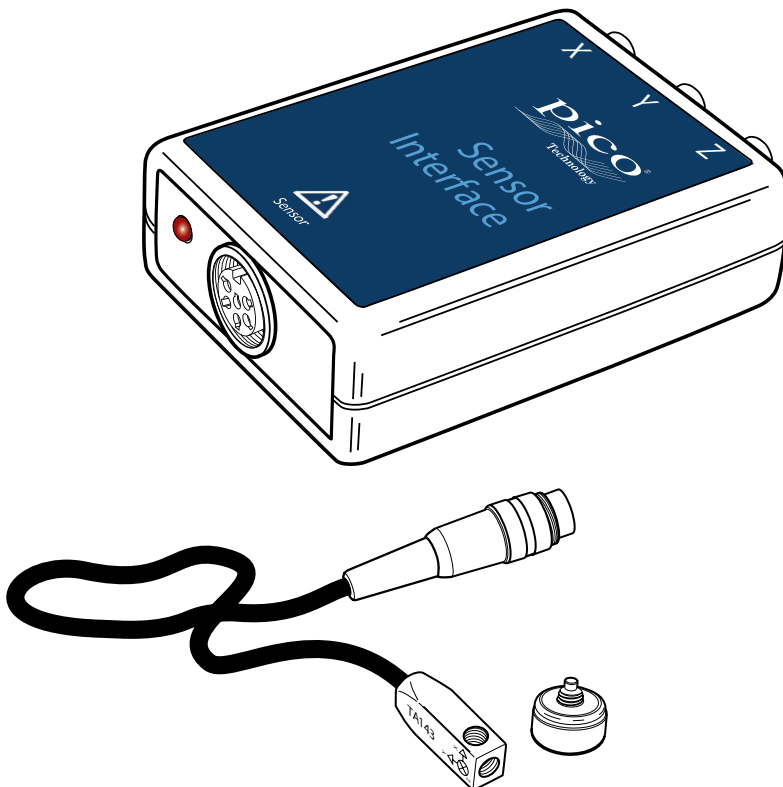


# Three Axis Accelerometer Kit

## Quick Start Guide



# 1. Introduction

Thank you for buying a Three Axis Accelerometer Kit from Pico Technology, designed for real-time NVH (noise, vibration and harshness) diagnosis. This Quick Start Guide will help you set up your interface and oscilloscope. In conjunction with this guide, please also see the PicoScope help manual installed with the software.

## 2. Safety warnings



WARNING

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

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

**DO NOT** apply a voltage to the BNC or sensor connectors. The BNC connector is designed to output signals only.

**DO NOT** use any of this equipment in explosive atmospheres.



WARNING

The mounting magnet described in this guide has a strong magnetic field. Users of pacemakers and insulin pumps must avoid using this item.

Magnetic media (such as credit cards), analogue watches, televisions, computer monitors, sensitive electronic equipment, and mobile storage devices, should all be kept away from this magnet to avoid permanent damage. This magnet can attract magnetic materials or other magnets from large distances, causing trapping injuries. Care must always be taken to prevent this hazard.

**DO NOT** give this magnet to small children.

## 3. Pack contents

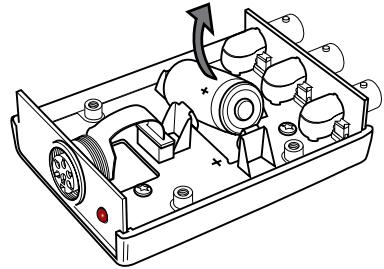
Please check your Three-Axis Accelerometer Kit has the following contents:

- Accelerometer sensor
- 3-Axis sensor interface
- 3 BNC cables
- Quick start guide
- Mounting magnet (see warning above)

## 4. Battery replacement

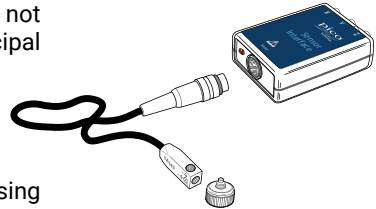
The red LED flashes while the sensor is connected to show the interface is powered. If the sensor is connected and the LED is not flashing, you need to replace the battery.

1. Place the interface face down and remove the four securing screws.
2. Remove the base cover
3. Lift the battery away from the connections
4. Place new battery in position, matching the polarity markings on the unit.
5. Replace the base cover and secure.
6. To help protect the environment, please do not dispose of used batteries as unsorted municipal waste.



## 5. Connections

- Connect your PicoScope to your computer using the blue USB cable supplied.
- Connect the interface box to the PicoScope by means of the BNC cables.
- Open PicoScope.
- Connect the accelerometer to the three axis interface.
- When you have finished making measurements, disconnect the sensor from the interface box. This powers down the interface and saves battery life.



## 6. Magnet mounting instructions

**DO** ensure 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 the keeper is fitted to the magnet, to protect the magnet itself and nearby objects.

**DO NOT** mount the accelerometer carelessly as this has the potential to generate very high (and damaging) *g* levels.

## 7. Troubleshooting

Problem	Check		Action
Interface not working	Is LED Flashing?	Yes	Check BNC lead
		No	Connect or change sensor
			Replace battery

## 8. Specifications

Weight (Interface/Vibration Sensor)	120 g / 80 g
Dimensions Sensor Interface (inc. BNCs) Magnet (inc. fitted grub screw)	105 mm x 65 mm x 27 mm 12 mm x ø18 mm
Battery (Lithium Primary Cell)	CR123(A) 3 V
Battery life (Shelf/Vibration mode)	10 years / 6 months
Maximum measurable acceleration	±5 g
Output BNC	0-2 V DC coupled
Vibration frequency (3 dB)	DC to 350 Hz
BNC overvoltage protection	30 V
Shock survivability (sensor head)	10,000 g
Temperature range (operating) Sensor head	-40 °C to 85 °C
Thread mounting (sensor)	1/4" x 28 UNF
Output scaling	99 to 122 mV/g
0g output (all axes)	0.85 to 1.15 V

Part number	Description	Part number	Description
PP877	Three Axis Accelerometer Kit	TA096	Mounting magnet
TA149	Three axis interface	TA130	BNC to BNC Cable (5 m)
TA143	Accelerometer		

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