## N4903A-06 <u>S E R V I C E N O T E</u>

Supersedes: NONE

N4903A-C07 - 150 Mb/s-7 Gb/s Pattern Generator and Error Detector. Includes built-in CDR.

Serial Numbers:

DE45A00127, DE45A00131, DE45A00144, DE45A00155, DE45A00164, DE45A00175, DE45A00211, DE45A00213, DE45A00216, DE45A00239, DE45A00240, DE45A00242, DE45A00243, DE46B00308, DE46B00314, DE46B00347, DE46B00348, DE46B00354, DE46B00357, DE46B00363, DE46B00373, DE46B00377, DE46B00388, DE46B00393, DE46B00427, DE46B00428, DE46B00450, DE46B00451, DE46B00456, DE46B00475, DE46B00514, DE46B00516, DE46B00534, DE46B00536, DE46B00537, DE46B00539, DE46B00550, DE46B00573, DE46B00580, DE46B00583, DE46B00584, DE46B00588

Due to a configuration problem the "External PLL" clock mode selection may be hidden in the product GUI.

Parts Required: P/N Description

Qty.

NONE

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:					
	MODIFICATION RECOMMENDED				
ACTION CATEGORY:	XX ON SPECIFIED FAILURE [[]] AGREEABLE TIME	STANDARDS LABOR: 0.5 Ho	urs		
LOCATION CATEGORY:	[[]] CUSTOMER INSTALLABLE XX ON-SITE XX SERVICE CENTER [[]] CHANNEL PARTNER	SERVICE [[]] RETURN INVENTORY: [[]] SCRAP [[]] SEE TEXT	USED PARTS:	[[]] RETURN [[]] SCRAP [[]] SEE TEXT	
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	NO CHARGE AVAILABLE UNTIL: 31-	Dec-2016		
[[]] Calibration Required XX Calibration NOT Required		PRODUCT LINE: PL24 AUTHOR: HK			
ADDITIONAL INFORMATION:					

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## Situation:

Due to a configuration problem the N4903A with Option C07 (Data rate: 150 Mb/s to 7 Gb/s) may offer only 3 instead of 4 Pattern Generator (PG) clocking modes. The "External PLL" mode may be missing.

This can be easily checked by starting the BERT and going to the "PG – Bit Rate Setup" page in the GUI:

42	👫 GUI Agilent N4903A connected to Firmware localhost								
F	ile Edit	Pattern	PG Se	tup ED-Setup Res	ults Analys	is Jitter Utility Help			
	В	ER: 0.00	00		Errc	r SYNC DATA ED CLK	PG CLK LOSS RMT	Error Add Insert B	
-1	1 -10 -	9 -8 -7		t Data Sati	-1 07				
	Par	ttern			ib.				
	PG :	Setup		lock Source	Internal				
			Ĩ					_	
	5	UL.	s	ub Rate Clock [	<sup>i</sup> Inte	rnal			
I	PG Outp	out Setup		Clock Bate					
				Value and Unit	EXte	ernal			
				value anu Onit	Exte	ernal P			
	Bit Rat	e Setup		Preset					
		JII I		622.0800	101	<u>/IHZ Ret.</u>		Add Preset	
				1.06250	Gb/s	FC1063			
	Triggei	r Output		1.25	Gb/s	Gb Ethernet		Delete Preset	
	1	<u>T</u>		2.48832	Gb/s	OC-48/STM-16	ì		
		<u> </u>		3.125	Gb/s	10GbE(XAUI)	-		
I	Error A	aa Settin		-	1				
	ED :	Setup		Spread Spectrum	Clock				
I	Ana	alysis		🗖 Enable – D	eviation:	0.500 %	Frequency	7 30.0000 kHz	
	Ji	itter		Encore E		0.000 /0		. 50.0000 Ki 12	
	Re	sults	St	atus Messages			More	Elapsed UU:00:00	
ŕ	DO Dum, 223 4 DDDO ED Dum, 223 4 DDDO PG (Ik Rate: 2 20000 GHz ED (Ik Rate: 2 20000 GHz								
	PG Ptm	1: 2 <sup>20</sup> -1 PI	RBS	ED Ptm: 223.	TPRBS	PG CK Nate: 5.20	0000 GHZ	LD Cik Nate, 5,20000 Gr	12

All 4 clock source mode must be visible: Internal, External, External PLL and 10 MHz Ref.

If "External PLL" is missing the unit is impacted by the configuration problem and must be fixed. The user is missing a valuable piece of functionality.

Use the tool and process described in the next chapter to correct the problem.

## **Solution/Action:**

The BERT Downgrade tool is able to correct the problem.

