It is important to note that these instructions are generalized for the Humvee (HMMWV). Each Humvee is slightly different and may require additional steps or actions. Please make sure you are comfortable and capable with the removal/replacement steps as listed below. Note that the more difficult steps are at the beginning of the installation process i.e. (disconnecting the harnesses) if this can be completed the remaining steps are relatively simple.

ATTENTION: The Speedhut Humvee gauges are designed for use with military series HMMWVs (these gauges are incompatible with the H-Series Hummers).

Installation Instructions
1. Disconnect negative (-) battery cable.

2. Remove the stock instrument panel.

3. Disconnect all of the stock gauges from the wiring harness. (To make installation easier, take note of the wires that each gauge is connected to)

4. Install the new Speedhut Humvee Gauges into the Speedhut replacement instrument panel. (If not previously completed)

5. Connect the Speedhut gauges to the vehicle wiring harness using the wiring diagram in **Figure 1**.

6. Install the replacement instrument panel.

7. Reconnect the negative (-) terminal on the battery.

GPS Speedometer Instructions

For best results, mount GPS antenna with as much view of the sky as possible (preferably on the roof of the vehicle.) The GPS antenna is waterproof and magnetic. If the vehicle's roof is not accessible then mount the antenna on top of the vehicle's dash with as much exposure as possible to the sky through the window. (Antenna will acquire signal through some thin materials i.e. wood, glass, fiberglass, and plastic. All types of metal will block signals.)

The Hot start feature is optional. Connecting the Hot start wire to constant +12-24 volts allows the GPS to quickly acquire a signal in less than 2 seconds. (Feature saves previous satellite position enabling speedometer to quickly restore GPS position on power up when the unit has been powered off 4 hours or less.)

The current draw is extremely low (25 micro-amp) and will have virtually zero impact on a car battery's charge. Hot start wire should be connected directly to battery +12-24 voltage and should remain powered 100% of the time.

See **Figure 2** for information on the GPS Speedometer menu

*If you need further assistance contact us at support@speedhut.com or 1-801-221-1460

SPEEDO

GREEN/BLUE (HB) ──────── 17 | 7-24V+
RED (+) ──────── 27H | 24V+ SWITCHED
BLACK (-) ──────── 58G | GROUND
WHITE (L) ────────
SMA ──────── GPS ANTENNA
GREEN/RED (R)
GREEN/BRWN (L)

TURN SIGNAL SWITCH
460B
461B

OIL PRESS

RED (+) ──────── 40C | 24V+ (LIGHTS ON)
BLACK (-) ────────
WHITE (L) ────────
YELLOW/RED (S) ──────── 36A | SIGNAL

TACH

RED (+) ────────
BLACK (-) ────────
WHITE (L) ────────
YELLOW/RED (S) ──────── PROVIDED SPEEDHUT HARNESS ──── WHITE | ALTERNATOR **AC** TERMINAL
YELLOW/BLK (GND) ──────── BLACK | GROUND

TEMP

RED (+) ──────── 27G | 24V+ SWITCHED
BLACK (-) ──────── 58E | GROUND
WHITE (L) ────────
YELLOW/RED (S) ──────── 33A | SIGNAL

40B | 24V+ (LIGHTS ON)

FUEL

RED (+) ──────── 27J | 24V+ SWITCHED
BLACK (-) ──────── 58H | GROUND
WHITE (L) ────────
YELLOW/RED (S) ──────── 28A | SIGNAL

VOLT

RED (+) ──────── 567A | 24V+ SWITCHED
BLACK (-) ──────── 58F | GROUND
WHITE (L) ────────
YELLOW/RED (S)

Figure 2

Speedometer LCD Menu

To cycle through menu, press button once for each menu item.

1. Odometer and Trip

```
000000 MI
000000 MI
```
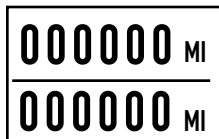
Odometer (shows up to 999,999 miles or kmh)
Trip Odometer (shows up to 999,999 miles or kmh)

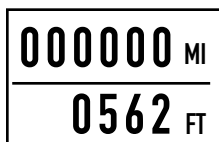- Press and hold button to reset trip.

2. Clock

```
000000 MI
2:36 PM
```

Time is acquired from GPS satellites. User only needs adjust the hour for their time zone.
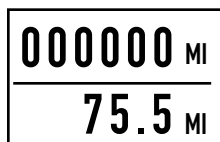
- Press and hold button to set clock. (colors will invert)
- Toggle through am/pm hours until correct time is reached.
- Release button for several seconds to save time. (colors will return)

3. Elevation

```
000000 MI
0562 FT
```

Elevation is acquired from GPS satellites and shows current elevation from sea level in feet/meters.

4. Speed (mph or kmh)

```
000000 MI
75.5 MI
```

Shows current speed in mph or kmh.

5. Direction

```
000000 MI
N    DIR
```
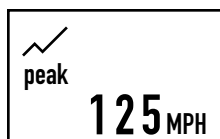
Shows current direction.

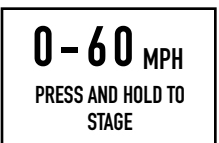Note: Default direction is North (N). Correct direction will display only when moving.

6. Peak

```
peak
125 MPH
```

Shows top speed reached.

- Press and hold button to clear peak.

7. 0-60 mph/0-100 kmh time

```
0-60 MPH
PRESS AND HOLD TO
STAGE
```

- Press and hold button to stage while car is stopped.
- Timer will start as soon as car starts to move.
- Accelerate to 60+mph/100+kmh.
- Timer will stop once 60mph/100kmh is reached to display the time to the nearest 1/100th of a second and distance traveled.

8. 1/4 mile time

```
1/4 MILE
PRESS AND HOLD TO
STAGE
```

- Press and hold button to stage while car is stopped.
- Timer will start as soon as car starts to move.
- Drive through 1/4 mile.
- Timer will stop once 1/4 mile distance is reached to display the time to the nearest 1/100th of a second and speed to the nearest 1/10th of mph.

3-3/8in Htz Tachometer instructions

Note:Your diesel tachometer will read any signal > 0.6 volts in any wave form pattern generated from a tach signal source. The typical options for a tach signal source are the Alternator (from the terminal labeled "A/C" or "R" or "W"), Crank sensor signal, or Magnetic pulse sensor. ***Humvees typically will have an A/C terminal on the alternator.***

<u>Calibration procedure</u>

1. Verify that your tachometer is connected to the signal source outputting the tachometer signal.   (Engine is running)

2. While holding button turn tachometer power on. Start engine. Pointer (needle) will move and point to 1K then release button.

3. Press and hold the button to move pointer (needle) to select the RPM that the engine is currently running at. Note: To change the pointer movement direction release the button then press and hold again

4. Release button and wait until tachometer swings to 0 and then back to new calibrated RPM.

5. Your tachometer is now calibrated. Calibration is *permanently* stored in tachometer memory and will not erase if tachometer is disconnected from power.

6. If needed you can repeat the procedure to recalibrate tachometer.