

## Quick Start Guide

# VectorStar™ MN4690B Series Multiport VNA Test Set

**VectorStar MN4694B, K Connectors for the MS4642A or MS4644A VNA**  
**VectorStar MN4697B, V Connectors for the MS4645A or MS4647A VNA**

This quick start guide provides a brief overview of the MN4690B Multiport VNA System assembly. Refer to the **VectorStar™ MN4690B Series Multiport VNA Test Set Installation Guide, PN: 10410-00290**, found on the CD-ROM, for important safety and compliance information and for more details about the assembly, configuration, setup, and initial equipment test.

## 1. Installing the Instruments

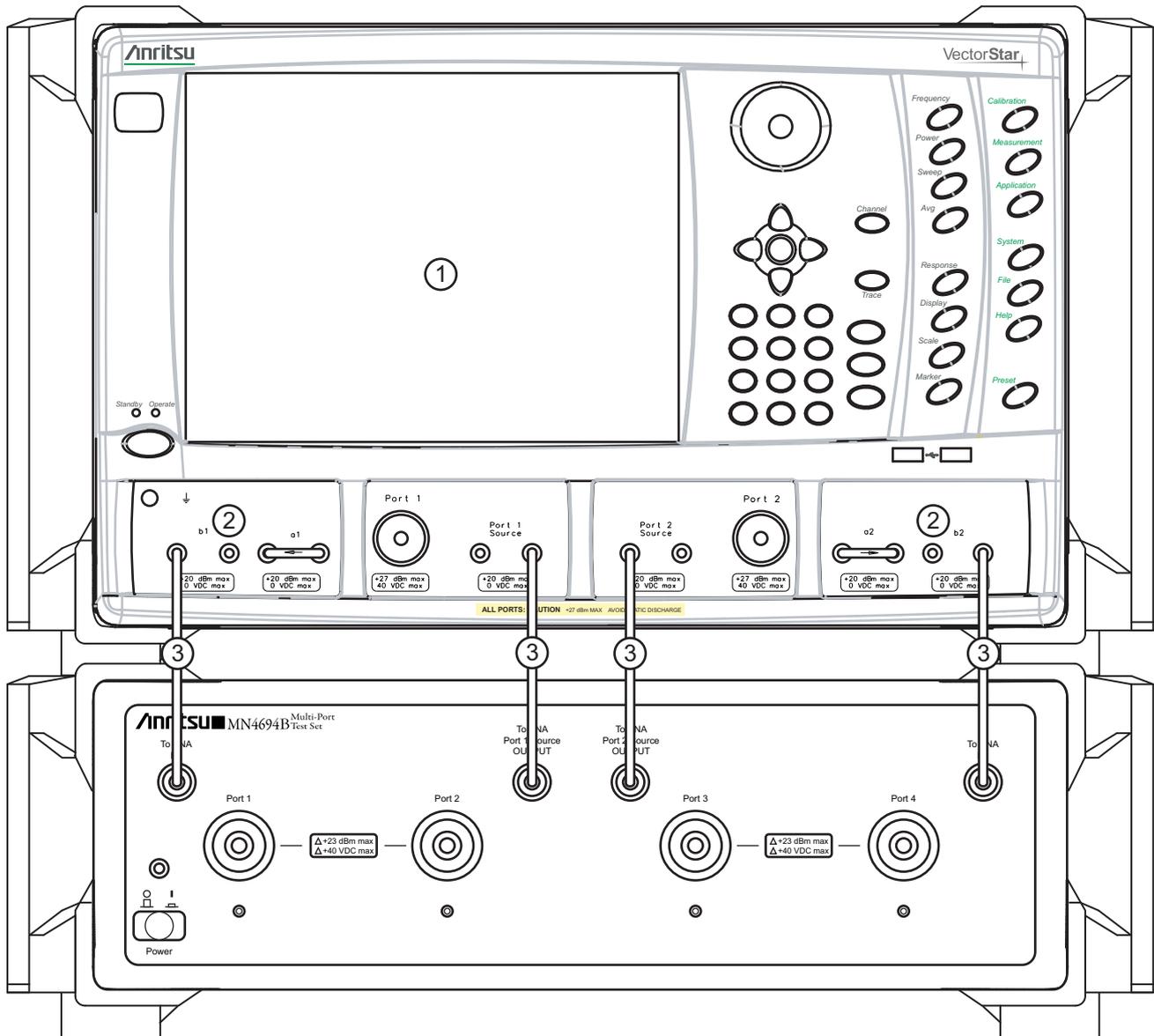


**Figure 1.** MS4647A VNA and MN4697B Test Set System Overview

# Anritsu

## 2. Connecting the Front Panel Cabling

The illustration below shows the front panel connections between the Test Set and VNA.

