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TG7P1A Quick Start Guide

Welcome to the Quick Start Guide for the Centellax TG7P1A 4-Tap De-Emphasis Pattern Generator Remote Head. This guide will help you identify the contents of the shipping package, perform a quick functional check of the product, and guide you on where to find more information and support for the TG7P1A.

The TG7P1A is shipped in a protective box with all the accessories required for operation. The shipping box contains:

- TG7P1A Remote Pattern Generator Head



- Accessory kit, which includes the following for each TG7P1A:
 - (Qty 2) SMA Cables
 - (Qty 1) 50Ω 18 GHz 1 W SMA Male Termination
- TG7P1A Quick Start Guide (this document)

The TG7P1A is designed to be used with the PCB12500 Parallel Channel BERT. This head requires PCB12500 FW Version 1.9 or later. If required the FW upgrade utility can be downloaded from www.centellax.com/products/testmeas/PCB12500_drivers. For more information on the operation and features of the TG7P1A please refer to the PCB12500 Users Guide on the product webpage at <http://www.centellax.com/products/testmeas/PCB12500>.

Technical support information: support@centellax.com

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TG7P1A Quick Start Guide

Unpacking

Carefully remove the TG7P1A from the case in an ESD-safe environment.

Important Notes

- Use ESD protection at all times when using the instrument
- Install the TG7P1A on a flat surface away from heat sources
- Use an 8 lbf-in (90 N-cm) torque wrench when attacking connectors
- The TG7P1A head is differential but can be operated single-ended if the unused output is terminated.

Operational Check Procedure

The following procedure will demonstrate the operation and functionality of the TG7P1A pattern generator head.

1. Plug the AC power cord into the PCB12500 real panel power socket.
2. Plug the other end of the AC power cord into a suitable wall socket (100-240 VAC, 50/60 Hz).
(Note: The power should be turned off until after the TG7P1A has been attached to the PCB12500.)
3. Connect the PCB12500 to a clock source and high speed sampling scope as shown in Figure 1.

