

# the new multimeter with more function power

Fluke's new DMM, Model 8000A, gives you more functions for your money. There are **26** different ranges, including five ranges of ac and dc voltage, five ranges of ac and dc current and six ranges of resistance. Pushbutton control gives you the most reliable, error free operation possible. The new self-zeroing circuit eliminates any possible offset uncertainty in the instrument.

### **Overload Protection**

It takes a lot to overload the 8000A. For instance, you can put 1,000 volts on the millivolt range with no damage to the instrument. All current ranges are protected from overload with front-panel replaceable fuse.

Tough and light

The Fluke 8000A is a sturdy design that can withstand an 8 foot drop test and still come up working within specifications. The case is molded from a high impact plastic that will withstand the most severe handling. And because the 8000A weighs under three pounds (four pounds with batteries) it's the most portable multimeter you've ever used. When you receive it, you'll find it's a complete instrument, with test leads, spare fuses, and fully detailed manual. When you take it from the shipping carton, it's ready to use.

## Plenty of options and accessories

Fluke offers you a wide choice of low cost options for the 8000A. Choose rechargeable battery power, digital printer output, 30 KV probe, high frequency probe, clamp-on probe for higher ac currents, a fitted soft vinyl case with compartments for accessories, front panel dust cover, or rack mounting kits.

# The Fluke 8000A, built by a world leader in instrumentation

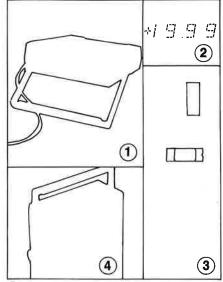
When you buy a Fluke 8000A, you can be sure of the same quality and the inherent performance characteristic of all Fluke products.

Your Fluke 8000A is a professional product designed to be the very best 3½ digit multimeter ever made. Compare the internal and external design quality to any other 3½ digital multimeter on the market.

The custom designed IC chips form the main circuitry of the 8000A. After intensive design effort, they were especially made for Fluke by one of the world's leading semiconductor companies. These circuits feature both analog and digital large scale integration (LSI), with more than 3,000 components integrated within one-eighth-inch square wafers for cost performance breakthroughs and improved reliability. They incorporate Fluke's unique self-zero feature, as well as digital determination of polarity. For the display, we use a light emitting diode readout with numbers styled for easy reading. And just like the most expensive Fluke multimeters, the 8000A uses single circuit-board construction for reliability and quick simplified service.

## For the price, no better 31/2 DMM

It all adds up. At this price, no other digital multimeter offers you 12 month guaranteed accuracy, foolproof operation, year-in, year-out reliability, and quick service. (48-hour turnaround service in U.S., Canada, Europe and Far East.)



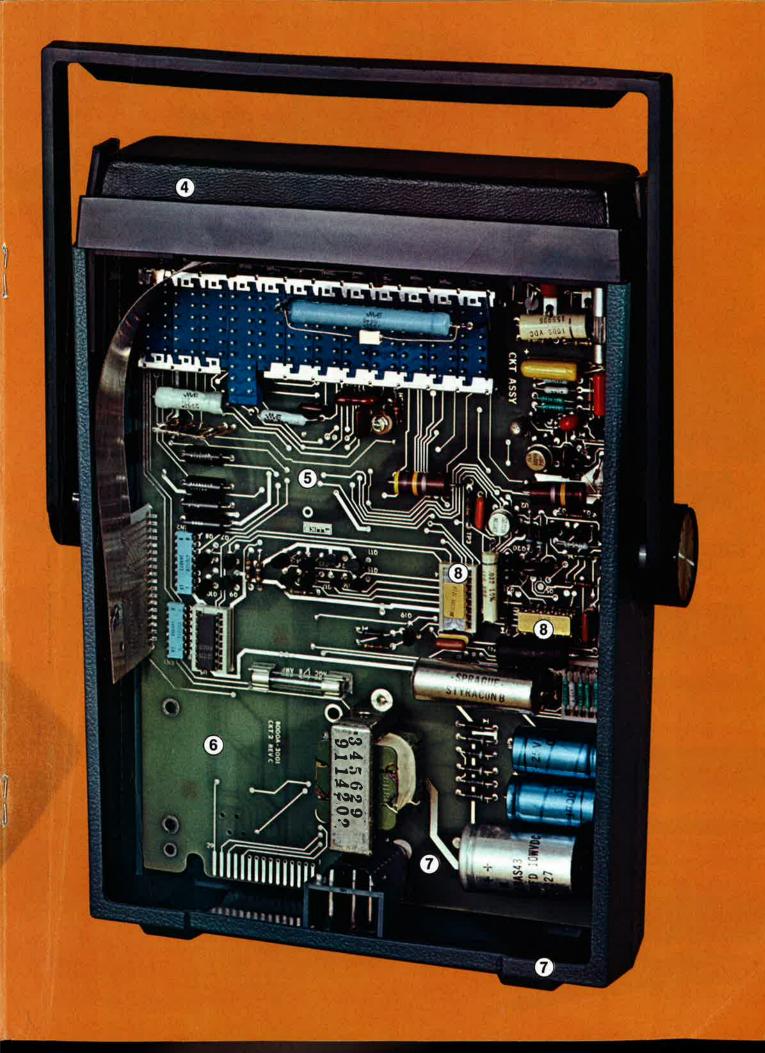
1 Model 8000A with tilt-up handle and test leads 2 digit readout 3 LSI chips 4 Carrying case

