

PRECISION CALIBRATION KITS

COAXIAL — 7-16 CONNECTORS ¹

Features

- 7-16 Connector
- Rated to 7.5 GHz (Useable to 8.0 GHz)
- Low Torque Coupling
- Expanded and Economy Kits



Model 2750B

Description

The Maury 2750 calibration kits provide the necessary standards required to accurately calibrate network analyzers up to 7.5 GHz for error-corrected measurements of devices equipped with 7-16 connectors.

Unique features of these kits include the use of materials selected to provide long term reliability and wear. Other features include a thicker dielectric bead to eliminate deflection, retracted threads on the female connector to eliminate the need to apply excessive torque during calibration and test, and of course, tighter tolerance control to reduce uncertainties.

The 2750 kits are available in configurations ranging from full kits that include both female and male standards with calibration constants on tape or disk, to 3-piece single-sex kits without software. All kits are supplied in a wooden instrument case with operating instructions. The option charts on the following pages allow you to select a calibration kit configuration that best fits your needs and budget.

The following table shows the available basic kits. To add capability, select an option from the appropriate chart on the following pages.

Model	Includes Torque and Open End Wrenches	Connector Type
2750B ²	Yes	Female and Male
2750F ²	No	Female
2750M ²	No	Male

¹ The Maury 7-16 connectors utilized in these kits are rugged calibration grade connectors that exceed the requirements for IEC169-4 reference grade and BSEN122190 grade 0 specifications.

² Add option suffix from the charts on the following pages to upgrade the kit capability from the basic model.



2750B Full Calibration Kits

These kits feature both female and male standards, a torque wrench and an open-end wrench for precise, repeatable connections, and optional adapter sets and calibration constants on computer media.

The components shown in the following chart are included in the 2750B kits.

Item	Model	Description	Quantity
1	2710A	Fixed termination, 7-16 female	1
2	2710B	Fixed termination, 7-16 male	1
3	2716A	Open circuit, 7-16 female	1
4	2716B	Open circuit, 7-16 male	1
5	2714A	Short circuit, 7-16 female	1
6	2714B	Short circuit, 7-16 male	1
7	2698K1	Torque wrench, 1-1/16"	1
8	2750Z3	Open-end wrench, 15/16"	1
9	2750Z1	Operating instructions	1
10	2750Z2	Instrument case	1

To upgrade a 2750B kit to include calibration constants on computer media and/or adapters, add a

two digit suffix, selected from the chart below, to the basic model.

Example: The model number for a kit with 7mm adapters for an Agilent 8510C network analyzer is 2750B14.

Test Set or Cable Connectors	Calibration Constants Media VNA Format									Includes Adapter Set
	Agilent ENA	Agilent 8510A/B	Agilent 8510C	Agilent 8719/20/22	Agilent 8753	Agilent PNA	Anritsu 360	Anritsu 37200	None	
—	02	03	04	05	06	07	08	09	N/A	None
7mm	12	13	14	15	16	17	18	19	10	2750Z4
Type N	22	23	24	25	26	27	28	29	20	2750Z5

The adapter sets listed in the preceding chart are comprised of the items listed below.

Adapters within each set are phase matched (same electrical length) so that they may be interchanged for measurement of non-insertable devices.

Adapter Test Set	Quantity	Model	Description
2750Z4	2 each	2707A	Adapter, 7mm to 7-16 female
	2 each	2707B	Adapter, 7mm to 7-16 male
2750Z5	1 each	2706A	Adapter, type N female to 7-16 female
	1 each	2706B	Adapter, type N male to 7-16 female
	1 each	2706C	Adapter, type N female to 7-16 male
	1 each	2706D	Adapter, type N male to 7-16 male



2750F/M Economy Calibration Kits

The 2750F (female) and 2750M (male) calibration kits are single-sex kits composed of the items listed in the chart below. Various software and adapter options are available for these kits for either one-port

(one adapter) or two-port (three adapters) measurement. The third adapter in the two-port adapter sets is phase matched to the other two, and is used for the through connection during calibration.

Item	Model	Description	Quantity 2750F	Quantity 2750M
1	2710A	Fixed termination, 7-16 female	1	—
2	2710B	Fixed termination, 7-16 male	—	1
3	2716A	Open circuit, 7-16 female	1	—
4	2716B	Open circuit, 7-16 male	—	1
5	2714A	Short circuit, 7-16 female	1	—
6	2714B	Short circuit, 7-16 male	—	1
7	—	Operating instructions	1	1
8	—	Instrument case	1	1

To upgrade the selected kit to include calibration constants on computer media and/or adapters, add a

two digit suffix, selected from the chart below, to the basic model.

Example: The model number for a kit for an Agilent 8753 with 7mm cables to measure a two-port device with 7-16 female connectors is 2750F36.

