

# TEK-DPG Deskew Pulse Generator Instructions

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## Overview

The TEK-DPG Deskew Pulse Generator is a signal-generating accessory for Tektronix instruments that feature the TekVPI interface, including DPO3000 Series and DPO/MSO4000 Series oscilloscopes.



The TEK-DPG generator provides a source signal to the Power Measurement Deskew Fixture (Tektronix part number 067-1686-XX), used to deskew Tektronix probes.

The TEK-DPG generator is not required for, and is not supported by DPO7000 Series oscilloscopes. These models provide the appropriate source signal at the Probe Calibration output on the front-panel BNC connector.

The generator and deskew fixture allow you to precisely deskew the time differences between instrument channels of current and voltage probes (necessary when you are using the probes in power measurement applications).

## Controls and Indicators

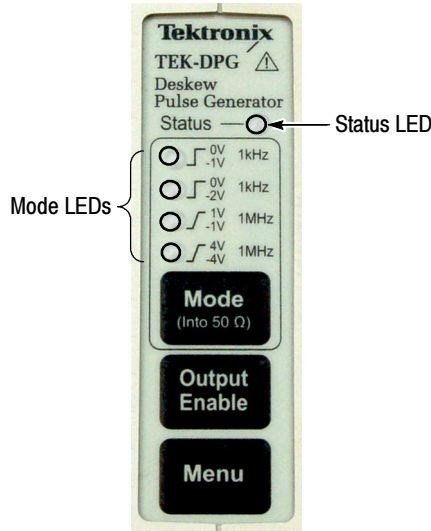
The generator functions are described below.

### Status LED

The Status LED glows amber at power-on to indicate that the generator is on and the output at the BNC cable is not enabled.

The Status LED glows green after the Output Enable button is pressed once. Press the button again to disable the output. (The LED glows amber.)

The Status LED glows red to indicate an error condition. If the Status LED glows red, disconnect and reconnect the generator to clear the fault that might have occurred.



### Mode Button and LEDs

Press the **Mode** button to cycle through the following output signals:

- Mode 1: 1 Vpk-pk @ 1 kHz
- Mode 2: 2 Vpk-pk @ 1 kHz
- Mode 3: 2 Vpk-pk @ 1 MHz
- Mode 4: 8 Vpk-pk @ 1 MHz

A green LED lights next to the selected mode.

### Output Enable Button

Press the **Output Enable** button to pass the generator signal out through the BNC cable, and to enable the trigger signal on the oscilloscope channel that the generator is plugged into.

The **Status LED** glows green to indicate that the output at the BNC cable is enabled.

### Menu Button

Press the **Menu** button to display the generator function selections on the oscilloscope screen.

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**NOTE.** Not all oscilloscope models support the menu button.

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## Equipment Required to Deskew Probes

The following equipment is required to deskew your probes:

- Oscilloscope with the TekVPI interface
- TEK-DPG Deskew Pulse Generator
- Tektronix Power Measurement Deskew Fixture, part number 067-1686-XX, with instructions
- Tektronix voltage or current probes to deskew

## Deskew the Probes

Refer to the table and illustration on the back page as you perform the following steps:

### Connect the Generator

1. Plug the generator into any channel (1-4) of the oscilloscope.
2. Connect the BNC cable from the generator to either the Port A or Port B input of the deskew fixture.

The input that you use depends on the type of probes you have and the operation that you want to perform. (Refer to the table on the back of the page and on the deskew fixture instructions.)

### Select the Signal

3. If you want to control the generator functions from the oscilloscope screen, press the **Menu** button on the generator.

