Quick Start Guide

VectorStar™ MN469xC Series Multiport Test Set

VectorStar MN4694C, K Connectors, for the MS4642A/B or MS4644A/B VNA
VectorStar MN4697C, V Connectors, for the MS4645A/B or MS4647A/B VNA

Anritsu Company
490 Jarvis Drive
Morgan Hill, CA 95037-2809
USA
http://www.anritsu.com

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MN469xC Series Multiport Test Set

This quick start guide provides a brief overview of the MN469xC Multiport VNA System assembly. For important safety and compliance information and for more details about the assembly, configuration, setup, and initial equipment test, refer to the ***VectorStar™ MN469xC Series Multiport VNA Test Set Installation Guide, PN: 10410-00728***, found on the CD-ROM or at the Anritsu web site (www.anritsu.com).

1. Preparation

Caution

An MS464xA/B VNA unit is heavy. To avoid personal injury, it must be lifted and maneuvered by at least two people during installation.

The test loops on the front and rear panels of the VNA are delicate. Be careful not to bump or bend the test loops.

1. If mounting on a workbench surface, first position the MN469xC Multiport Test Set with access to its front and rear panels. Place the VNA on top.
2. If mounting into rack or console, make sure the Test Set has been installed, and that the rack/console is carefully positioned on a flat and level surface. If equipped, make sure any casters are locked. Use two people to lift the VNA unit and two to guide it into its shelf rails.

2. System Connections

The figure below shows the front panel connections between the Test Set and VNA. Make the semi-rigid cable connections as shown in Figure 1, Figure 2, and in Table 1.

Note	Before installing the test set in its operating environment, ensure that the airflow hole pattern at the right side of the instrument is clear. This is necessary to provide adequate ventilation for the test set.

Front Panel Connections

1. Place the VNA on top of the Test Set as shown in Figure 1.
2. Disconnect the front panel RF cable loops from ports that will be connected to the test set.

Note	When front panel loops on a VectorStar MS464xA/B are removed and then reinstalled for any reason, ensure they are returned to their original locations. If they are reconnected to locations other than their original, this can affect the VNA factory calibration. If the loop locations are forgotten and the calibration has been compromised, refer to the VectorStar Maintenance Manual for instructions on performing a new factory RF calibration.

3. Use the eight provided RF (K or V) male-to-male cables, or other semi-rigid or phase stable male-to-male RF cables to make the connections as shown in Figure 1 and in Table 1.