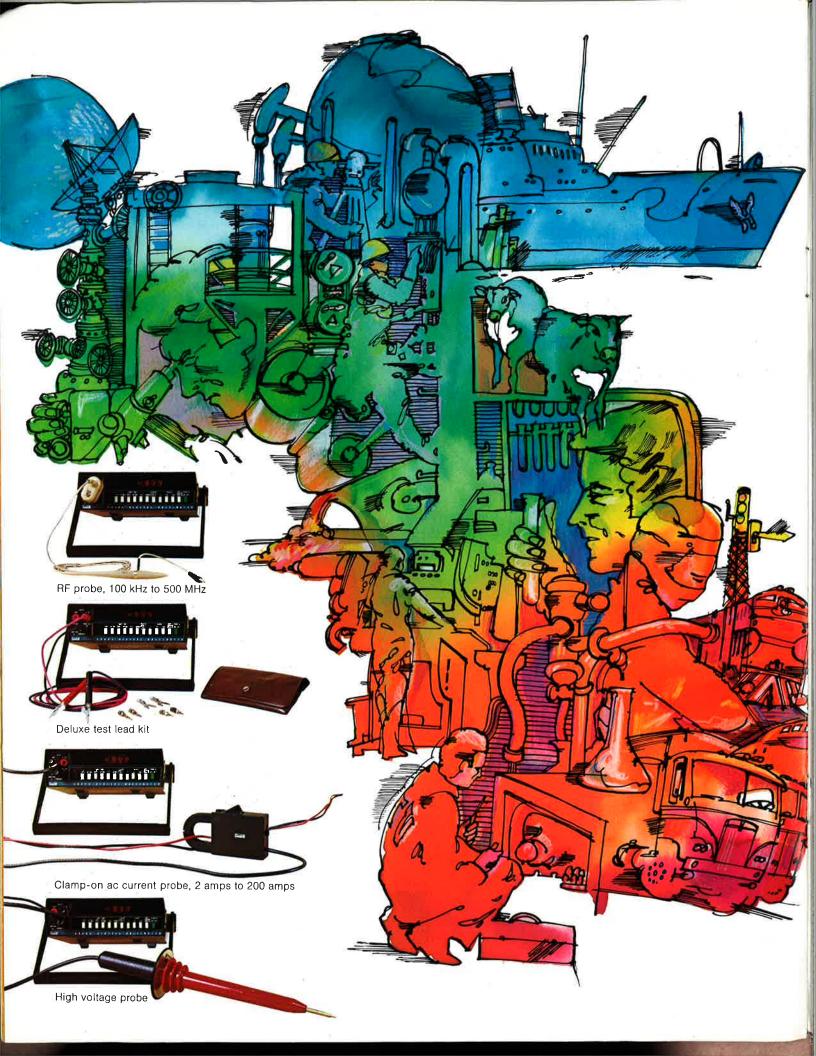
1 The 8000A offers excellent overvoltage protection—you can accidentally apply 1200 V while measuring 100 microvolts without damage. All current measurements from 100 nanoamps up are protected to 2 amps with a convenient front-panel replaceable fuse (spare fuses are included so you have them if you need them!) 2 A large, bright LED readout—with over twice the visibility of many competitive units. 3 Five full functions with a total of 26 ranges. Fluke offers you more Function Power. Optional probes extend the 8000A's measurement capability to 200 amps ac current, 30,000 volts dc, and 500 MHz response on ac volts. 4 Front panel dust cover option helps protect the instrument during rough field use. 5 Single circuit-board construction gives you convenient access to

