

N5171B-02B

Information Only Service Note

Supersedes:
N5171B-02A

N5171B X-Series EXG Analog Signal Generator

Serial Numbers: ALL

The Problem – Installing a new A3 RF Assembly during a repair may require the installation of a newer version of instrument firmware.

Parts Required:

P/N	Description	Qty.
-----	-------------	------

NONE

ADMINISTRATIVE INFORMATION

<input type="checkbox"/>	Calibration Required
X	Calibration NOT Required

PRODUCT LINE: 15
AUTHOR: MM

ADDITIONAL INFORMATION:

Situation:

The A3 RF assemblies in the X-Series family of signal generators has gone through a few changes over the years. These changes have typically been made to either improve reliability or replace lower level components that have been discontinued. When changes such as this are made the part number of the assembly will typically be changed. Some changes also require that the instrument firmware be updated to recognize and control them properly. In these cases, the instrument firmware may need to be updated when the assembly is replaced during servicing. If the firmware is not updated in these cases, instrument configuration errors may be seen, installed options may not function properly, service software may give errors, and self-test errors can occur.

While the A3 RF assembly part number has changed over time, the replacement kits have maintained the same ordering part numbers.

Solution/Action:

Under normal circumstances it is always recommended that the latest firmware be installed in Keysight products to maintain the most current functionality and performance, as well as proper operation. However, there are times when the customer does not want their instrument firmware to be updated.

Table 1 lists the possible A3 RF assembly part numbers that could be installed in an N5171B signal generator, along with any minimum firmware revision requirement for them. These are the part numbers that can be found on the **Utility, Instrument Info, Installed Board Info** screen of the instrument, as shown in Figure 1.

Table 1 – A3 RF Assembly Hardware versus Firmware

A3 RF Assembly Part Number	Hardware ID	Minimum Firmware Requirement
N5180-60203	0002	Any
N5180-69203	0002	Any
N5180-60239	0002	Any
N5180-69239	0002	Any
N5180-60279	0006	B.01.65
	0009	B.01.96
N5180-69279	0006	B.01.65
	0009	B.01.96

For the latest information on the correct kit part number to order when replacing an A3 RF assembly, see Chapter 14, Replacement Parts in the instrument service guide ([N5180-90059.pdf](#)).

When an exchange assembly is ordered, the A3 RF assembly that comes in the kit could be any one of the exchange part numbers listed in Table 1, so the minimum firmware requirement may vary depending on the part received.

Figure 1 – Installed Board Information Screen

FREQUENCY		RF OFF		Board Info			
3.000 000 000 000 GHz		-144.00 dBm					
Installed Board Information							
Name	Part#/Rev#	Serial#	HUID	OFR	PIC	Opts	Extr
RF	N5180-60279	23160600004	0006	000	000	0000	0000
Analog FPGA	7,1db0,1501:cd38						
PCI FPGA	7,0130,0000:feb9						
Ref FPGA	2,12ba,131a:da2a						
Synth FPGA	12d,0000,0000:0000						

CPU	0960-2870	NCD710285	0000	000		0000	0000

FrontPanel Firmware	N5180-60158 2.02	13115009999	0001	000	0000	0000	0000

To download the latest version of the EXG firmware go to http://www.keysight.com/find/exg_firmware

Revision History:

Date	Service Note Revision	Author	Reason for Change
24 Aug 2017	01	Allen Stephens	As Published
16 Oct 2018	02	Mike Medley	Updated information
01 April 2022	03	Mike Medley	Updated to add latest requirements