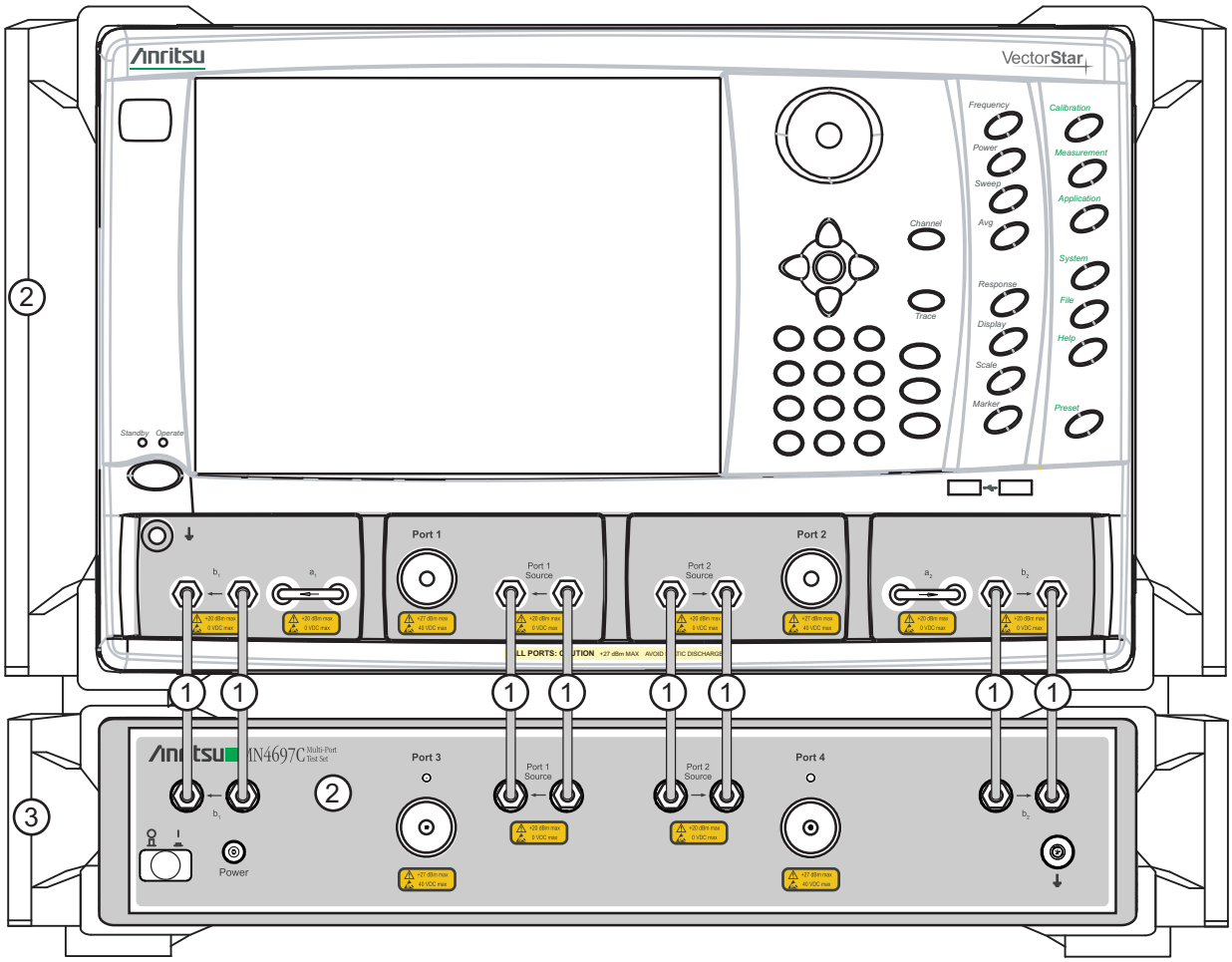

Figure 1. MS464xA/B VNA and MN469xC Test Set Front Panel Connections

Rear Panel Connections

1. Connect the GPIB cable between the VNA Rear Panel **Dedicated GPIB** connector and the Test Set **IEEE 488.2 GPIB** connector as shown in Figure 2.
2. On the VNA rear panel, remove and set aside the eight SMA (m-m) loops.
3. Install the eight semi-rigid cables provided as shown in Figure 2 and Table 1.
4. Connect the **AC Power Cords** to the VNA and the Test Set and then to the AC Mains.