all parts and improves reliability over multi-board designs.

6 The rechargeable battery pack option goes here to provide over 8 hours of fully portable operation. Or you can choose the digital printer output option for datalogging and systems applications. 7 The 8000A's sturdy case and internal design give you a multimeter that can take the shock and drops of rough field use and still come up working within specifications. 8 These two Fluke L.S.I. integrated circuits contain over 3,000 microminiaturized electrical components. As a result of our advanced technology, the 8000A has far fewer parts in it than any competitive DMM. The advantages to you: More performance for your money, outstanding reliability, and simplified calibration and maintainence.







## **specifications**

#### DC VOLTAGE

Ranges

Accuracy
(1 year, 15°C to 35°C)
Input Impedance
Normal Mode Rejection
Common Mode Rejection
(1 kΩ unbalance)
Response Time
Maximum Input Vol-

#### **AC VOLTAGE**

Ranges

tage

Accuracy
(1 year,15°C to 35°C)
Input Impedance
Common Mode Rejection (1 kΩ unbalance)
Response Time
Maximum Input Voltage

#### **DC CURRENT**

Ranges

Accuracy (1 year, 15°C to 35°C) Voltage Burden Response Time Maximum Input

#### **AC CURRENT**

Ranges

Accuracy (1 year, 15°C to 35°C)

Voltage Burden Response Time Maximum Input

#### RESISTANCE

Ranges

Accuracy (1 year, 15°C to 35°C)

Response Time

Current through Unknown

Maximum Input Voltage

#### GENERAL

Max. Common Mode Voltage Operating Temp. Range Storage Temp. Range

Humidity Range Display Size

Weight

Power Battery Option (-01)  $\pm 199.9 \text{ mV}, \pm 1.999 \text{ V}, \pm 19.99 \text{ V}, \\ \pm 199.9 \text{ V}, \pm 1199 \text{ V} \\ \pm (0.1\% \text{ of reading } + 1 \text{ digit})$ 

10 MΩ, all ranges

Greater than 60 dB @ 50 Hz, 60 Hz

Greater than 120 dB @ dc and 50 Hz, 60 Hz

1/2 second

1200 V rms, all ranges

199.9 mV, 1.999 V, 19.99 V, 199.9 V, 1199.9 V , 1199 V 45 Hz to 10 kHz  $\pm$  (0.5%  $\pm$  2 digits) 10kHz to 20 kHz  $\pm$  (1%  $\pm$  2 digits) 10 M $\Omega$  in parallel with 100 pf

Greater than 60 dB @ 50 Hz, 60 Hz 3 seconds, worst case 1200 V rms, not to exceed 10<sup>7</sup> volt • Hz product on 20, 200, 1200 V ranges. 500 V rms on 200 mV and 2 V ranges.