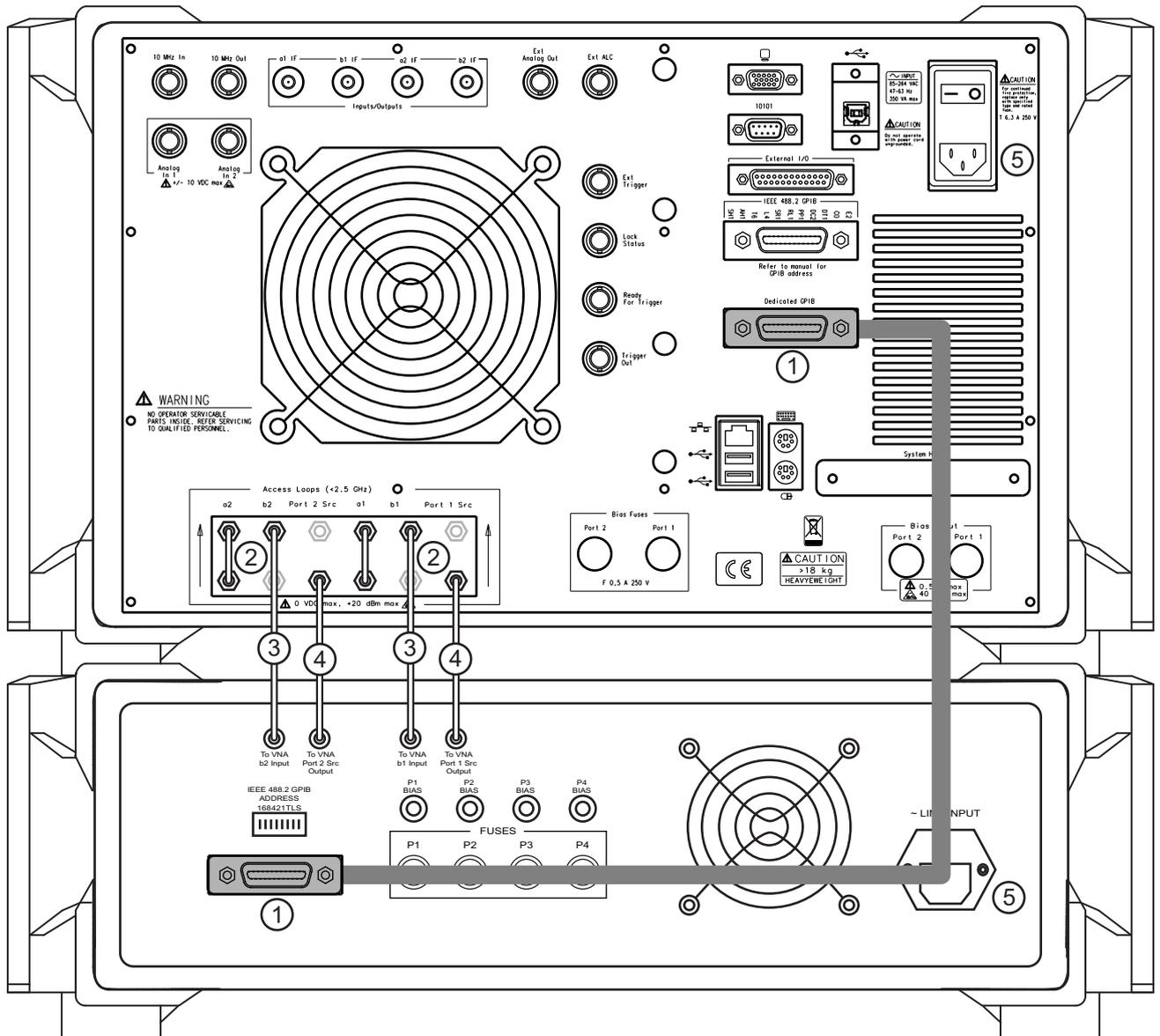


**Figure 2.** Front Panel Test Set Connections

1. Place the VNA on top of the test set as shown above.
2. Disconnect the front panel RF cable loops from VNA ports **b1** and **b2** and any cables that are connected from VNA **Port 1** and **Port 2**.
3. Using the four provided RF (K or V) male-to-male cables, or other semi-rigid or phase-stable male-to-male RF cables:
  - a. Connect the Test Set **To VNA b1** output port to the far left VNA **b1** input port.
  - b. Connect the Test Set **To VNA b2** output port to the far right VNA **b2** input port.
  - c. Connect the Test Set **To VNA Port 1 Source OUTPUT** port to the VNA **Port 1 Source** output port.
  - d. Connect the Test Set **To VNA Port 2 Source OUTPUT** port to the VNA **Port 2 Source** output port.

### 3. Connecting the Rear Panel Cabling

The illustration below shows the rear panel connections between the Test Set and VNA.



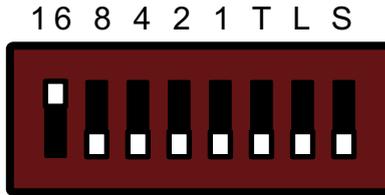
**Figure 3.** Rear Panel Cabling

1. Connect a standard one meter GPIB cable — Anritsu PN: 2100-1 shipped with the test set — using the VNA rear panel **Dedicated GPIB** connector to the Test Set **GPIB** connector as shown above.
2. Disconnect the four SMA loops from VNA ports **b1**, **b2**, **Port 1 Src**, and **Port 2 Src**.
3. Using the two provided RF (SMA) longer male-to-male cables, or other semi-rigid or phase stable male-to-male RF cables, connect the Test Set **To VNA b1** output port to the VNA **b1** upper input port. Install the second cable between the Test Set **To VNA b2** output port to the VNA **b2** upper input port.
4. Using the two provided RF (SMA) shorter male-to-male cables, connect the Test Set **To VNA Port 1 Src Output** port to the VNA **Port 1 Src** lower output port. Install the second cable between the Test Set **To VNA Port 2 Src Output** port to the VNA **Port 2 Src** lower output port.
5. Finally, connect the **AC Power Cords** to the VNA and the Test Set and then to the AC Mains.

## 4. GPIB Address Settings

The MN4690B Series Test Set GPIB address must match the GPIB address set on the VNA and is set on the Test Set by rear panel Dual Inline Package (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 | System | SYSTEM | Remote Interface | REMOTE INTER | Multiport Test Set



**Figure 4.** MN4690B DIP Switches (Factory Default Setting)

**Note**

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

## 5. 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 VectorStar 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 from the VectorStar Menu Bar: **File** | **Exit** and clicking **Yes** in the resulting dialog box.
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**.