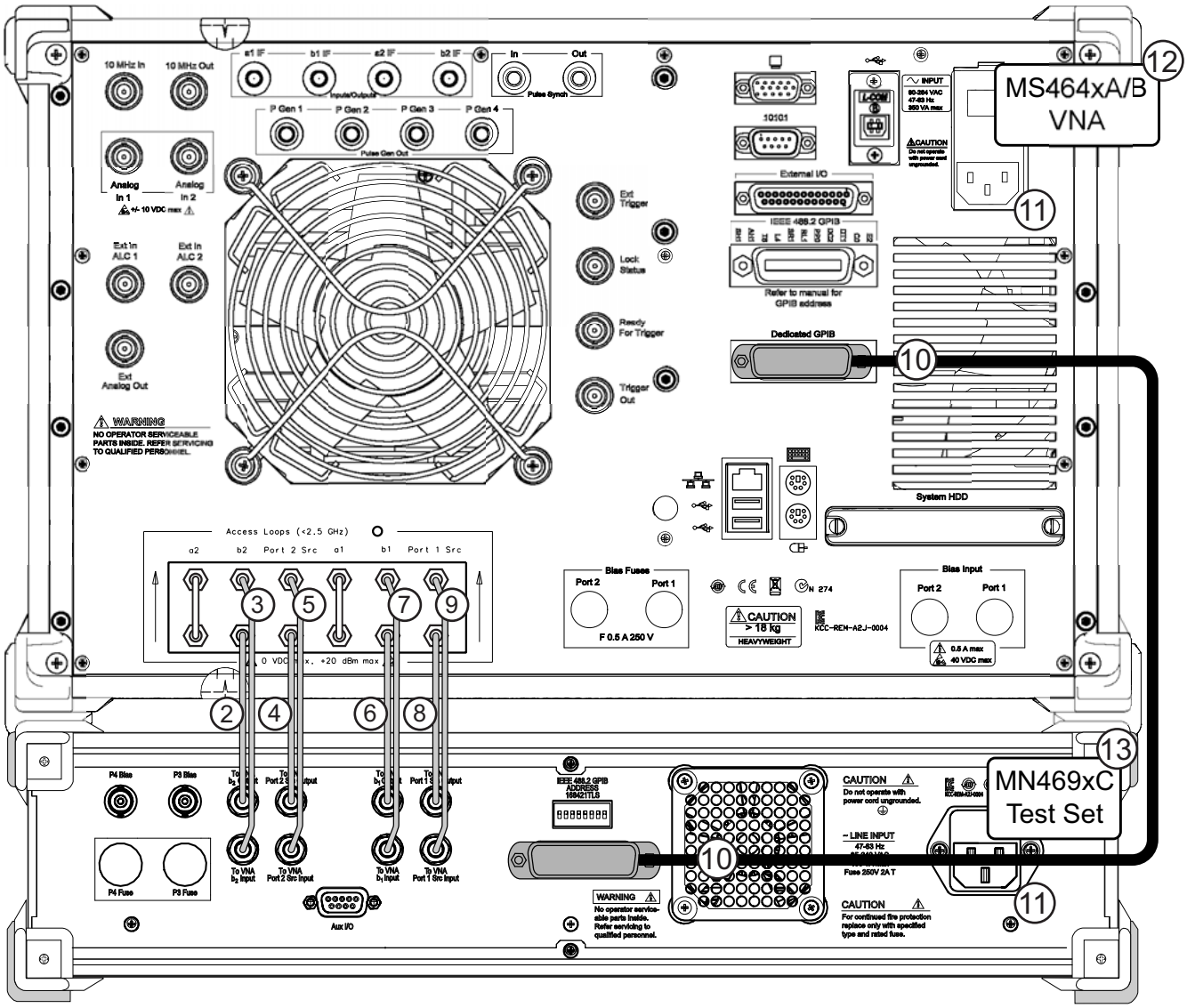

Figure 2. MS464xA/B VNA and MN469xC Test Set Rear Panel Connections (MS464xB shown)

Table 1. MN469xC Multiport Semi-Rigid Cable Interconnect Part Numbers and Locations (1 of 2)

Index	Part Numbers	Description/Torque	Connection From	Connection To
Front Panel Connections				
1	3-62109-42 V (m-m) (MN4697C) **-or-** 3-67357-38 K (m-m) (MN4694C)	**Front Panel RF Cable** (8 each) V or K male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	VNA port labeled: **b1** (In)	MN469xC port labeled: **b1** (In)
			VNA port labeled: **b1** (Out)	MN469xC port labeled: **b1** (Out)
			VNA port labeled: **Port 1 Source** (In)	MN469xC port labeled: **Port 1 Source** (In)
			VNA port labeled: **Port 1 Source** (Out)	MN469xC port labeled: **Port 1 Source** (Out)
			VNA port labeled: **Port 2 Source** (In)	MN469xC port labeled: **Port 2 Source** (In)
			VNA port labeled: **Port 2 Source** (Out)	MN469xC port labeled: **Port 2 Source** (Out)
			VNA port labeled: **b2** (In)	MN469xC port labeled: **b2** (In)
			VNA port labeled: **b2** (Out)	MN469xC port labeled: **b2** (Out)
Rear Panel Connections				
2	3-62112-81	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **b2 loop out**	MN469xC port labeled: **TO VNA b2 OUTPUT**
3	3-62112-80	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **b2 loop in**	MN469xC port labeled: **TO VNA b2 INPUT**
4	3-62112-81	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **P2 Source loop out**	MN469xC port labeled: **TO VNA Port 2 Src OUTPUT**
5	3-62112-80	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **P2 Source loop in**	MN469xC port labeled: **TO VNA Port 2 Src INPUT**
6	3-62112-81	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **b1 loop out**	MN469xC port labeled: **TO VNA b1 OUTPUT**
7	3-62112-80	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **b1 loop in**	MN469xC port labeled: **TO VNA b1 INPUT**