 $\pm\,199.9~\mu\text{A},~\pm\,1.999~\text{mA},~\pm\,19.99~\text{mA},\\ \pm\,199.9~\text{mA},~\pm\,1999~\text{mA}\\ \pm\,(0.3\%~\text{of reading}~+~1~\text{digit})$ 

0.22V maximum up to 20 na/45V at 2 amps ½ second 2 amps rms (fuse protected)

199.9  $\mu$ A, 1.999 mA, 19.99 mA, 199.9 mA, 199.9 mA, 1999 mA 45 Hz to 10 kHz  $\pm$  (1% of reading  $\pm$  2 digits) except 2000 mA range: 45 Hz to 3 kHz  $\pm$  (1% of reading  $\pm$  2 digits) 0.22V maximum up to 20 na/45V at 2 amps 3 seconds, worst case 2 amps rms (fuse protected)

199.9Ω, 1.999 kΩ, 19.99 kΩ, 199.9 kΩ, 1999 kΩ, 19.99 MΩ  $\pm (0.2\%$  of reading + 1 digit) all ranges except:  $\pm (0.5\%$  of reading + 1 digit) on 20 MΩ range ½ second, all ranges except: 4 seconds on 20 MΩ range 200Ω range, 1 mA 2 kΩ range, 1 mA 20 kΩ range, 100  $\mu$ A 200 kΩ range, 1  $\mu$ A 2000 kΩ range, 1  $\mu$ A 2000 kΩ range, 1  $\mu$ A 20 MΩ range, 0.1  $\mu$ A 200Ω and 2 kΩ ranges, 130 V rms 20 kΩ through 20 MΩ ranges, 250 V rms

#### 1200 V peak

-10°C to +55°C -40°C to +60°C with batteries)
0 to 80% RH
7-segment LED, 0.25" character height 8½" wide x 2½" high x 10" deep (22 cm x 6 cm x 25 cm)
2¾ pounds (1, 2 kilograms) without batteries
4 pounds (1, 8 kilograms) with batteries 100-115-230 V ac, 50 to 400 Hz, 2 watts 8 hour minimum operation on internal rechargeable batteries

#### **OPTIONS**

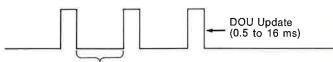
Rechargeable Battery Pack (8000A-01)

The rechargeable battery pack is entirely self-contained within the 8000A package. It is supplied with standard "D" sized nickle-cadmium batteries which provide, under normal conditions, 300 to 500 discharge-charge cycles of operation. The battery pack will provide a minimum of eight hours operation, with recharge requiring less than 14 hours. Recharging is automatic whenever unit is plugged in and does not affect normal bench operation.

Digital Printer Output (8000A-02)

The data output option provides parallel, buffered BCD data on the digital readout, polarity and overload. It is suitable for driving a digital printer or providing input to systems. The non-isolated buffered output will sink up to 10mA of current and has a 15Kohm pull-up resistor.

A "Busy" signal is "one" while the DOU output is being updated to the last measurement. This update requires from 0.5 to 16 ms depending on the reading. The data output is available from 110 to 200 ms between busy signals. A single update-readout cycle can be triggered externally.



Data Available 110 to 200 ms

One update cycle with continuous output availability occurs after external "date update" command.

#### **ACCESSORIES**

#### Deluxe Test Lead Kit (A80)

Universal test leads having two color coded leads with insulated, threaded adapters on each end suitable for attachment of the following adapters: 1. Banana Plugs, 2. Pin Tips, 3. Test Prod Tips, 4. Alligator Clips, 5. Binding Post Lugs.

High Voltage Probe (80K-30)

Voltage Range, 1 kV-30 kV Input Resistance, 1000 M $\Omega$  Division Ratio, 1000:1 Ratio Accuracy,  $\pm 1.0\%$  @ 25 kV

Operating Temp. Range, 0-50° C Humidity Range, 0-80% RH Cable Length, 5' (1.5 meters)

Note:

(1) Calibrated for 10 M $\Omega$  voltmeter input resistance.

(2) The overall accuracy specification from 20 kV to 30 kV is ±2%; this includes the total effects of ratio accuracy, voltage coefficient, temperature coefficient, long-term stability, power coefficient, and 8000A multimeter accuracy.

#### RF Probe (80RF)

Input Voltage Range: Response: 0.25 to 30 V

Peak response calibrated to read rms

value of sine wave.

Accuracy: 100 kHz -100 MHz 100 MHz -500 MHz  $+10^{\circ}$ C to  $+30^{\circ}$ C  $\pm 5\%$   $\pm 7\%$   $\pm 15\%$   $<\pm 3$  dB at 10 kHz

Input Z
Maximum Input V
Cable Connection

Accessories

4 M $\Omega$  shunted by 2  $\pm$  0.5 pf 30 V rms ac, 200 V dc

Shielded dual banana plugs on ¾ inch centers. Cable length 4 feet (1.2 meters) minimum.

minimum.

