

PicoDiagnostics™ NVH Kit Quick Start Guide



1. Introduction

Thank you for buying a PicoDiagnostics NVH Kit. This Quick Start Guide will help you set up your NVH Interface and automotive oscilloscope. In conjunction with this guide, please also see the NVH section of the *PicoDiagnostics User's Guide* (installed with the software).

2. Safety warnings



WARNING

Please review the following safety precautions to avoid injury and prevent damage to both the NVH Interface and surrounding devices.

DO ensure that only Pico Technology approved sensors are used with this unit.

DO ensure that any scan tool connected to the vehicle is safe to use. An unsuitable scan tool could interfere with the vehicle's electronics or damage the ECU.

DO NOT apply a voltage to the BNC or sensor connectors on the NVH Interface. The BNC connector is an output only.

DO NOT use any of this equipment in explosive atmospheres.

DO NOT operate the NVH Kit while driving the vehicle. Take a passenger with you to operate the software.



WARNING

The mounting magnet has a strong magnetic field. **KEEP AWAY** from it if you use a pacemaker or an insulin pump.

KEEP magnetic media (such as credit cards), analog watches, televisions, computer monitors, sensitive electronic equipment, and mobile storage devices away from the magnet to avoid permanent damage.

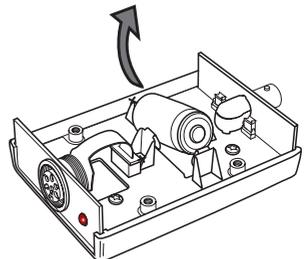
The magnet can attract metallic objects or other magnets from large distances, causing trapping injuries. **TAKE CARE** to prevent this hazard.

DO NOT give the magnet to small children.

3. Battery replacement

To remove the battery:

1. Place the NVH Interface face down and remove the four securing screws.
2. Remove the base cover from the NVH Interface.
3. Lift the battery away from the connections.
4. Place new battery in position, replace the base cover and secure.



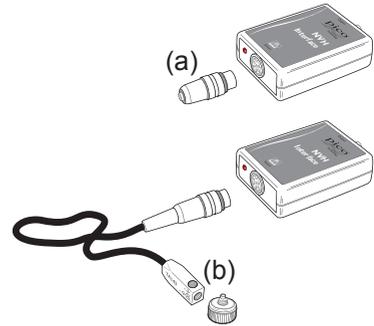
4. Connections

1. Connect the oscilloscope to your computer using the blue USB cable supplied with the oscilloscope.
2. Connect the NVH Interface box to Channel B on the PicoScope.



Important: You must connect the NVH Interface to **Channel B** on the PicoScope. Channel A is reserved for other uses.

3. Connect either the microphone (a) or accelerometer (b) to the NVH Interface.
4. Run the PicoDiagnostics software.
5. Click the **NVH** button.



5. Magnet mounting instructions

DO ensure that a correctly prepared mounting surface is available. This is critical for obtaining reliable measurements.

1. Verify the mounting surface is clean, flat and smooth.
2. Slide the keeper off the mounting magnet.
3. Mount the magnet/sensor assembly to the prepared test surface by gently rolling it into place. This will avoid damaging the surface.

DO ensure that when in storage and in transit that the keeper is fitted to the magnet, to protect the magnet itself and nearby objects.

DO mount the accelerometer carefully to avoid potential very high (and damaging) *g* levels.

6. Troubleshooting

Problem	Check	Action	
NVH Interface not working	Is LED flashing?	Yes	Check BNC lead
		No	Connect/change sensor
	Replace battery		

7. Specifications

Weight:	NVH Interface Vibration sensor Microphone	120 g 80 g 20 g
Dimensions:	NVH Interface (including BNCs) Microphone Magnet (including grub screw)	105 mm x 65 mm x 27 mm 43 mm x ø17 mm 12 mm x ø18 mm
Sensor extension lead length		3 m
Battery type		CR123(A) 3 V lithium primary cell, user-replaceable
Battery life:	Shelf life Vibration mode Microphone mode	10 years 6 months 2 months
Maximum measurable acceleration		5 g
Output BNC		0 to 2 V, DC-coupled
Vibration frequency range (-3 dB)		DC to 350 Hz
BNC overvoltage protection		30 V
Accelerometer head shock survivability		10 000 g
Accelerometer head operating temperature range		-40 °C to +85 °C
Accelerometer thread mounting		¼" x 28 UNF
Microphone sensitivity		45 mV/Pa, nominal, at 1 kHz
EMC approvals		CE: Meets EN61326-1:2006

8. Pack contents

Part Number	Description
TA148	NVH Interface
TA143	Accelerometer
TA144	Microphone
TA145	Sensor extension cable (3 m)
TA096	Mounting magnet
TA098	BNC to BNC cable (5 m)

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