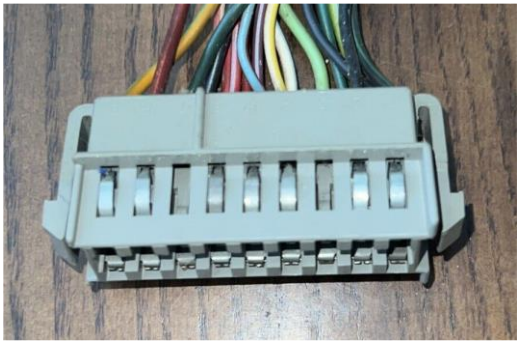
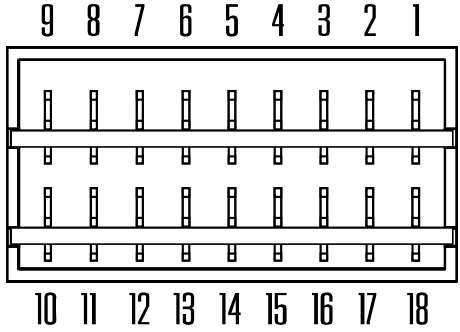
NEW VINTAGE USA
DETROIT

FORD 18-PIN ADAPT-O-PLUG INSTRUCTION BOOKLET
FITS SELECT FORD VEHCILES





FORD VEHICLES:

73-79 FORD TRUCK (WITH GAUGES)

80-86 FORD TRUCK

INTRODUCTION

This product is designed to help the installer save time and create a professional installation of aftermarket gauges in less time than splicing in the old and new harnesses. Use this instruction manual as a guide. Due to the wide variety of variations over model years we have used the most popular applications as our wiring diagram guides.

The following will help you to an easy, trouble-free installation:

- Use the diagrams to help verify each pin and function as below.
- If you have a variation on a cluster/pinout, please let us know so we can add that to our diagrams for future installs
- Use a test light/multimeter to verify each connection before making a final decision/connection.
- Crimp wires to spade terminals (provided) in the same direction as the spade- this will save space between connections as we have done our best to minimize the size of the adapter plug.
- Commonize connections in the spade terminal crimp to save wiring and time. Power, ground, lights can all be common from all gauges
- LED lighting: All NVU gauges use LED lighting, ***which may or may not operate properly with OE dimmers.*** If your lights will not work on the plug try turning up the dimmer all the way. If that does not work, we recommend connecting directly into the parking lamp circuit for a constant 12v. If you would like to dim the gauges, we have our LED dimmer available, part number 99003-04
- Use care when removing spade terminals, the boards are held in with clips that snap into the housing. Hold the board in place while removing spade terminals (they are tight) so that the housing/snaps are not damaged or pull out.

Plugging into original harness plug:

Most plugs are directional meaning that it can only be plugged in one way. Some are not due to the original design. Note when plugging in , that the same pin count and any spacing is in the same direction as the original.

There are 2 types of connections used:

1. Snap in: Same as original, the plugs will snap in. To remove, depress the tabs just like OE
2. Mechanical: Other plugs did not have a mechanical attachment as part of the original design. While this may have been useful for use at the factory, our application needs to be mechanically held in place. This is done using the included hardware (screws, nuts) or a cable tie. In cable-tie applications, slide the tie through the holes and slot guides. Clamp tightly once you are ready to complete the installation.

TESTING THE TERMINALS BEFORE FINALIZING CONNECTIONS.

As stated earlier in the instruction booklet, the diagrams within are to be used as a guide. With the large variation and options available, we have provided the most popular/common diagrams to start with. If you find something new or better, please let us know so that this booklet can continually be updated with newer material.

HOW TO TEST FOR EACH FUNCTION:

Plug the adapter into the stock plug.

TESTING FOR 12V+ POWER:

Using a test light or multimeter, place one end on a good ground. Turn on the key if needed.
Turn on the function you would like to test, lights, ignition, etc that would be powered by 12v+.
Probe the pins/terminal with the other end of the test lamp/multimeter. When you reach the pin that operates that function, the lamp will illuminate, or the multimeter will read vehicle voltage (12V).
Turn that item on and off to verify that is the correct pin. Make a note of it so you remember.