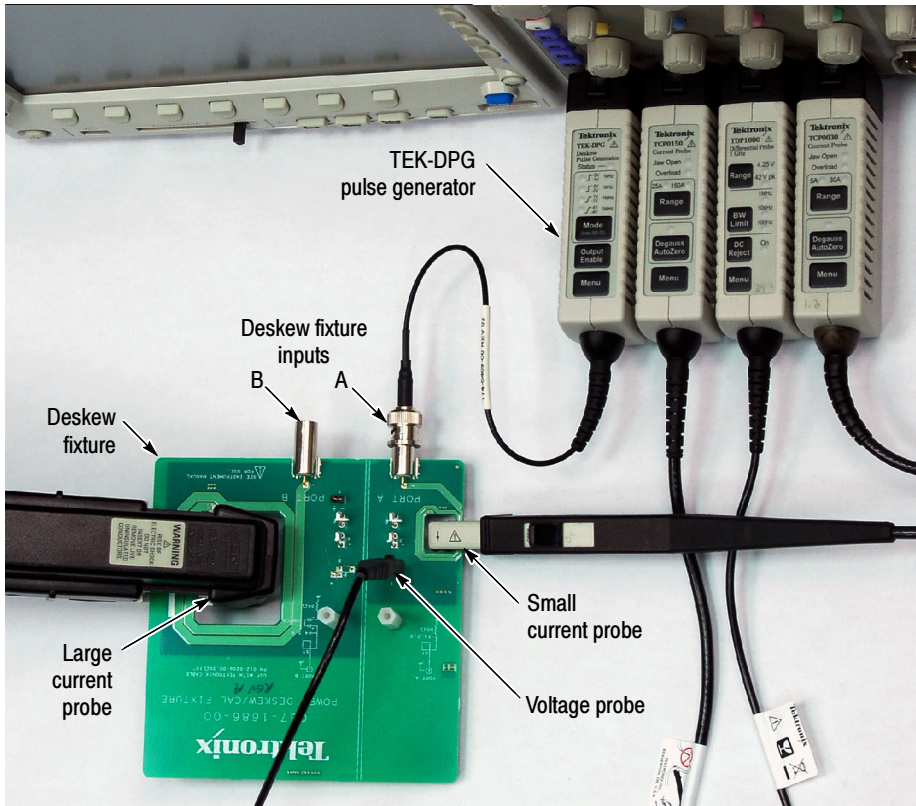
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**NOTE.** Not all oscilloscope models support the menu button.

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You can perform steps 4 and 5 from the oscilloscope screen or the generator buttons.

4. Press the **Mode** button to select the output signal that is required for your probe and oscilloscope combination.
5. Press the **Enable** button to apply the generator signal to the deskew fixture.
6. Refer to the deskew fixture instructions to complete the procedure.



## Safety Summary

To avoid potential hazards, use this product only as specified.

To avoid fire or personal injury, do not operate in wet/damp conditions.

Keep product surfaces clean and dry.

## Safety terms in this manual

**WARNING.** These statements identify conditions or practices that could result in personal injury or loss of life.

## Warranty Information

For warranty information, go to [www.tektronix.com/service](http://www.tektronix.com/service), and then use the provided links to search for your product's warranty.

## Contacting Tektronix

Tektronix, Inc.  
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PO Box 500  
Beaverton, OR 97077  
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit [www.tektronix.com](http://www.tektronix.com) to find contacts in your area.

Probe <sup>1</sup> (range)	Operation	Oscilloscope and Output mode	Use input connector
Passive voltage probes, including: P6139A P5050 & other 10X passive probes	Compensate timing with respect to current probes	DPO3000: Mode 2 DPO/MSO4000: Mode 1	A or B, depending on current probe type
Active voltage probes, including: TAP1500 (10X) TAP2500 (10X) TAP3500 (10X) TDP0500 (5X, 50X) TDP1000 (5X, 50X) TDP1500 (1X, 10X) P6243 (10X) P6245 (10X) P6246 (1X, 10X) P6247 (1X, 10X) P6248 (1X, 10X) P6250 (5X, 50X) P6251 (5X, 50X)	Compensate timing with respect to current probes	DPO3000: Mode 2 DPO/MSO4000: Mode 1	A or B, depending on current probe type
High voltage probes, including: P5200 (50X, 500X) P5205 (50X, 500X) P5210 (100X, 1000X) P6135A (Adj. to 10X)	Compensate timing with respect to current probes	DPO3000: Mode 2/4 DPO/MSO4000: Mode 1/4	A or B, depending on current probe type
Small current probes <sup>2</sup> , including: TCP0030 (5A, 30A) TCP202 (15A) TCP312 (5A, 30A) TCP305 (25A, 50A) A6302 (20A) A6312 (20A)	Compensate timing with respect to voltage probes	DPO3000: Mode 2/4 DPO/MSO4000: Mode 1/4	A
Large current probes <sup>2</sup> , including: TCP0150 (25A, 150A) TCP303 (25A, 150A) A6303 (100A)	Compensate timing with respect to voltage probes	DPO3000: Mode 4 DPO/MSO4000: Mode 4	B

<sup>1</sup> Not all probes are usable with all instruments, and some voltage probes may require a TPA-BNC Adapter.

<sup>2</sup> Some current probes require an amplifier to operate and/or may need an adapter to connect to instruments that feature the TekVPI interface.