



Agilent U1701A Handheld Capacitance Meter

Data Sheet



Agilent U1701A handheld capacitance meter expands Agilent's portfolio of handheld tools into electronics assembly and passive components troubleshooting.

Features

- 11,000 counts resolution
- Dual display with backlight
- Wide range: 0.1 pF to 199.99 mF
- Compare mode with 25 sets of High/Low limit settings
- Tolerance mode: 1%, 5%, 10% and 20%
- Relative mode
- Hold and Min/Max/Average recordings
- Data logging to PC with optional IR-to-USB cable

Efficient capacitor sorting

With up to 25 sets of High/Low limits that you can store and choose from in compare mode, the U1701A lets you breeze through capacitor sorting without the need to set and reset the standard reference for different capacitors-under-test.

The U1701A also comes with other handy functions, including tolerance and relative modes, Hold, Min/Max/Average recordings, and PC data logging.

Uncompromised quality and reliability

The U1701A comes in a robust overmold and tested to stringent industrial standards. Each U1701A is also sealed with a three-year warranty and the assurance that you can test your components with confidence.



Figure 1: Automate the recording of continuous readings when you hook the U1701A to a PC



Agilent Technologies

Take a closer look

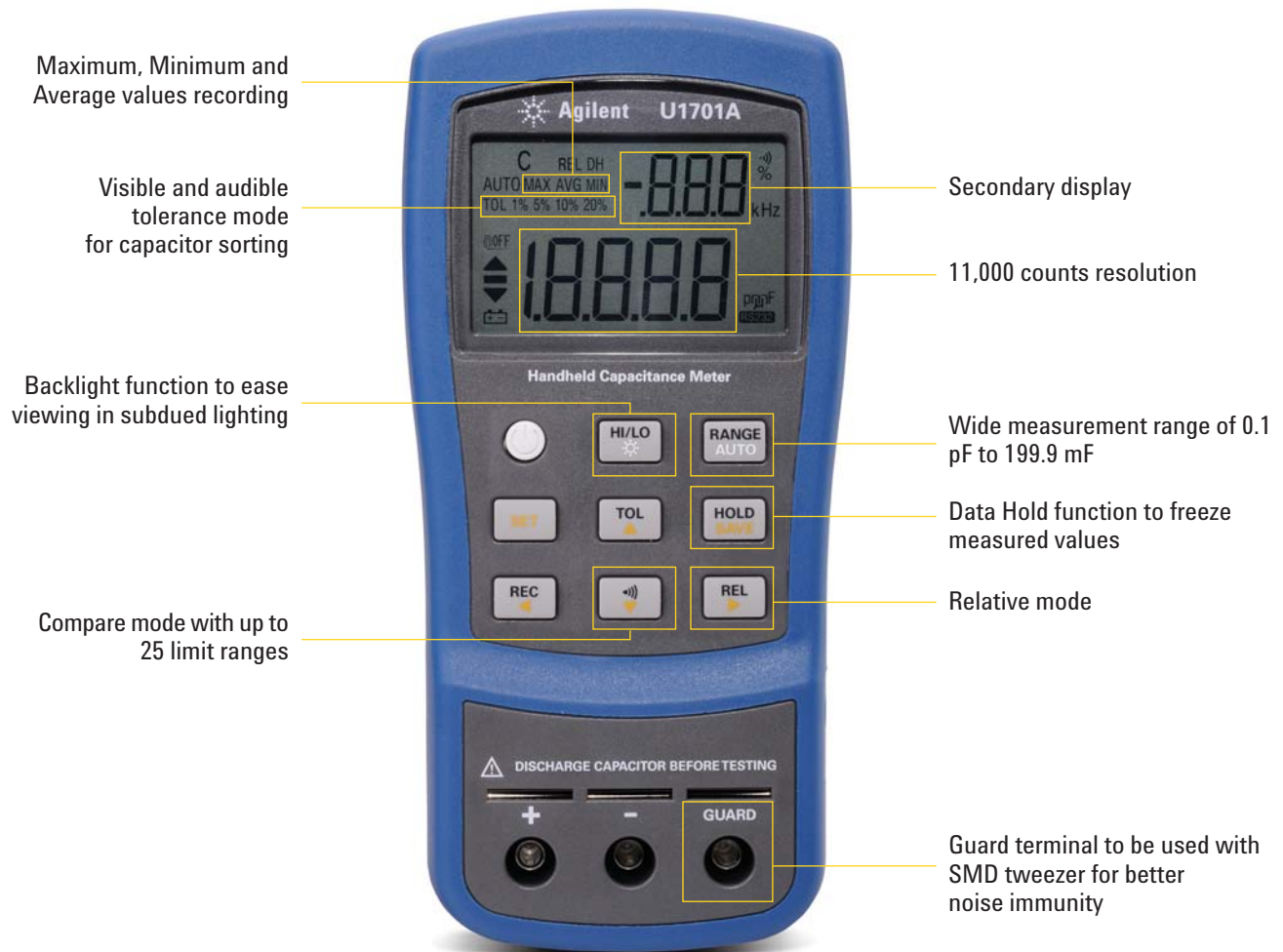


Figure 2: U1701A front view

U1701A Electrical Specifications

Accuracy is given as $\pm$ (% of output + counts of least significant digit) at 23 °C $\pm$ 5 °C, with relative humidity less than 80% R.H.

For example, 1% $\pm$ 10 = 1% of reading + 10 counts of least significant digit

Capacitance

Range	Resolution	Accuracy*	Measuring rate as full scale (approx.)
1000.0 pF	0.1 pF	1% + 10	5 times/s
10.000 nF	0.001 nF	1% + 5	5 times/s
100.00 nF	0.01 nF	0.5% + 3	5 times/s
1000.0 nF	0.1 nF		5 times/s
10.000 μ F	0.001 μ F		5 times/s
100.00 μ F	0.01 μ F		5 times/s
1000.0 μ F	0.1 μ F		0.86 times/s
10.000 mF	0.001 mF	1% + 5	0.13 times/s
199.99 mF	0.01 mF	2% + 5	0.006 times/s

*Accuracy is specified to measure film capacitor or better. Use Relative mode to zero residual.

General Specifications

Parameter	U1701A
Display	4½-digit liquid crystal display (LCD) with a maximum resolution of 11,000 counts. Automatic polarity indication
Power supply	• 9 V Alkaline battery (ANSI/NEDA 1604A or IEC 6LR61) • AC power adapter and cord available as options
Power consumption	5.6 mA (on battery operation)
Battery life	~80 hours without backlight and based on new alkaline
Operating temperature	Full accuracy at 0 °C to 50 °C
Operating humidity	Up to 80% relative humidity (R.H.) for temperatures up to 31 °C, decreasing linearly to 50% R.H. at 50 °C
Altitude	0 to 2000 m
Storage temperature	–20 °C to 60 °C
Storage humidity	0 to 80% R.H. non-condensing
Temperature coefficient	0.1 x (specified accuracy)/ °C (from 0 °C to 18 °C or 28 °C to 50 °C)
Low battery indicator	 will appear when the voltage drops below ~ 6.0 V
Weight	320 g
Dimension (H x W x D)	87 mm x 184 mm x 41 mm
Safety and EMC compliance	IEC 61010-1:2001/EN 61010-1:2001 (2 nd Edition) Pollution Degree 2, IEC 61326-2-1:2005/EN 61326-2-1:2006, ICES-001:2004, AS/NZS CISPR11:2004
Calibration	One-year calibration cycle recommended
Warranty	3 years

Ordering Information

Standard shipped items



Standard U1701A ordering includes:

- Quick Start Guide
- User's and Service Guide (included in Product Reference CD)
- Certificate of Calibration (CoC)
- Alligator clip leads
- Data logging software (included in Product Reference CD)
- 9 V Alkaline battery

Option U1701A-SMD ordering includes:

SMD tweezer and soft carrying case in addition to the standard shipped items

Optional accessories



U1174A Soft carrying case



U5481A IR-to-USB cable



U1782A SMD tweezer



U1780A Power adapter and cord (according to country)



Agilent Email Updates

www.agilent.com/find/emailupdates
Get the latest information on the products and applications you select.



Agilent Direct

www.agilent.com/find/agilentdirect
Quickly choose and use your test equipment solutions with confidence.

Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

Agilent offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance onsite education and training, as well as design, system integration, and project management.

For more information on repair and calibration services, go to

www.agilent.com/find/removealldoubt

Product specifications and descriptions in this document subject to change without notice.

www.agilent.com
www.agilent.com/find/handheldlcr

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Phone or Fax

Americas

Canada	(877) 894-4414
Latin America	305 269 7500
United States	(800) 829-4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Thailand	1 800 226 008

Europe & Middle East

Austria	01 36027 71571
Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700*
	*0.125€/minute
Germany	07031 464 6333
Ireland	1890 924 204
Israel	972-3-9288-504/544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
Switzerland	0800 80 53 53
United Kingdom	44 (0) 118 9276201

Other European Countries:

www.agilent.com/find/contactus

Revised: October 6, 2008

© Agilent Technologies, Inc. 2009
Printed in USA, February 4, 2009
5989-3525EN



Agilent Technologies