TESTING FOR A GROUND TRIGGER:

Same procedure as above but swap the power to a good 12V source and probe the terminals with the ground side. The light will illuminate, or multimeter will show vehicle voltage (12V)

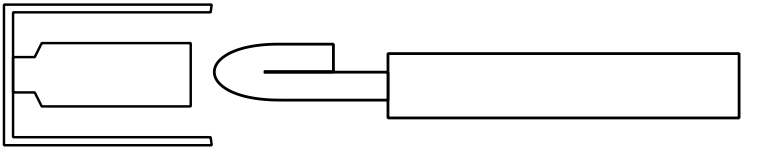
TESTING FOR OHMS (TYPICALLY FUEL SENDER)

This one is a little trickier as you will need to know what Ω (ohms) range you are looking for. In a fuel gauge its best to know how much fuel is in the tank before starting, and noting what the original fuel gauge was reading before removal. Give us a call if you need a hand with this.

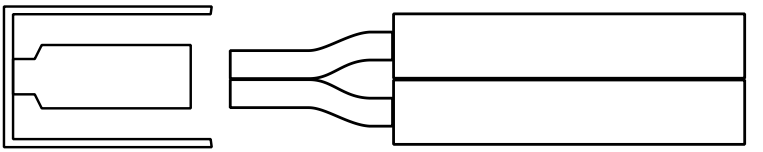
Using a multimeter set to the appropriate ohm scale (usually 200Ω), place the ground side probe on a good ground.
Start probing the terminals with your multimeter, look for the range that would be appropriate for your fuel gauge at that level.

THE LAST RESORT:
Take a look at the back of the cluster, you can often trace the printed circuit to identify which pin does which function.

VIDEO LINK HERE:



Single wire: fold over



Multiple wires

CRIMPING WIRES TO SPADE TERMINALS

We have included BLUE spade terminals for 18-20 ga wire. This is a larger size that can be used for 1 or 2 wires to be attached.

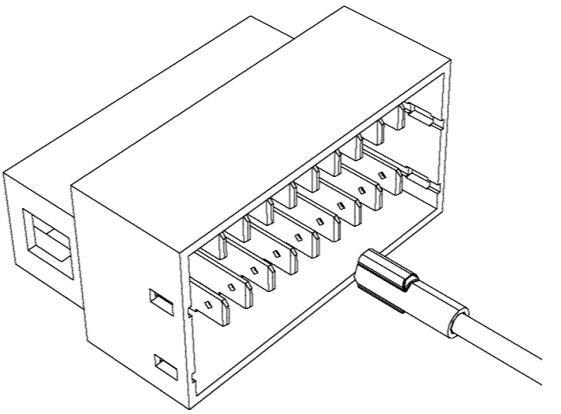
-When using one wire in the terminal, we find its best to strip off extra wire and fold it over to create a thicker piece for the crimp to attach to.

- 2 wires should fit in there nicely, be sure to strip off enough wire to extend full into the end of the terminal.

Use a quality crimper to ensure a good connection.

Connection should be tight and not be able to pull out. Make sure the crimp is in the same direction as the spade (red arrows) so that there is enough room between terminals.

The spade terminals will bottom out on the male side in the plug making a good connection. Remember to hold the board in if you need to remove the spades afterward to not damage the housing or pull the board(s) out.



GAUGE SIGNALS AND WIRING TIPS

NVU adapter plugs are designed to minimize your searching for the right wires as much as possible. Your new gauges probably have features your original vehicle was never designed to have, so some additional wiring may be required. Here are some helpful tips for a successful gauge installation.

ELECTRONIC SPEEDOMETER: this signal may or may not be in your wiring harness, LS swaps, new PCMs, cableless senders in older vehicles will require some additional wires to be run. If in doubt, just run new wires down to the new speed sender or PCM, that 15-20 minutes now can save you hours of troubleshooting later. If you are using a new "conversion" or "update" harness from a trusted harness manufacturer, these are already in place and you can use those designated wires.

TACHOMETER: Similar to above, old wires can also deteriorate, if you are unsure, just run a new wire to the appropriate tachometer signal source. Check page 12 in the NVU BIG BOOK or give us a call to help you through.

