N4978A Single and Double Rack Mount Kits (for N4960A or N4965A)



Installation Note

NOTICE: This document contains references to Agilent Technologies. Agilent's former Test and Measurement business has become Keysight Technologies. For more information, go to **www.keysight.com.**



Notices

Copyright Notice

© Keysight Technologies 2015

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Keysight Technologies, Inc. as governed by United States and international copyright laws.

Manual Part Number

N4978-80001

Edition

Edition 2.0, June 2015

Printed in:

Printed in Malaysia

Published by:

Keysight Technologies Deutschland GmbH, Herrenberger Str. 130, 71034 Böblingen, Germany

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

U.S. Government Rights

The Software is "commercial computer software," as defined by Federal Acquisition Regulation ("FAR") 2.101. Pursuant to FAR 12.212 and 27.405-3 and Department of Defense FAR Supplement ("DFARS") 227.7202, the U.S. government acquires commercial computer software under the same terms by which the software is customarily provided to the public. Accordingly, Keysight provides the Software to U.S. government customers under its standard commercial license, which is embodied in its End User License Agreement (EULA), a copy of which can be found at http:// www.keysight.com/find/sweula. The license set forth in the EULA represents the exclusive authority by which the U.S. government may use, modify, distribute, or disclose the Software. The EULA and the license set forth therein, does not require or permit, among other things, that Keysight: (1) Furnish technical information related to commercial computer software or commercial computer software documentation that is not customarily provided to the public; or (2) Relinquish to, or otherwise provide, the government rights in excess of these rights customarily provided to the public to use, modify, reproduce, release, perform, display, or disclose commercial computer software or commercial computer software documentation. No additional government requirements beyond those set forth in the EULA shall apply, except to the extent that those terms, rights, or licenses are explicitly required from all providers of commercial computer software pursuant to the FAR and the DFARS and are set forth specifically in writing elsewhere in the EULA. Keysight shall be under no obligation to update, revise or otherwise modify the Software. With respect to any technical data as defined by FAR 2.101, pursuant to FAR 12.211 and 27.404.2 and DFARS 227.7102, the U.S. government acquires no greater than Limited Rights as defined in FAR 27.401 or DFAR 227.7103-5 (c), as applicable in any technical data.

Warranty

THE MATERIAL CONTAINED IN THIS DOCUMENT IS PROVIDED "AS IS," AND IS SUBJECT TO BEING CHANGED, WITHOUT NOTICE, IN FUTURE EDITIONS. FURTHER, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KEYSIGHT DISCLAIMS ALL WARRANTIES, EI-THER EXPRESS OR IMPLIED, WITH REGARD TO THIS MANUAL AND ANY INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIM-ITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FIT-NESS FOR A PARTICULAR PUR-POSE. KEYSIGHT SHALL NOT BE LIABLE FOR ERRORS OR FOR INCI-DENTAL OR CONSEQUENTIAL DAM-AGES IN CONNECTION WITH THE FURNISHING, USE, OR PERFOR-MANCE OF THIS DOCUMENT OR OF ANY INFORMATION CONTAINED HEREIN. SHOULD KEYSIGHT AND THE USER HAVE A SEPARATE WRITTEN AGREEMENT WITH WAR-RANTY TERMS COVERING THE MA-TERIAL IN THIS DOCUMENT THAT CONFLICT WITH THESE TERMS. THE WARRANTY TERMS IN THE SEPARATE AGREEMENT SHALL CONTROL.

Safety Information

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Contents

N4978A Single and Double Rack Mount Kits Installation

- 1.1 Overview 7
- 1.2 Single Rack Installation Kit Parts List 7
- 1.3 Dual Rack Installation Kit Parts List 8
- 1.4 Typical Safety Considerations 8
- 1.5 Contacting Keysight 8
- 1.6 Single Rack Installation Procedure 9
- 1.7 Double Rack Installation Procedure 11

1 N4978A Single and Double Rack Mount Kits Installation

- 1.1 Overview / 7
- 1.2 Single Rack Installation Kit Parts List / 7
- 1.3 Dual Rack Installation Kit Parts List / 8
- 1.4 Typical Safety Considerations / 8
- 1.5 Contacting Keysight / 8
- 1.6 Single Rack Installation Procedure / 9
- 1.7 Double Rack Installation Procedure / 11

1.1 Overview

This installation kit allows the N4960A or N4965A to be rack mounted as a single unit or two instruments mounted side-by-side. The following tables show the parts needed for single or double rack installation included in the N4978A universal single/dual rack mount kit.