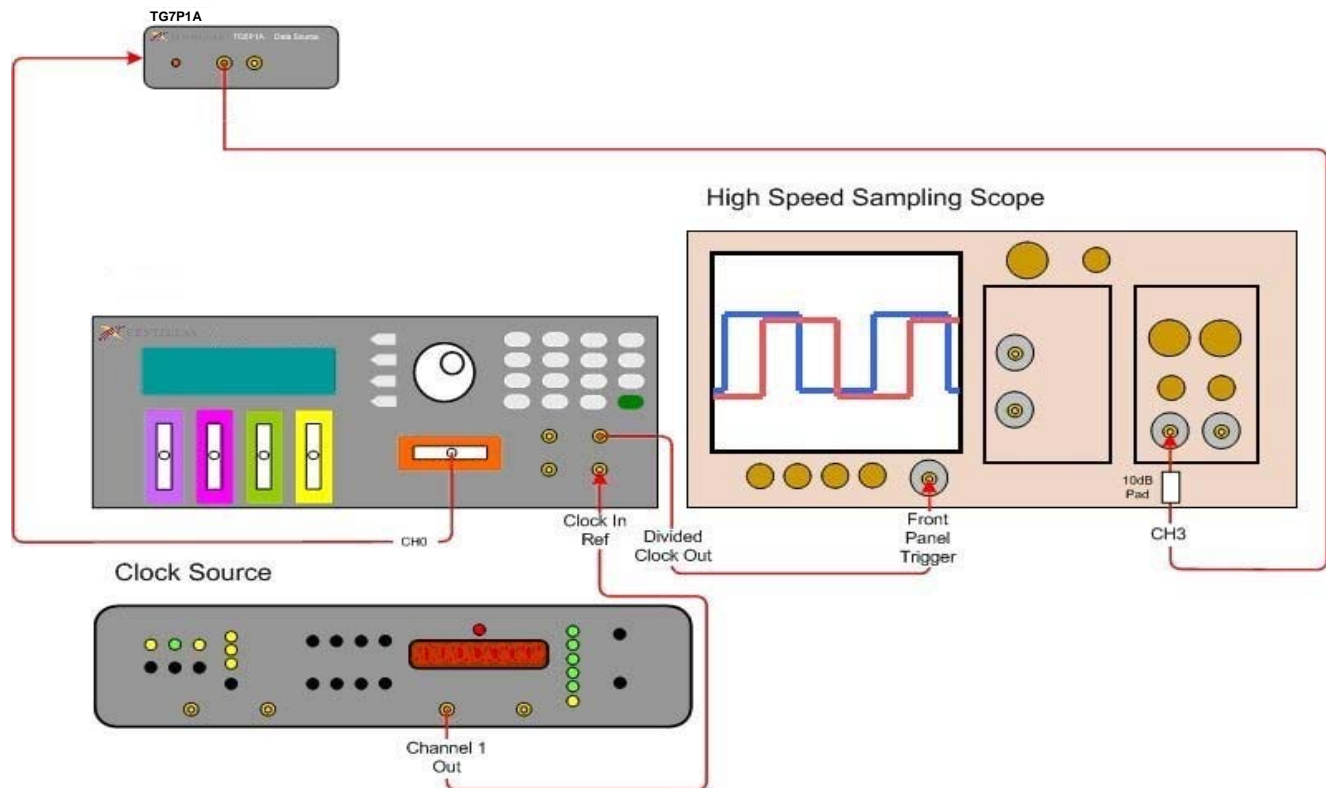


Figure 1. Installation Setup

4. Connect the TG7P1A to the reference channel (Ch. 0). You may now apply power to the PCB12500.
5. Set up the clock source as follows: Frequency 10 GHz, Output Level 0 dBm.

TG7P1A Quick Start Guide

6. Set up the high speed sampling scope as follows: (Note: Agilent 86100C Infiniium DCA used in this example, other high speed scope setup option names may differ.)

Eye/Mask Mode	
Trigger Level	0 V
Timebase Scale	50 ps/div
Channel 3 Setup	
Attenuation	10 dB
Scale	200 mV/div
Offset	0 V

7. On the keypad, press the number **0** to view the STAT (Status) menu settings for channel 0:

Pat Out:	OFF	ErInj:	OFF
Pat:	2^7-1	ErInjRate:	10 ⁻³
DatAmp:	+1.000 V	PatInv:	OFF
DatOfs:	+0.000 V	Dly Sweep:	OFF
DatTrm:	+0.000 V	Dly:	+00000.000
Post1:	+0.00 dB	Clk Output:	OFF
Post2:	+0.00 dB	ClkAmp:	900 mV
Pre:	0.00 dB	ClkOfs:	+0.000 V
Dat Xover:	050%	ClkTrm:	+0.000 V

8. Position the arrow next to the **Pat Out** label on the PCB12500 Controller then press the softkey corresponding to the **EDIT** label.
9. Select **On** then press the softkey corresponding to the **EXIT** label to accept the change. This will turn on the data output. The channel ID LED of the TG7P1A should come on.
10. Position the arrow next to the **Clk Output** label on the PCB12500 Controller then press the softkey corresponding to the **EDIT** label.
11. Select **On** then press the softkey corresponding to the **EXIT** label to accept the change. This will turn on the clock output.
12. Verify that the waveform is similar to the one shown in Figure 2.

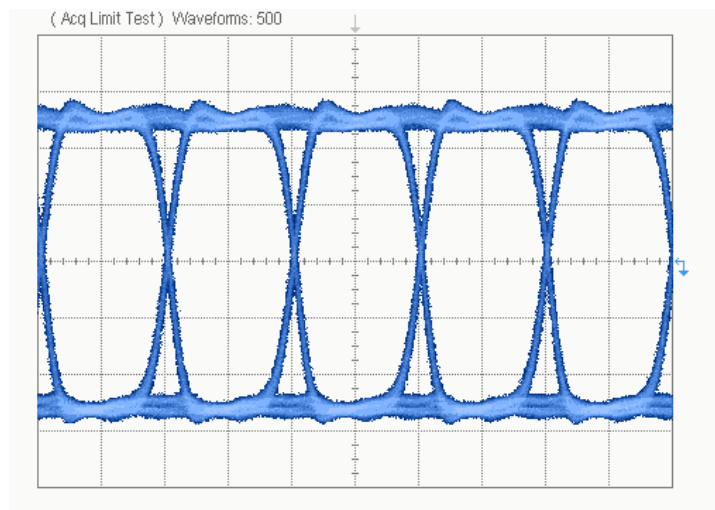


Figure 2. Installation Setup Waveform