OIL PRESSURE SENDER: NVU recommends installing a new wire to the pressure sender to ensure you have the correct connection established. If you are using a new "conversion" or "update" harness from a trusted harness manufacturer, these are already in place and you can use those designated wires.

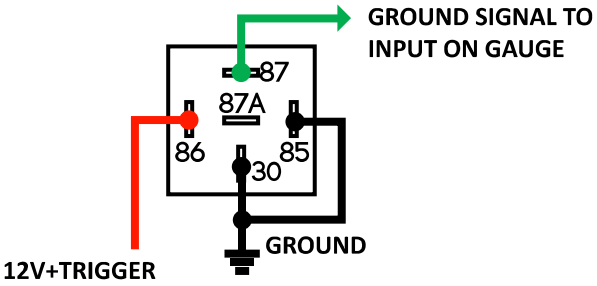
TEMPERATURE SENDER: NVU recommends installing a new wire to the temperature sender to ensure you have the correct connection established. If you are using a new "conversion" or "update" harness from a trusted harness manufacturer, these are already in place and you can use those designated wires.

FUEL SENDER: This one is a pain usually to run a new wire all the way to the tank. Its best to try to re-use the original wire unless there is an issue with the vehicle wiring.

LED lighting: All NVU gauges use LED lighting, ***which may or may not operate properly with OE dimmers.*** If your lights will not work on the plug try turning up the dimmer all the way. If that does not work, we recommend tying directly into the parking lamp circuit for a constant 12v. If you would like to dim the gauges, we have our LED dimmer available, part number 99003-04

SCAN THE QR CODE AT RIGHT TO SEE THE INSTRUCTIONAL VIDEO >>>

HOW TO SET UP A RELAY TO CONVERT A 12v+ OUTPUT TO A GROUND TRIGGER FOR THE GAUGE.



To trigger NVU indicator lights (in the gauge) will require 12V+ to illuminate the LEDs. If your signal is a ground trigger (brake light for example) there are 2 methods:

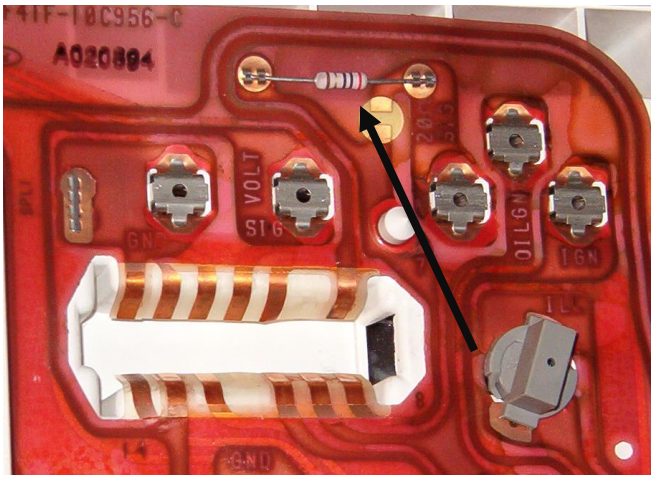
1. Use a relay as shown above, most any relay will do, LEDs draw less than 1 amp.

2. The NVU ground trigger controller can "flip" up to 3 ground triggers to power for use on almost any light or low amp circuit.

ALTERNATOR EXCITER JUMPER IF REQUIRED

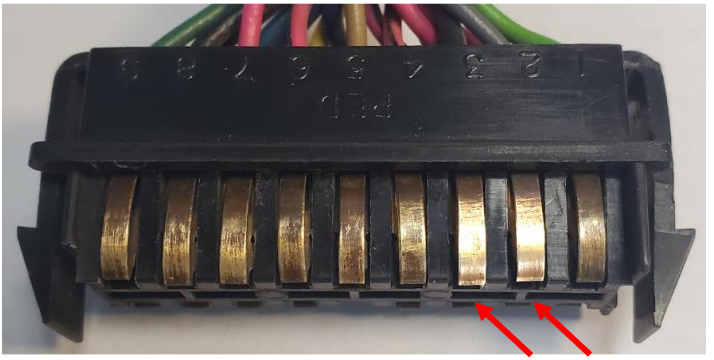
Some alternators may require a jumper to excite the unit to charge the battery. Often times the lamp in the cluster itself is "in charge" of that function. To simulate the bulb there are a few options:

- Use a 510 Ω resistor between the terminals. Most of the time there is already one on the back of the cluster itself.
- Convert to a 1 wire alternator
- Jump the excite wire on a 3-wire alternator basically converting it to one wire
- Use a bulb in that jumper location.