Ground lead, straight tip, hook tip, high frequency adapter.

#### Clamp on AC Current Probe (801-600)

Ranges, 2 to 600 amps, accuracy + 3% 60 to 400 Hz (2" opening) Carrying Case (C80)

Carrying Case (Cou)

Fitted soft vinyl case, with carrying strap and storage compartment for test leads, power cord and other compact accessories.

#### Front Panel Dust Cover (M00-100-714)

Snap-on dust cover provides protection for front panel and controls.

#### Rack Mount Kits (M00-200-611/612)

Three rack mount kits provide full width (19 inch E.l.A. standard) panel mounts  $3\frac{1}{2}$  inches high. The -611 provides right or left offset mounting of the 8000Å, the -612 is a center mount unit and the -613 mounts two units side by side.

# a simple guarantee you can believe

Fluke guarantees that any model of the 8000A will meet the specifications published herein throughout one full year from the date you receive it. Further, any part which fails during that time will be replaced and the instrument recalibrated without charge.

## sales and service

Throughout the United States, Canada, Europe and Far East immediate delivery of the 8000A comes from over 50 different locations. (If your 8000A should fail, you are guaranteed a 48-hour turnaround from over 30 different locations.)

For your convenience, the city and phone number of your nearest Fluke office are listed below.

FOR U. S. AND CANADA:
Albuquerque, NM (505) 299-7658 Atlanta, GA (404) 874-9925 Boston, MA (617) 861-8620 Chicago, IL (312) 298-3600 Cleveland, OH (216) 267-0445 Dallas, TX (214) 231-2573 Dayton, OH (513) 434-7500 Denver, CO (303) 934-5505 Detroit, MI (313) 892-2500 Glastonbury, CT (203) 633-0777 Greensboro, NC (919) 273-1918 Honolulu, HI (808) 533-6095 Houston, TX (713) 621-0040 Huntsville, AL (205) 881-6220 Indianapolis, IN (317) 244-2456 Los Angeles, CA (213) 245-9404 Minneapolis, MN (612) 884-4336 Orlando, FL (305) 896-4881 Philadelphia, PA (215) 248-5050 Pittsburgh, PA (412) 892-2953 Pleasantville, NY (914) 769-1811 Phoenix, AZ (602) 947-7841 Rochester, NY (716) 266-1400 San Diego, CA (714) 565-2555 Santa Clara, CA (408) 244-1505 Seattle, WA (206) 774-2211 St. Louis, MO (314) 423-1234 Union, NJ (201) 687-8737 Washington, D. C. (301) 881-5300 Williamsburg, VA (703) 245-1786 Montreal, P.Q. (514) 670-1212 Ottawa, ONT (613) 725-3354 Calgary, ALTA (603) 725-3354
FOR INTERNATIONAL:
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Kontrol GmbH & Co. KG 420202 Vienna, Austria AUSTRALIA
Elmeasco Instruments Pty Ltd 939-7944 Brookvale, Australia BELGIUM
C. N. Rood S.A
Ambriex S.A
CARIBBEAN West Indies Sales Co (809) 723-3743 San Juan, Puerto Rico
CHILE Coasin Chile Ltd

CHINA, Peoples Republic of May Lee Industries (212) 532-9200 New York, New York
COLOMBIA Marones, Ltda
Tage Olsen A/S294800 Copenhagen, Denmark ECUADOR
Proteco Coasin Cia, Ltd 526759 Quito, Ecuador
EASTERN EUROPE Kontrol GmbH & Co. KG420202 Vienna, Austria
FINLAND Oy Findip AB717799 Helsinki, Finland
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IRAN Berkeh Company Ltd 628294 Tehran, Iran
ISRAEL R. D. T. Electronics Engineering Ltd
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JAPAN Toyo Trading Company, Ltd 279-0771 Tokyo, Japan
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Deemtee Electrontechnics Ltd.
Lagos, Nigeria
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