.

Warranty Service

Service can be obtained during the normal warranty period by contacting New Vintage and obtaining a Return Authorization Number (RZA#). New Vintage will repair or replace any item found to be defective and return ship to no cost via ground or post office services. Other shipping/international services will be applied at additional cost. Buyer is responsible for shipping to New Vintage for warranty repair. Return shipping will be the responsibility of the customer if the product is found to be damaged or out of warranty. An RZA number must be obtained and proper return/warranty form accompanied with the product.

Missing items/Returns

Missing items/returns must be processed within 15 days of end user receiving the product. All returned must be shipped back to the place of purchase. Any return shipping costs to New Vintage are the responsibility of the purchaser. An RZA number must be obtained and proper return/warranty form accompanied with the product. A restocking fee not to exceed 10% may be applied to items that must be repackaged. Any item returned in a non-usable condition will be returned or charged to the customer.

Missing items must be reported within 15 days of receiving the product. Items found to be missing will be shipped via ground or postal service at no charge.

Expedited/international shipping options are available at an additional charge. It is the policy of New Vintage to quickly replace any items that may be missing in a timely manner but not to overnight or expedite shipping in any way at no cost.



**NEW VINTAGE USA
21840 WYOMING PL STE. A
OAK PARK, MI 48237
VOICE: 248.850.5482
FAX: 248.565.8291**

**www.newvintageusa.com
service@newvintageusa.com**

MORE RESOURCES ONLINE 24/7



[SNAP-ADAPT VEHICLE
SPECIFIC WIRING
DIAGRAMS](#)



[PROGRAMMING BUTTON
WIRING](#)



[FUEL SENDER TECH
ARTICLE](#)



[F.A.Q.
PAGE](#)



[ONLINE
TROUBLESHOOTING
GUIDES](#)



[TECH VIDEO
PAGE](#)



NEW VINTAGE USA
21840 WYOMING PL STE. A
OAK PARK, MI 48237
VOICE: 248.850.5482
FAX: 248.565.8291

www.newvintageusa.com
service@newvintageusa.com