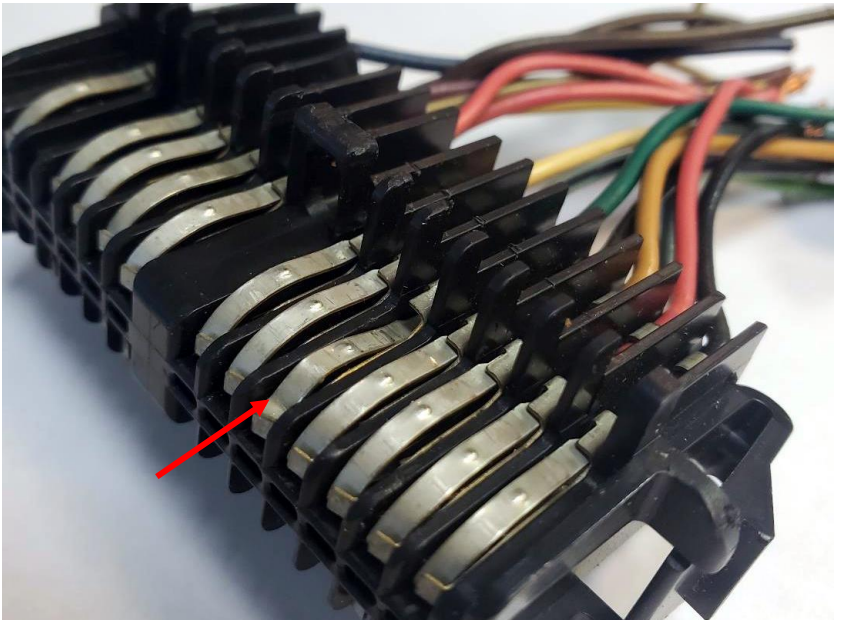
CLEANING PINS

The original plugs have been in the vehicle for a long time, for best results the pins should be gently cleaned. Use a Scotchbrite or similar pad or an eraser. Gently clean the contact area. DO NOT USE SANDPAPER OR STEEL WOOL OR A SHORT/FIRE MAY RESULT. Cleaned pins shown below (arrows)



BENT PINS

Before plugging together, inspect the original plug pins for any bent or pushed down pins that may not have good contact with the adapter. CAREFULLY adjust as needed.



CHECKING CONNECTIONS

Its always a good idea to make sure you have a good connection, bent or dirty pins can lead to frustration. A multimeter set to OPEN/CLOSED can be a fast way to double-check before you button things up.

LABELS ON BOARD

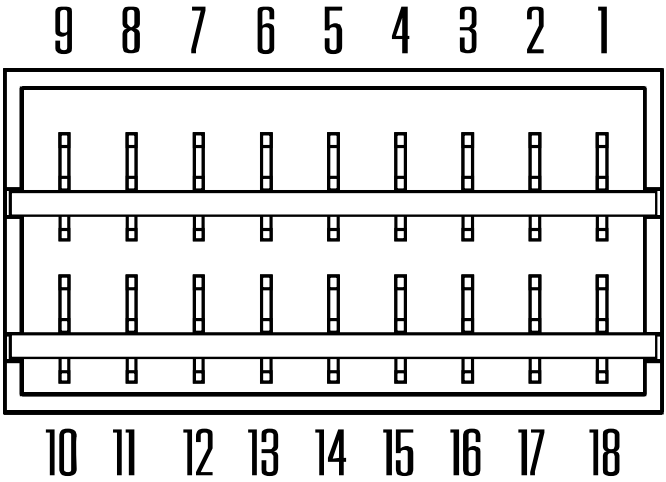
The boards have labels that match the pin layout on your drawings, use those as you install the wires onto the spade terminals.