Test Set or Cable Connectors	Number of Test Ports	Calibration Constants Media VNA Format (2750F/M Kits)									Includes Adapter Set
		Agilent ENA	Agilent 8510A/B	Agilent 8510C	Agilent 8719/20/22	Agilent 8753	Agilent PNA	Anritsu 360	Anritsu 37200	None	
—	—	02	03	04	05	06	07	08	09	N/A	None
Type N (f)	2	12	13	14	15	16	17	18	19	10	1
Type N (m)	2	22	23	24	25	26	27	28	29	20	2
7mm	2	32	33	34	35	36	37	38	39	30	3
Type N (f)	1	42	43	44	45	46	47	48	49	40	4
Type N (m)	1	52	53	54	55	56	57	58	59	50	5
7mm	1	62	63	64	65	66	67	68	69	60	6

2750F/M Adapter Sets

Adapter Set	Test Set or Cable Connectors	Number of Test Ports	2750F Kits	2750M Kits
1	Type N (f)	2	2 each 2706D type N (m) to 7-16 (m) 1 each 2706B type N (m) to 7-16 (f)	2 each 2706B type N (m) to 7-16 (f) 1 each 2706D type N (m) to 7-16 (m)
2	Type N (m)	2	2 each 2706C type N (f) to 7-16 (m) 1 each 2706A type N (f) to 7-16 (f)	2 each 2706A type N (f) to 7-16 (f) 1 each 2706C type N (f) to 7-16 (m)
3	7mm	2	2 each 2707B 7mm to 7-16 (m) 1 each 2707A 7mm to 7-16 (f)	2 each 2707A 7mm to 7-16 (f) 1 each 2707B 7mm to 7-16 (m)
4	Type N (f)	1	1 each 2706D type N (m) to 7-16 (m)	1 each 2706B type N (m) to 7-16 (f)
5	Type N (m)	1	1 each 2706C type N (f) to 7-16 (m)	1 each 2706A type N (f) to 7-16 (f)
6	7mm	1	1 each 2707B 7mm to 7-16 (m)	1 each 2707A 7mm to 7-16 (f)



Specifications

Short Circuits:

Model 2714A, 7-16 (f)	
Model 2714B, 7-16 (m)	
Frequency Range	DC — 7.5 GHz
Reflection Coefficient	0.99 minimum
Reflection Phase:	
DC - 4.0 GHz	± 0.60 degree
4.0 - 7.5 GHz	± 0.85 degree
Reference Impedance.....	50 ohms

Open Circuits:

Model 2716A, 7-16 (f)	
Model 2716B, 7-16 (m)	
Frequency Range	DC — 7.5 GHz
Reflection Coefficient	0.99 minimum
Reflection Phase:	
DC - 4.0 GHz	± 1.00 degree
4.0 - 7.5 GHz	± 1.25 degree
Reference Impedance.....	50 ohms

Fixed Terminations:

Model 2710A, 7-16 (f)	
Model 2710B, 7-16 (m)	
Frequency Range	DC — 7.5 GHz
VSWR (maximum):	
DC - 4.0 GHz	1.02
4.0 - 7.5 GHz	1.03
Reference Impedance.....	50 ohms

7mm (APC7) to 7-16 Adapters ³:

Model 2707A, 7mm to 7-16 (f)	
Model 2707B, 7mm to 7-16 (m)	
VSWR (maximum)	1.03

Type N (m) to 7-16 Adapters ³:

Model 2706A, type N (f) to 7-16 (f)	
Model 2706B, type N (m) to 7-16 (f)	
Model 2706C, type N (f) to 7-16 (m)	
Model 2706D, type N (m) to 7-16 (m)	
VSWR (maximum)	1.03

Optional Accessories

Connector Gage Kit:

Model A041A - Includes female and male push-on gages with a master setting gage housed in a foam-lined instrument case.

In-Series Adapters:

Model 2712A, 7-16 (f) to 7-16 (f) adapter ³	
Model 2712B, 7-16 (m) to 7-16 (m) adapter	
Model 2712C, 7-16 (f) to 7-16 (m) adapter	
VSWR (maximum)	1.025

3.5mm to 7-16 Adapters:

Model 2705A, 3.5mm (f) to 7-16 (f)	
Model 2705B, 3.5mm (m) to 7-16 (f)	
Model 2705C, 3.5mm (f) to 7-16 (m)	
Model 2705D, 3.5mm (m) to 7-16 (m)	
VSWR (maximum)	1.04

TRL/LRL Air Line Kit Option

TRL/LRL (Through-Reflect-Line, Line-Reflect-Line) Calibrations:

Model 2735A TRL/LRL Air Line Kit Option - Perform TRL/LRL calibrations with the addition of an optional air line set. See Maury data sheet 2Z-041A.

For a fully configured TRL/LRL calibration kit, refer to Maury data sheet 2Z-044 and model series 2760B.

³ Adapters within each series are phase matched (same electrical length) to facilitate measurement of non-insertable devices by means of adapter substitution.