

Type N VNA Calibration Kits

8880A/B 75 ohm Fixed Termination Kits

Features

- ▶ 75 ohm Kits
- ▶ Simple Fixed Load Calibration
- ▶ Broad VNA Coverage

Description

Maury's 8880 series calibration kits are designed for calibrating vector network analyzers (VNAs) from DC to 2.0 GHz that will be used to make 75 ohm type N connector measurements.

A full complement of calibration standards (opens, shorts and fixed terminations, female and male) are included in the 8880A and 8880B kits. In addition, the 8880B kit includes three (3) in-series adapters that are phase matched for accurate measurements of non-insertable devices.

All kit components (as listed at right) are housed in a foam-lined wood instrument case. Operating instructions are included with the calibration standard constants so that they can be keyed in from the VNA's front panel. (Calibration standard constants in the form of software on a 3-1/2 inch diskette may be ordered separately.)

Connector Description

The type N 75 ohm connectors on the components in these kits are a precision version of type N 75 ohm connectors, developed by Maury, which meets all applicable requirements of IEC169-16. They exhibit extremely low VSWR, and although specified to 2.0 GHz, they can be used at much higher frequencies. The male connectors are provided with a 3/4" hex coupling nut so the junctions can be properly torqued to 12 in. lbs. For interface specifications see Maury data sheet 5E-054.

Supported VNAs

Maury's 8880 series calibration kits are ideal for use in calibrating Agilent's 75 ohm VNAs (ie., 8752B or 8753C with 85046B, 85044B test sets or 11850D splitters). With the appropriate adapters (listed at right) these kits can also be used with 50 ohm VNAs (eg., Agilent 8510C, 8719/20/22, and PNA series; Anritsu 37000 series; and Rohde & Schwarz ZV series) to make 75 ohm measurements.

Recommended Accessories

Torque wrench See page 94.

2698C2 3/4-inch torque wrench (12 in. lbs)

Connector Gage Kits See page 92.

- A020A Connector gage kit (push-on type)
- A020D Connector gage kit (thread-on type)
- A020G 75 ohm type N Connector gage kit (push-on type)

Utility Boxes

8880X2 Foam-lined utility box (houses up to 12 adapters)

 Key Literature: Maury data sheet 2Z-035.



8880B

Components Included in 8880A/B Kits

| QUANTITY | DESCRIPTION | MODEL |
|----------|-----------------------------------------|--------|
| 1 | Type N 75 ohm female fixed offset short | 8884A |
| 1 | Type N 75 ohm male fixed offset short | 8884B |
| 1 | Type N 75 ohm female open | 8885A |
| 1 | Type N 75 ohm male open | 8885B |
| 1 | Type N 75 ohm female fixed termination | 8883A |
| 1 | Type N 75 ohm male fixed termination | 8883B |
| 1 | Type N 75 ohm female to female adapter | 8882A* |
| 1 | Type N 75 ohm male to male adapter | 8882B* |
| 1 | Type N 75 ohm female to male adapter | 8882C* |
| 1 | Operating Instructions (manual) | — |
| 1 | Instrument case | — |

* In-series, phase matched adapters included in 8880B kits, but not in 8880A kits.

Recommended Adapters

In-Series Phase Matched Adapters See page 117.

- 8882A Type N 75 ohm female to type N 75 ohm female
- 8882B Type N 75 ohm male to type N 75 ohm male
- 8882C Type N 75 ohm female to type N 75 ohm male

Between-Series Adapters (75 ohm to 50 ohm) See page 117.

- 8882D1 Type N 75 ohm female to 7mm 50 ohm
- 8882D2 Type N 75 ohm male to 7mm 50 ohm
- 8882E1 Type N 75 ohm female to NMD3.5mm 50 ohm female
- 8882E2 Type N 75 ohm male to NMD3.5mm 50 ohm female
- 8882F11 Type N 75 ohm female to type N 50 ohm female
- 8882F12 Type N 75 ohm female to type N 50 ohm male
- 8882F21 Type N 75 ohm male to type N 50 ohm female
- 8882F22 Type N 75 ohm male to type N 50 ohm male
- 8882G11 Type N 75 ohm female to 3.5mm 50 ohm female
- 8882G12 Type N 75 ohm female to 3.5mm 50 ohm male
- 8882G21 Type N 75 ohm male to 3.5mm 50 ohm female
- 8882G22 Type N 75 ohm male to 3.5mm 50 ohm male

Warning: Do not mate a 75 ohm type N connector to a 50 ohm type N connector.

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Kit Component Specifications

Fixed Terminations

Models 8883A and 8883B (see also page 55)

| | |
|-------------------|---------------------------|
| Frequency Range | DC to 2.0 GHz |
| Maximum VSWR | 1.01 (46 dB minimum R.L.) |
| Nominal Impedance | 75 ohm |
| Power Handling | 1 watt CW |

Fixed Shorts

Models 8884A and 8884B (see also page 73)

| | |
|------------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Reflection Coefficient | 0.98 minimum |
| Nominal Impedance | 75 ohm |

Open Circuits

Models 8885A and 8885B (see also page 79)

| | |
|------------------------|-------------------|
| Frequency Range | DC to 2.0 GHz |
| Reflection Coefficient | 0.98 minimum |
| Phase Accuracy | ± 2.0 degrees |
| Nominal Impedance | 75 ohm |

Type N 75 ohm Phase Matched In-Series Adapters (Included in 8880B Kits; Not Included in 8880A Kits)

Models 8882A/B/C (see also page 117)

| | |
|-------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Maximum VSWR | 1.03 |
| Nominal Impedance | 75 ohm |

Specifications for Accessories

Type N 75 ohm Between-Series Adapters (Adapting to various 50 ohm connector types)

Models 8882E1/E2 (see also page 117)

| | |
|-------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Typical VSWR | 1.05 |
| Nominal Impedance | 75 ohm |

Models 8882G11/G12/G21/G22 (see also page 117)

| | |
|-------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Typical VSWR | 1.05 |
| Nominal Impedance | 75 ohm |

Models 8882D1/D2 (see also page 117)

| | |
|-------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Typical VSWR | 1.05 |
| Nominal Impedance | 75 ohm |

Models 8882F11/F12/F21/F22 (see also page 117)

| | |
|-------------------|---------------|
| Frequency Range | DC to 2.0 GHz |
| Typical VSWR | 1.05 |
| Nominal Impedance | 75 ohm |

Other Recommended Accessories

Model 2698C2 Torque wrench (see also page 94)

| | |
|--------------|--------------------------|
| Wrench Size | 3/4-inch Hex |
| Reset Torque | 12 (± 0.4) in. lbs |
| Handle Color | Blue |

Model A020A Connector Gage Kit (see also page 92)

| | |
|--------------------------|---------------------------------|
| Connector Type(s) | Type N (50 ohm) female and male |
| Dial Resolution (Inches) | 0.00025 |
| Gages in Kit | One |
| Interface | Hand-held Push-on |

Model A020D Connector Gage Kit (see also page 92)

| | |
|--------------------------|---------------------------------|
| Connector Type(s) | Type N (50 ohm) female and male |
| Dial Resolution (Inches) | 0.0001 |
| Gages in Kit | Two |
| Interface | Metrology Grade Thread-on |

Model A020G Connector Gage Kit (see also page 92)

| | |
|--------------------------|---------------------------------|
| Connector Type(s) | Type N (75 ohm) female and male |
| Dial Resolution (Inches) | 0.0001 |
| Gages in Kit | One |
| Interface | Hand-held Push-on |