VEHICLE MODELS AND USE

****

This plug was used by many OE vehicle manufacturers over a period of over a decade. The number of clusters and variations on builds vary greatly. The following diagrams are for your guidance only. Please verify each connection prior to final installation of your NVU gauges or damage will result. Follow the pin verification procedure on prior pages in the book to ensure an easy installation.

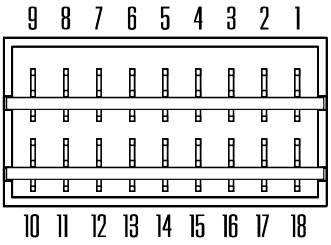
****



TERMINAL SIDE OF PLUG– NOTE: OE PLUG CAN ONLY BE PLUGGED IN ONE WAY- THERE ARE LOCATORS ON THE PLUG AND ADAPTER.

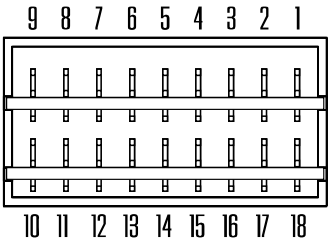
Below and next page are the available items on the stock cluster wiring. The above cluster is the only style supported by this diagram. Other options, pinouts and functions may be available based on your cluster, plug , PCM, model and year.
O= Optional: use this for warning lights and such
R= Required: the minimum items needed to get your gauges up and running
N/A= Available pin but not used on NVU gauges.

For ground trigger functions please see USING A RELAY in the previous section of this booklet.



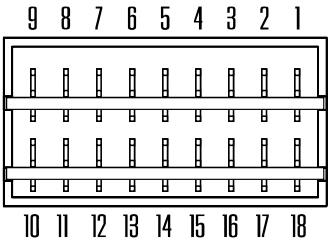
73-74 FORD TRUCK WITH GAUGES
18 PIN ONLY (14 PIN IS DIFFERENT)

73-74 FORD TRUCK WITH GAUGES			
NVU COLOR	**PIN**	**OE COLOR**	**FUNCTION**
TAN SPEEDO	1		HI BEAM 12V+ TRIGGER
	2	N/A	BLANK
GREY SPEEDO	3		RIGHT TURN LAMP 12V+
	4	N/A	BLANK
	5		TEMP NOT USED
	6	N/A	BLANK
BLACK SPEEDO, TACH	7		GROUND
	8	N/A	BLANK
WHITE SPEEDO, TACH	9		LIGHTS SEE NOTES ON LED BULBS
	10	N/A	BLANK
	11	N/A	BLANK
BLUE SPEEDO	12		LEFT TURN 12V+
	13		ACCY 12V+
	14	N/A	BLANK
GREEN SPEEDO	15		FUEL 73-10 Ω
RED SPEEDO, TACH	16		12V+ KEY ON
	17		BRAKE LAMP GROUND TRIGGER
	18		OIL NOT USED



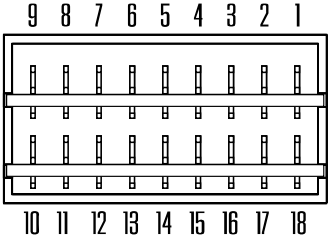
1975 ONLY FORD TRUCK WITH GAUGES
18 PIN ONLY (14 PIN IS DIFFERENT)

73-74 FORD TRUCK WITH GAUGES			
NVU COLOR	**PIN**	**OE COLOR**	**FUNCTION**
	1	N/A	BLANK
	2	N/A	BLANK
	3	N/A	BLANK
	4	N/A	BLANK
	5	N/A	BLANK
TAN SPEEDO	6		HI BEAM 12V+ TRIGGER
GREY SPEEDO	7		RIGHT TURN 12V+ TRIGGER
	8		TEMP NOT USED
BLACK SPEEDO, TACH	9		GROUND
WHITE SPEEDO, TACH	10		LIGHTING - SEE NOTES ON LED BULBS
	11	N/A	BLANK
	12	N/A	BLANK
BLUE SPEEDO	13		LEFT TURN LAMP 12V+ TRIGGER
	14		ACCY VOLTAGE 12V+
GREEN SPEEDO	15		FUEL SENDER 73-10 Ω
RED SPEEDO, TACH	16		12V+ KEY ON
	17		BRAKE GROUND TRIGGER
	18		OIL NOT USED



