BNC

Ignition pickup

Ground clip

MI074
Secondary Ignition Pickup

Due to the high voltages in secondary ignition systems, it is not possible to make measurements by connecting directly to them. Attempting to do so will almost certainly damage the measuring instrument.

The MI074 is a capacitive pickup that connects around the insulation of an ignition circuit component such as a plug wire. This avoids the need for direct connection.

Although ideal for use with the Pico ADC-212 and PicoScope 3000 and 4000 Series Automotive ranges, the MI074 pickup can also be used with oscilloscopes of most other makes provided they have a waveform invert option.

MI074
Secondary Ignition Pickup

How to use the MI074

Safety precautions before use

- Keep the lead away from pulleys and other moving parts
- Keep the lead away from heat
- Never let the ignition pickup, ground clip or BNC come in direct connection with primary or secondary voltage (otherwise the Pico oscilloscope may be damaged)
- Always use the ground clip
- Do not let the metal portion of the pickup contact a ground

Connecting the MI074

- Connect the MI074 to the ADC-212 or PicoScope 3000 or 4000 Series Automotive oscilloscope before connecting to the vehicle. The BNC connector on the MI074 can be plugged into any channel (A to B or A to D depending on the scope model).
- Connect the ground clip to a good ground (earth) on the vehicle.
- Connect the pickup to the vehicle:
  For standard ignition, clip the pickup around the coil wire (or one plug wire at a time);
  For an integrated coil, clip the pickup around the central location on the distributor cap;
  For DIS, clip the pickup around one plug wire at a time.
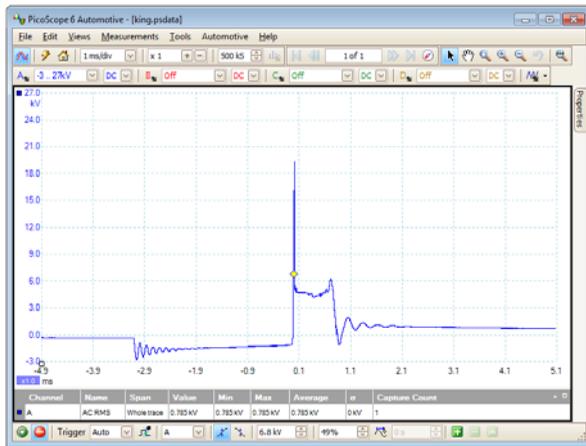
MI074
Secondary Ignition Pickup

Using the MI074 with PicoScope

With the MI074 connected as described above, start the PicoScope software.

Click the **Channel Options** button (to), then click the **Probe** box, and select **Secondary Ignition Pickup (Inverted).** Next adjust the timebase, voltage range and trigger until your waveform looks similar to the one below.

Using the MI074 with other scopes

The MI074 is compatible with most oscilloscopes that have standard high-impedance BNC inputs.

Scaling: If the scope has a scaling option, set it to 1:10,000, or 1 volt to 10,000 volts.

Polarity: If using the probe with a negative-fired plug then, if possible, set the scope input polarity to "Invert".

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Revision History
1)   8.10.2002   Text only.
2)   26.1.2007   Added photo & PicoScope 5 illustrations.
3)   28.4.2008   WEEE & CE logos.
4)   3.8.2010   PicoScope 6. Scaling data.

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