1.2 Single Rack Installation Kit Parts List

Table 1: Single rack installation kit parts list

Quantity	Description	Part Number	
1	Installation note	N4978-80001	
1	Rack mount kit, universal single/dual for N4960A/N4965A	N4978A	
The N4978A includes the following for single rack installation:			
1	Kit, rack adaptor, ½ rack: includes end plates (2), blank panels (2), and shoulder bolts (2)	N4960-80030	
8	Screw-machine 6-32 x .312-in-LG 82 degree	2360-0182	
2	Rack mount kit with handle 2U B-style (rack flange)	13212-024	
4	Screw 10-32 x .375 lg fhms 82 degree, pozi, sst	2680-0116	



1.3 Dual Rack Installation Kit Parts List

Table 2: Dual rack installation kit parts list

Quantity	Description	Part Number
1	Installation note	N4978-80001
1	Rack mount kit, universal single/dual for N4960A/N4965A	N4978A
The N4978A	includes the following for dual rack installation:	
4	Screw 4-40 x .250 fhms 82 degree, pozi, sst	2200-0165
2	Tie bracket	23130-104
2	Rack mount kit with handle 2U B-style (rack flange)	13212-024
4	Screw 10-32 x .375 lg fhms 82 degree, pozi, sst	2680-0116

1.4 Typical Safety Considerations



Before you begin the installation, turn the power switch off and unplug the power cord. Failure to unplug the instrument can result in personal injury.



Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation.

1.5 Contacting Keysight

Assistance with test and measurement needs and information on finding a local Keysight office is available on the Web at:

http://www.keysight.com/find/assist

If you do not have access to the Internet, please contact your Keysight field engineer.

NOTE

In any correspondence or telephone conversation, refer to the Keysight product by its model number and full serial number. With this information, the Keysight representative can determine whether your product is still within its warranty period.

1.6 Single Rack Installation Procedure

- 1. Use a table top that is static safe and padded so that the coating of the top of the instrument is not scratched.
- 2. Remove the four feet from the instrument using a flat head screwdriver.
- 3. Assemble the rack mount kit as shown in Figure 1.



Figure 1: Assemble rack mount kit

4. Add the two shoulder bolts as shown in Figure 2.

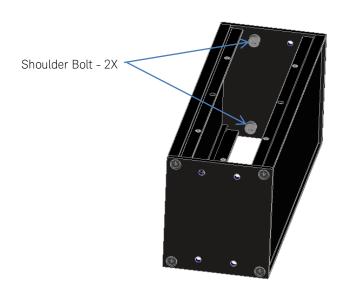


Figure 2: Add two shoulder bolts

5. Secure the rack mount kit to the side of the instrument with the two shoulder bolts as shown in Figure 3.

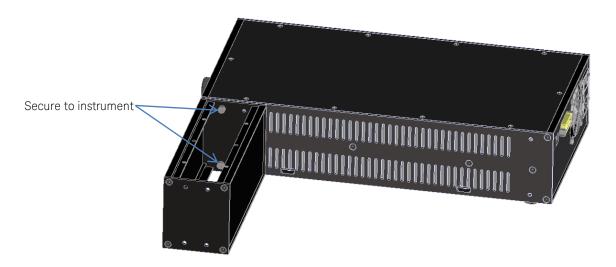


Figure 3: Secure rack mount kit to instrument with shoulder bolts

6. Attach a rack flange to the rack mount kit and to the instrument as shown in Figure 4.

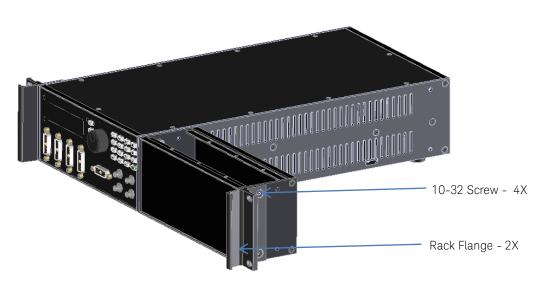


Figure 4: Attach rack flanges

1.7 Double Rack Installation Procedure

- 1. Use a table top that is static safe and padded so that the coating of the top of the instruments are not scratched.
- 2. Remove the four feet from each instrument using a flat head screwdriver.
- 3. Install the two tie brackets into instrument 1 as shown in Figure 5.



Figure 5: Install tie brackets to instrument 1

4. Secure instrument 2 to tie brackets installed in instrument 1 as shown in Figure 6.



Figure 6: Secure instrument 2 to instrument 1

5. Attach the rack flanges as shown in Figure 7.



Figure 7: Attach rack flanges

This information is subject to change without notice.

© Keysight Technologies 2015
Edition 2.0 June 2015
Printed in Malaysia





www.keysight.com