Table 1. MN469xC Multiport Semi-Rigid Cable Interconnect Part Numbers and Locations (2 of 2)

Index	Part Numbers	Description/Torque	Connection From	Connection To
8	3-62112-81	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **P1 Source loop out**	MN469xC port labeled: **TO VNA Port 1 Src OUTPUT**
9	3-62112-80	SMA male-male semi-rigid Tighten using an 8 mm (5/16 in) torque end wrench set to 0.9 N·m (8 lbf·in).	MS464xB port labeled: **P1 Source loop in**	MN469xC port labeled: **TO VNA Port 1 Src INPUT**
10	2100-1	Rear Panel GPIB Cable 1 meter (39.3”) long	**IEEE 488.2 GPIB**	**Dedicated GPIB**
11		Rear Panel Power Cord Varies with country	Line Input connects to AC Mains	
12	MS464xA VNA with Option 051, 061, or 062			
	MS464xB VNA with Option 051, 061, or 062			
13	MN469xC Test Set			

3. Rear Panel DIP Switch GPIB Address Setting

The MN469xC Series Test Set GPIB address must match the GPIB address set on the VNA and is set on the Test Set by rear panel DIP switches. The factory default GPIB address is **16** (where Switch 1 = ON or up and all other switches OFF or down). The GPIB address on the VNA can be verified by navigating to the REMOTE INTER menu and the Multiport Test Set button.

- Navigation: Main Menu | System | Remote Interface | REMOTE INTER | Multiport Test Set.

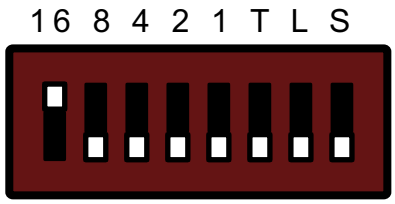

Figure 3. MN469xC DIP Switches (factory setting)

Note	The VNA GPIB connection must be made to the **VNA Dedicated GPIB** connector and *NOT* to the **VNA IEEE-488.2 GPIB** connector.

4. Power Up Sequence

Note	The VNA application must be started after the Test Set is connected and powered up. If the VNA application is started before the Test Set, the VNA will remain in 2-port mode and the 4-port functions will not be available. If this happens, exit the VNA application, make sure the Test Set is powered up, and launch the VNA application.

1. Make sure all of the cables are properly installed as illustrated in the previous sections.

2. Turn on the Test Set prior to launching the VNA application on the VNA. The VNA can be powered on, but the application must be off.

3. Once the Test Set is on, launch the VNA application. During the launch sequence, the VNA application recognizes the Test Set on the GPIB bus and is configured for 4-port mode. If the VNA application is powered up and launched before the test set, the VNA application will stay in 2-port mode and only 2-port mode features and functions will be available.

4. If the 4-port functions fail to appear, exit the VNA application by selecting File | Exit from the VectorStar Menu Bar and then clicking Yes in the confirmation dialog box.

- Navigation: **MENU BAR** | File | FILE Drop-Down Menu | Exit Command

5. After the Windows desktop appears, launch the VNA application by doing one of the following:

a. On the desktop, click the VectorStar icon. If the VNA was running in 100,000 point mode, the icon is annotated with “100K”.

b. If running in 25,000 point mode, select **Start** | All Programs | VectorStar | VectorStar.

c. If running in 100,000 point mode, select **Start** | All Programs | VectorStar_100K | VectorStar.

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Anritsu Company
490 Jarvis Drive
Morgan Hill, CA 95037-2809
USA
http://www.anritsu.com