

TNCA VNA Calibration Kits

8670A Standard Kits & 8670B Fixed Termination Kits

Features

- ▶ MIL-STD 348A TNCA Interface
- ▶ Rated to 20 GHz
- ▶ Sliding Load and Fixed Load Kits
- ▶ Multiple VNA Support



Description

Maury 8670 calibration kits provide the necessary standards and accessories required to accurately calibrate network analyzers up to 20 GHz for error-corrected measurements of devices equipped with TNC connectors. Each kit includes a full complement of calibration standards (as listed at right) and can be configured for any combination of VNA or test set/cable connectors. The "A" model kits include both sliding and fixed terminations; the "B" model economy kits include only fixed terminations. All kit components are supplied in an attractive foam-lined wood instrument case.

Connector Description

The Maury TNCA connectors supplied in this kit fully comply with the interface requirements of MIL-STD 328A. The male connector utilizes a solid outer conductor configuration to provide consistent measurement results. All connector bodies are fabricated from stainless steel for strength and wear resistance. These connectors are rated to 20 GHz. For interface specifications on these connectors, please refer to Maury data sheet 5E-058.

Components Included in 8670A/B Kits

QUANTITY	DESCRIPTION	MODEL
1	TNCA female fixed offset short	8676A
1	TNCA male fixed offset short	8677A
1	TNCA female open	8675A
1	TNCA male open	8675B
1	TNCA female sliding termination	8673A*
1	TNCA male sliding termination	8673B*
1	TNCA female fixed termination	8674A
1	TNCA male fixed termination	8674B
1	VNA software disk	—
1	Operating Instructions (manual)	—
1	Instrument case	—

* Included in the 8670A standard kits and not included in the 8670B fixed termination kits.

Recommended Accessories

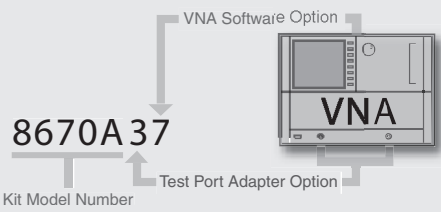
- 2698G1 9/16-inch hex torque wrench (12 in. lbs) See page 94.
- A012E Connector gage kit (push-on type) See page 92.

Ordering Options

To specify the test port adapter and VNA software options you need, simply add two digits to the end of the kit model number (as shown in the diagram at right). The first digit is the test port adapter option number, and the second is the VNA software option number (as found in the **Option Finder** below). The example in the diagram shows the combination of digits needed to order a 8670A kit configured with the adapters and software for use with an Agilent PNA that has 3.5mm test ports.

Option Finder

VNA TEST PORT TYPE	TEST PORT ADAPTER OPTIONS (see page 29)	VNA SOFTWARE OPTIONS					
		KITS W/O SOFTWARE OPTION 0	ROHDE & SCHWARZ ZV SERIES OPTION 1	AGILENT 8510C OPTION 4	AGILENT 8719/20/22 OPTION 5	AGILENT PNA SERIES OPTION 7	ANRITSU 37000 OPTION 9
TNCA ¹	0	—	01	04	05	07	09
7mm	1	10	11	14	15	17	19
Type N	2	20	21	24	25	27	29
3.5mm or 2.92mm (K) ²	3	30	31	34	35	37	39



¹ Adapters are not included with these TNCA test port options, but may be ordered separately, if needed. See page 33.

² 3.5mm and 2.92mm (K) connectors are fully mateable. The resulting junction is calibrated out and is not critical.

Key Literature: Maury data sheet 2Z-067.

TNCA VNA Calibration Kit Adapter Options

7mm, Type N, & 3.5mm Sets

Features

- ▶ TNCA to 7mm, TNCA to Type N, and TNCA to 3.5mm Adapters
- ▶ DC to 20 GHz
- ▶ High Performance
- ▶ Phase Matched Within Model Series

Description

The NMD3.5mm test port adapters in these sets are specifically designed to mate with the special ruggedized connectors used on commercial VNA test sets. The precision 7mm, Type N, and 3.5mm adapters feature low VSWR, low insertion loss and are of minimum length. The sets described on this page are configured to provide users with the ability to tailor their Maury calibration kit for use with specific VNAs. These adapters may be ordered as options shipped with their corresponding VNA calibration kits, or as individual adapters (by model number) to serve as replacement parts or spares.

Adapters Included in 7mm Sets

TEST PORT ADAPTER OPTION	QUANTITY	DESCRIPTION	MODEL
1	2	7mm to TNCA female	8696A
	2	7mm to TNCA male	8696B

Adapters Included in Type N Sets

TEST PORT ADAPTER OPTION	QUANTITY	DESCRIPTION	MODEL
2	1	Type N female to TNCA female	8697A
	1	Type N female to TNCA male	8697B
	1	Type N male to TNCA female	8697C
	1	Type N male to TNCA male	8697D

Adapters Included in 3.5mm Sets

TEST PORT ADAPTER OPTION	QUANTITY	DESCRIPTION	MODEL
3	1	NMD3.5mm female to TNCA female	8679A
	1	NMD3.5mm female to TNCA male	8679B
	1	3.5mm female to TNCA female	8672A
	1	3.5mm female to TNCA male	8672B
	1	3.5mm male to TNCA female	8672C
	1	3.5mm male to TNCA male	8672D

Adapter Specifications

The Maury precision TNCA adapters and the NMD3.5mm test port adapters included in these sets conform to the following:

Test Port Adapters

Models 8679A and 8679B (for more detail see page 108)

Frequency Range	DC to 20.0 GHz
Maximum VSWR:	
DC to 4.0 GHz	1.04
4.0 to 20.0 GHz	1.10
Nominal Impedance	50 ohm

Precision 3.5mm to TNCA Adapters

Models 8672A/B/D/C (for more detail see page 111)

Frequency Range	DC to 20.0 GHz
Maximum VSWR:	
DC to 4.0 GHz	1.04
4.0 to 12.0 GHz	1.06
12.0 to 20.0 GHz	1.20
Nominal Impedance	50 ohm

Precision Type N to TNCA Adapters

Models 8697A/B/C/D (for more detail see page 116)

Frequency Range	DC to 18.0 GHz
Maximum VSWR:	
DC to 4.0 GHz	1.04
4.0 to 8.0 GHz	1.06
8.0 to 18.0 GHz	1.08
Nominal Impedance	50 ohm

Precision 7mm to TNCA Adapters

Models 8696A/B (for more detail see page 113)

Frequency Range	DC to 18.0 GHz
Maximum VSWR:	
DC to 4.0 GHz	1.04
4.0 to 18.0 GHz	1.06
Nominal Impedance	50 ohm

Recommended Adapters

(not included in adapter option sets)

Precision TNCA In-Series Adapters

Models 8678A/B/C (for more detail see page 119)

Frequency Range	DC to 20.0 GHz
Maximum VSWR:	
DC to 4.0 GHz	1.04
4.0 to 8.0 GHz	1.08
8.0 to 20.0 GHz	1.12
Nominal Impedance	50 ohm