It is available here:

\\wbbnps03\ftp\_support\PL24-Support\BERT\_Serial\N4903B\Software\Tools\ DowngradeSerialNumToolSetup\_v5.06.zip

Please use the following steps:

- 1. You need to install the tool on a desktop or laptop PC (WinXP SP3 or Win7 SP1 64bit system) that has a network connection or a GPIB interface card.
- 2. You need to connect the BERT either to the LAN or use a GPIB connection
  - a. When using the LAN you have to find out the IP address of the unit. Start a DOS command prompt window (Start  $\rightarrow$  Run  $\rightarrow$  cmd) and use the command "ipconfig" to get the IP address of the BERT



In addition you must switch off the Windows firewall (or create an exception rule) because the tool will require a socket connection using port 5025.

b. When using a GPIB connection you can change the address here:

😵 GUI Agilent N4903A connected to Firmware localhost					
File Edit Pattern I	PG Setup ED Setup Results Analysis Jitter Utility Help				
BER: 0.00	C Error SYNC Set Date and Time Or Add Insert B				
11 -10 -9 -8 -7	Bit Rate Setup Minimize GUI Output Window				
PG Setup	Clock Source: Internal Touchscreen Off				
m	Sub Rate Clock Divider: Sub Factors				
PG Output Setup	Licenses				
<u>s</u>	Value and Unit 3.200000 Gb/s				
Bit Rate Setup	Preset				
Trigger Output	622.0800 Mb/s OC-12 / STM-4 ▲ 1.06250 Gb/s FC1063 ■ Add Preset				
Error Add Setur,	2.48832 Gb/s OC-48 / STM-16 3.125 Gb/s 10GbE(XAUI)				
ED Setup	Spread Spectrum Clock				
Analysis 1itter	Enable Deviation: 0.500 % Frequency: 30.0000 kHz				
Results	Status Messages More Elapsed 00:00:00				
PG Ptm: 2 <sup>23</sup> .1 PRBS ED Ptm: 2 <sup>23</sup> .1 PRBS PG Clk Rate: 3.20000 GHz ED Clk Rate: 3.20000 GHz					

- 3. "Preset Instrument State" button on the front panel to reset unit to factory default settings.
- 4. Then start the tool via the windows start menu:



5. Press the "Connect" button and enter either the IP address or the GPIB address of the BERT.

AgilentBERTDowng	radeSerialNumTool v5.06 (24-May-12)	_ 🗆 X
Step 1: Connect To In To set a correct produ Press the "Connect" B over TCP/IP connectic popup window.	strument t: configuration including serialnumber. utton to connect to a BERT or SPDG on or GPIB. Follow the steps on the <u>Connect</u>	Connection Status Disconnected Device: not connected yet Serial Number:
Step 2: Select Task?		
C Change Serial Nu	mber? Enter New Serial	Number:
C Perform Downgrad	i=7	
C	onnect to device	×
Step 3: If Downgrad	Please Select: 💿 use LAN (TCP/IP)	
Step 4: Apply Chan	C use GPIB Connect your device to the network, set up and deactivate the windows fireval. After the select the iP Address of the Device to confi be something like 134.40.61.70 or locahost [156.140.239.166 OK Apply	an IP address tat enter or gure. This can w Log

6. The tool will show the following window in case the inconsistency in the internal data tables is detected:

AgilentBERTDowngradeSerialNumTool v5.06 (24-May-12)	
Step 1: Connect To Instrument To set a correct product configuration including serialnumber. Press the "Connect" Button to connect to a BERT or SPDG over TCP/IP connection or GPIB. Follow the steps on the popup window. Connect	Connection Status Connected Device: N4903B Series not available
Step 2: Select Task?       PG_ExternalClockPLLHode         C       Change Setial Ni         ATTENTION!!       The tool found an inconsistenty in the table of the BERT that must be fixed.         Step 3: if Downgrade       Press "Fix" to proceed with fixing the or press "Abort"	calibration inconsistency
Fix	Abot Inder the path Iog file, check
Step 4: Apply Changes (Ether Senai Number Change or Downgrade)	
Loguiew: AgilentBERTDowngradeSerialNumTool v5.06 (2 Current product and configuration: Product Number: N4903B Serial Number: Firmware Revision: REV 7.20	24-May-12)

7. Press "Fix" in the window above. The tool then will show the following window.



Check the checkbox next to your BERT type and press "Apply" to start the correction process.

The tool will show the following window as "last exit". Please confirm with "OK".



8. The following window confirms that everything is ok.



9. Now re-enable the Windows firewall and reboot the BERT and check whether you get all 4 selection in the following window:

