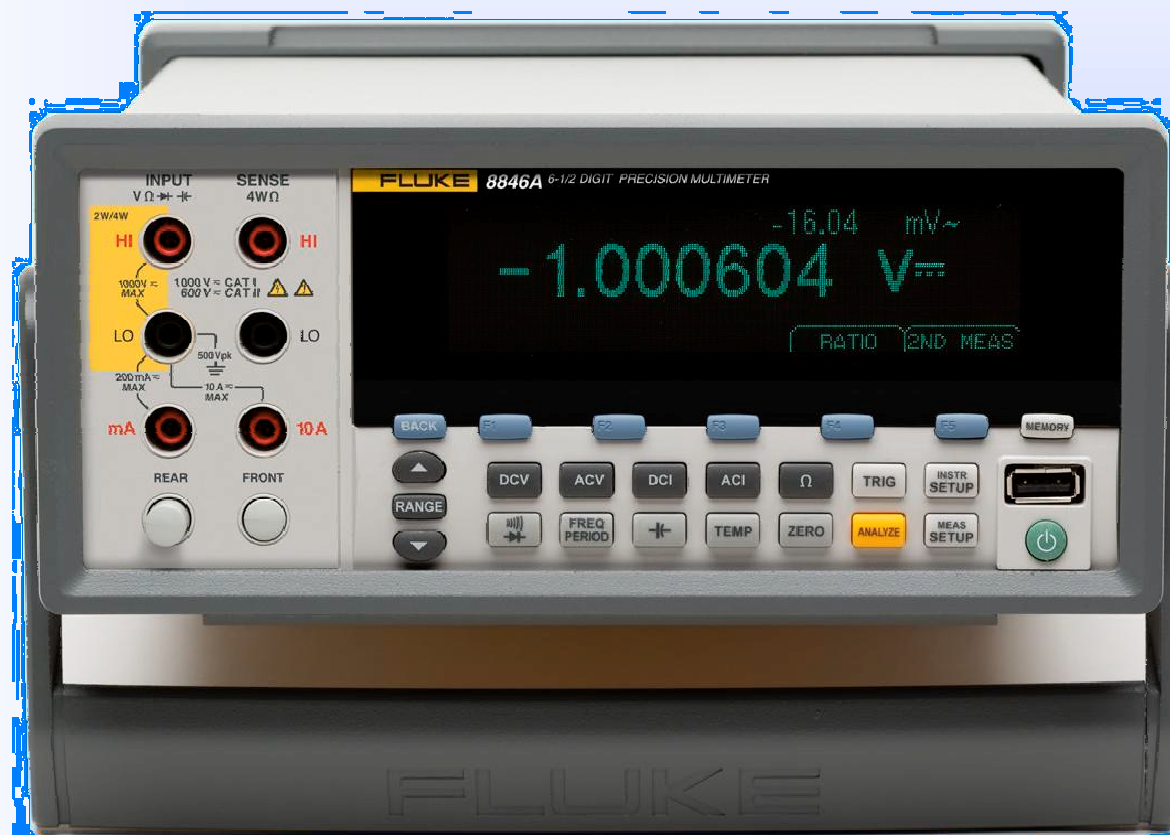


# New 6.5 digit DMM



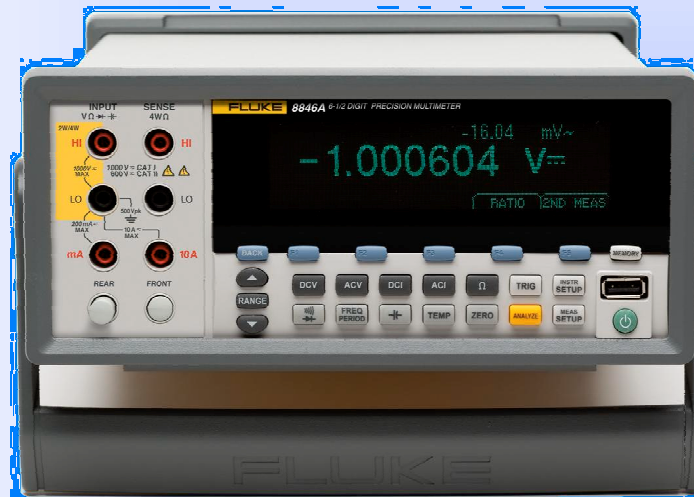
884X – 6.5 Digit Precision DMM

## 884X – background

- ❑ Brand recognition - Fluke is market leader in DMM category
- ❑ Technology - Fluke is built on precision low frequency source and measurement technology
- ❑ Product offering – we have not had a competitive bench DMM for 10 years

**A bench DMM is the most asked-for new product from Fluke!**

# 8845 & 8846 position



Adds a new 6.5 Digit 0.0024 % Vdc accurate multimeter to portfolio

# Introducing Fluke 8845A & 8846A



884X – 6.5 Digit Precision DMM

Start the display and the histogram is shown. The histogram is a bar chart showing the distribution of the measured values. The x-axis represents the measured value and the y-axis represents the frequency of occurrence. The histogram is used to analyze the distribution of the measured values and to identify any outliers or anomalies.

# Analogue performance

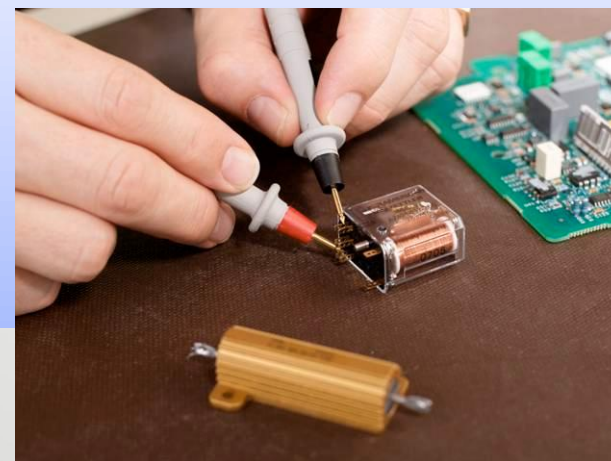
- ❑ For precision measurement applications
  - 6.5 digit resolution
  - primary & secondary readings
  - 0.0024% basic  $V_{dc}$  accuracy
  - with wider ranges
    - 100 mV to 1000 V with 100 nV resolution
    - 10  $\Omega$  to 1 G $\Omega$  with 10  $\mu\Omega$  resolution
    - 100  $\mu$ A to 10 A with 100 pA resolution

# Full suite of measurements

- A variety of measurements for every application
  - Volts, Ohms and Amps plus:-
  - Capacitance: 1 nF to 10 mF, 1 pF resolution
  - Temp: RTD, -200 Å to 600 Å, 0.001 Å resolution (RTD 4 Wire & 385 with  $R_o$  & Alpha parameters)
  - Freq & period: 3 Hz to 1 MHz @  $\pm 0.01$  % rdg
  - Math Functions: Zero, dBm, dB, Min/Max/Ave & Standard Deviation

# Innovative functions

- ❑ Unique innovative functions that extend meter utility
  - Patented 2x4 wire Ohms measurement technique
  - USB device port
  - TrendPlot™
  - Histogram
  - Statistics





# System connectivity

Remote interfaces to PC's and ATE systems

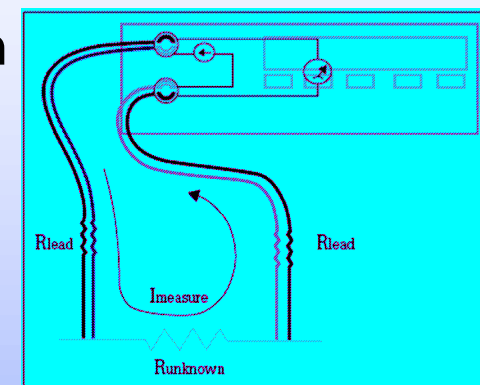
- IEEE488.2
- LAN
- RS232-USB adapter [optional]
- Trigger I/O
- Rear panel inputs
- Fluke 45 & Agilent 34401A command emulation





# 2 x 4 wire Ohms technique

- ❑ 4 wire measurement method is used for precision lo-O measurements, typically <100O
  - Eliminates test lead resistance from measurement typically 0.5O
- ❑ 2x4 wire Ohms
  - Combines 4 wire source & sense leads into two test leads
  - Simplifies connecting to the device under test, eliminating setup errors
  - Allows probing into tight or small components



**Patented split contacts provide 4 wire measurements in a single pair of test leads**

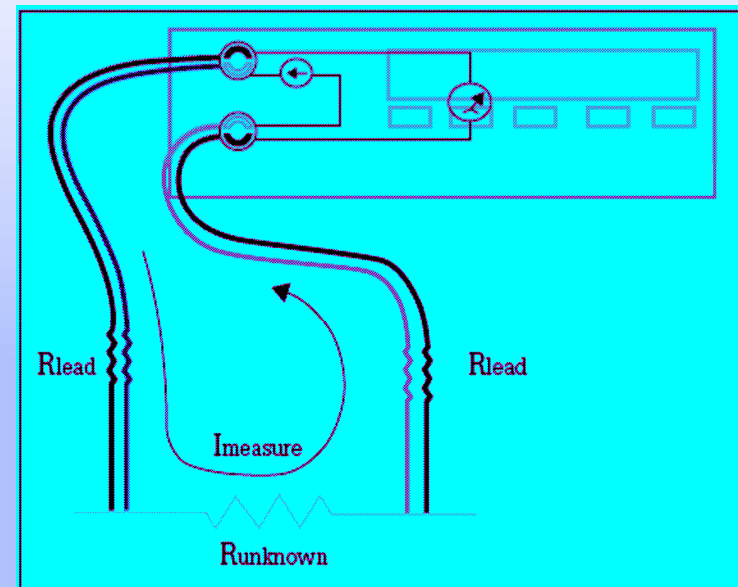


Nordic Tour

September 2006

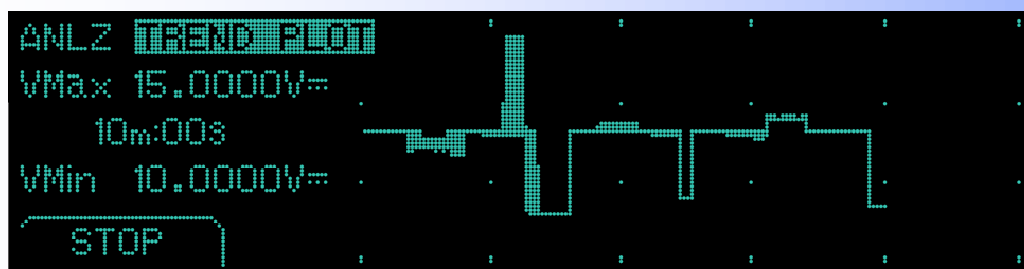
# 2 x 4 wire Ohms technique

- Applications
  - Relay contact resistance
  - Coil resistance
  - Terminators (loO)
  - Connector contacts
  - Reference dividers



# Trendplot™

- ❑ Used to understand signal dynamics – drift, glitches etc.
- ❑ Numeric based DMM cannot display signal historic trends
- ❑ 8845A & 8846A offer:
  - Graphical display that plots measurements over time
  - Quickly display signal issues like drift, glitches, surges and drop-outs
  - Real time analysis – no need to transfer data to PC

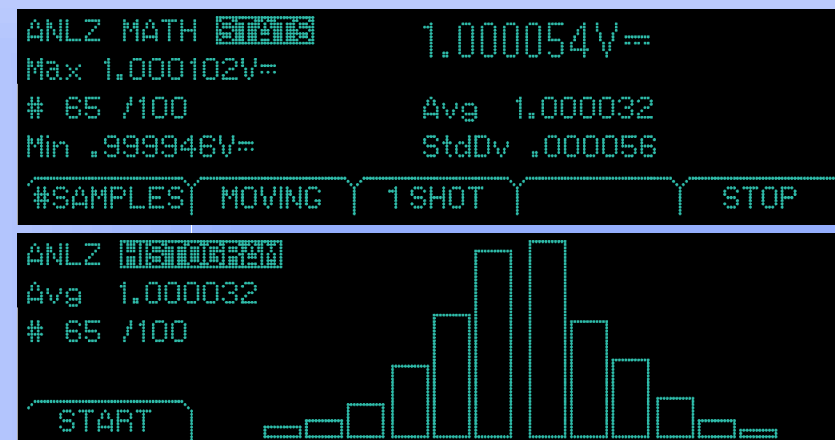
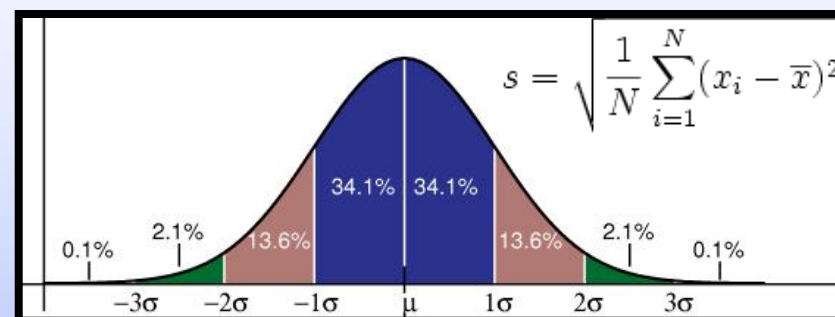


## Applications

Temperature monitoring  
 Monitoring reference test points through temperature cycle  
 Verify circuit designs  
 TCXO circuit tests  
 Capture intermittent events  
 Power supply stability tests

# Statistical analysis

- ❑ Determine the deviation or variance of the measured value relative to expected value
- ❑ Helps us understand how close and how often the measured value reaches limits of tolerance
- ❑ 8845A & 8846A offer:
  - Automatic calculation of min, max, ave and SD
  - Results presented on one screen – eliminates need to switch functions and retake measurements
  - Plots histogram – an easy to use visual analysis tool



# Easy to use !

- ❑ Dot matrix display with context sensitive menus and soft keys
- ❑ Direct access to measurement parameters and instrument settings



# Summary specifications

- Internal memory
  - 5000 readings
- Power
  - 100V, 120V, 220V, 240V
  - 47-440Hz
  - 28VA peak
  - 12W average
- Display
  - vacuum fluorescent dot matrix

	8845A	8846A
Resolution	6.5 Digits	
<b>Measurement Function</b>		
Basic VDC Accuracy	0.0035%	0.0024%
VDC	1000 V	
VAC	750 V	1000 V
Resistance (2x4 Wire Ohms)	100 $\Omega$ to 100 M $\Omega$	10 $\Omega$ to 1 G $\Omega$
ADC	100 uAmp to 10 Amp	
AAC	10 mAmp to 10 Amp	100 uAmp to 10 Amp
Freq/Period	3 Hz to 300 kHz	3 Hz to 1 MHz
Continuity / Diode Test	Yes	
Capacitance	—	1 nF to 0.1 F
Temperature RTD	—	-200° to + 600°
<b>Advanced Functions</b>		
Analytical Functions	Statistics, Histogram, TrendPlot™, Limit Compare	
Math Functions	Ratio, NULL, Min/Max	Ratio, NULL, Min/Max, dB/dBm
<b>Input Output</b>		
USB Device Port	—	USB Memory Drive port
Real Time Clock	—	Yes
Interfaces	RS232, IEEE-488.2, Ethernet	
Programming & Emulation	SCPI (IEEE-488.2), Agilent 34401A, Fluke 45	
<b>General</b>		
Weight	3.6 kg (8.0lbs)	
Size	8.46" (215mm)W, 3.46" (88 mm) H, 11.53" (293 mm) D	
Safety	Designed to comply with IEC 61010-12000-1, ANSI / ISA-S82.01-1994, CAN/CSA-C22.2 No 61010-1 CAT I 1000V CAT II 600V	
Warranty	1year	

# Models

Mainframes			
8845A	6.5 Digit Precision Multimeter, 35ppm		
8845A/C	6.5 Digit Precision Multimeter, 35ppm Cert		
8845A/SU	6.5 Digit Precision Multimeter, SW & Cable		
8845A/CSU	6.5 Digit Precision DMM, Cert, SW & Cable		
8846A	6.5 Digit Precision DMM, 25ppm USB Mem		
8846A/C	6.5 Digit Precision DMM, 25ppm USB Mem Cert		
8846A/SU	6.5 Digit Precision Multimeter, SW & Cable		
8846A/CSU	6.5 Digit Precision DMM, CERT, SW & Cable		
What's Included:		Standard Units	
TL71	TL71, TEST LEAD SET,PREMIUM DMM		
LCI Line Cord	Line Power Cord		
Fuse	Spare Line Power fuse		
CARD	Statement of Calibration Practices (8 1/2 x 11 Sheet paper)		
	WEEE Information Sheet		
	Registration Card, Generic, Web Access		
	Accessories Brochure		
Warranty	Warranty Information Document		
CD-ROM	CD-Rom, Programmer And Users Manual, 8845A/8846a		
FVF-SC5	FlukeView Forms -Basic For 8845/8846		
884xA SU (Software plus Cable bundle)			
FVF-UG	FlukeView Forms Software Upgrade - NO cable		
884X-USB	USB to RS232 cable adapter		



# Accessories

884X – 6.5 Digit Precision DMM

Accessories	Test Leads & Probes
TL71	TL71, Test Lead Set, Premium DMM
TL910	Precision Electronic Probe Set
TL80A	Basic Electronic DMM Test Set
8845A-TPIT	Test Probe IC Tip (Set Red & Black)
8845A-EFPT	Extended Fine PT Tip Adap Set (Red/Black)
TL2X4W-PT	2x4 Wire Ohms Test lead
TL2X4W-KC	2x4 Wire Ohms Kelvin Clip
TL2X4W-TWZ	2x4 Wire Ohms SMD Test Tweezer
884X-RTD	100 Ohm RTD Temperature Probe
884X-SHORT	4-Wire short
Interface Cables	
884X-USB	USB to RS232 cable adapter
884X-ETH	Ethernet Interface Cable
RS43	RS232 Cable (2m)
Y8021	IEEE488 cable (1m)
Y8022	IEEE488 cable (2m)

Memory	
884X-512M	USB Memory 512M
884X-1G	USB Memory 1 GB
Software	
FVF-UG	FlukeView Forms Software Upgrade - NO cable
FVF-SC4	FlukeView Forms W/Cable For 8845/8846
Other	
Y8846	Rack Mount Kit
FUSE	FUSE, 11A, 1000V, FAST, .406INX1.5IN, BULK
FUSE	FUSE, .440 mA, 1000V, FAST, .406X1.375, BULK

# Summary

- ❑ Provides best in class analogue performance
- ❑ Complete suite of measurement functions for every application
- ❑ New innovative techniques and functions to improve testing and troubleshooting



*The best performance, utility and value in 6.5 digit multimeter category*