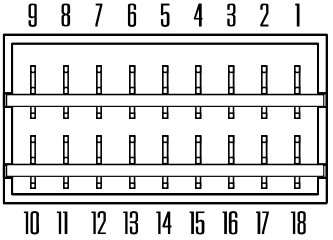
1976-79 FORD TRUCK WITH GAUGES
18 PIN ONLY (14 PIN IS DIFFERENT)

1976-79 FORD TRUCK WITH GAUGES			
NVU COLOR	**PIN**	**OE COLOR**	**FUNCTION**
RED SPEEDO, TACH	1		KEY ON 12V+
	2	N/A	BLANK
	3	N/A	BLANK
	4		BRAKE LAMP GROUND TRIGGER
	5	N/A	BLANK
TAN SPEEDO	6		HI BEAM LAMP 12V+
GREY SPEEDO	7		RIGHT TURN LAMP 12V+
	8		TEMP NOT USED
BLACK SPEEDO, TACH	9		GROUND
WHITE SPEEDO, TACH	10		LIGHTING - SEE NOTES ON LED BULBS
	11	N/A	BLANK
	12	N/A	BLANK
BLUE SPEEDO	13		LEFT TURN LAMP 12V+
	14		ACCY 12V+
GREEN SPEEDO	15		FUEL SENDER 73-10 Ω
	16	N/A	BLANK
	17		OIL NOT USED
	18	N/A	BLANK



1980 FORD TRUCK WITH GAUGES
18 PIN ONLY (14 PIN IS DIFFERENT)

1980 FORD TRUCK WITH GAUGES / TACHOMETER			
NVU COLOR	**PIN**	**OE COLOR**	**FUNCTION**
	1		ACCY 12V+
BLACK SPEEDO, TACH	2		GROUND
	3	N/A	BLANK
GREEN SPEEDO	4		FUEL 73-10 Ω
WHITE SPEEDO, TACH	5		LIGHTING - SEE NOTES ON LED BULBS
	6		TEMP SENDER
	7	N/A	BLANK
	8	N/A	BLANK
	9	N/A	BLANK
	10		OIL SENDER
VIOLET TACH	11		TACH SIGNAL FROM COIL (SET TO CYLINDERS) IF PERESENT-- MAY NOT BE ACTIVE
	12		TACH GROUND NOT USED
RED SPEEDO, TACH	13		12V+ KEY ON
BLACK SPEEDO, TACH	14		BRAKE GROUND TRIGGER
GREY SPEEDO	15		RIGHT TURN LAMP 12V+
TAN SPEEDO	16		HI BEAM 12V+
BLUE SPEEDO	17		LEFT TURN 12V+
	18	N/A	BLANK



1981-86 FORD TRUCK WITH GAUGES
18 PIN ONLY (14 PIN IS DIFFERENT)

1981-86 FORD TRUCK WITH GAUGES / TACHOMETER			
NVU COLOR	**PIN**	**OE COLOR**	**FUNCTION**
	1		ACCY 12V+
BLACK SPEEDO, TACH	2		GROUND
	3	N/A	BLANK
GREEN SPEEDO	4		FUEL 73-10 Ω
WHITE SPEEDO, TACH	5		LIGHTING - SEE NOTES ON LED BULBS
	6		TEMP SENDER
	7	N/A	BLANK
	8	N/A	BLANK
	9	N/A	BLANK
	10		OIL PRESSURE
VIOLET TACH	11		TACH SIGNAL FROM COIL (SET TO CYLINDERS) IF PERESENT-- MAY NOT BE ACTIVE
	12		TACH GROUND NOT USED
RED SPEEDO, TACH	13		12V+ KEY ON
	14		BRAKE GROUND TRIGGER
GREY SPEEDO	15		RIGHT TURN LAMP 12V+
TAN SPEEDO	16		HI BEAM LAMP 12V+
	17	N/A	BLANK
BLUE SPEEDO	18		LEFT TURN 12V+