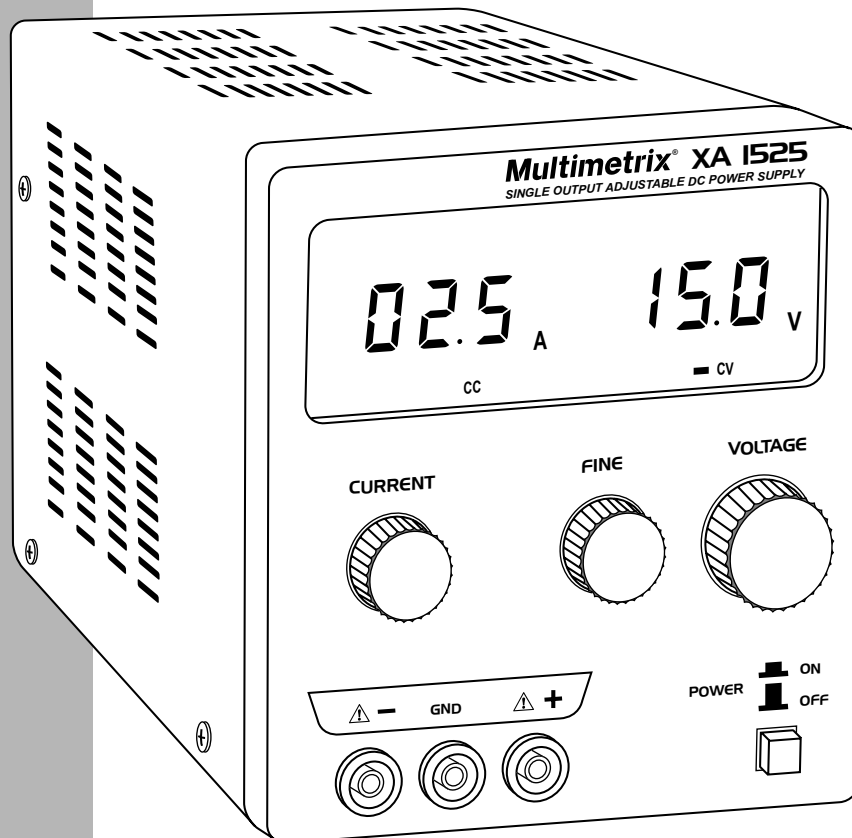


- SINGLE OUTPUT  
POWER SUPPLIES

# XA 1525

# XA 3051



ENGLISH

User Manual

**Multimetrix®**

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# CHAPTER 1

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## INTRODUCTION

### **Warning**

These safety warnings are provided to ensure the safety of personnel and proper operation of the instrument.

- Read the instruction manual completely and follow all safety information before operating this instrument.
- Only use the leads that are supplied with the instrument. Before using them, always check that they are in perfect working order.
- Any break in the protective conductor, inside or outside the instrument, or disconnection of the protective earth terminal may make the instrument dangerous. Intentional breaking is prohibited.
- When this instrument is supplied via an auto-transformer, in order to reduce the external voltage, make sure that the common terminal is connected to the neutral (earthed pole) of the supply circuit.
- The plug should only be inserted into a socket equipped with a grounding contact. The safety connection must not be broken by use of an extension lead without a protective conductor.
- When the required voltage and current parameter values are unknown, start by using the lowest values.
- Before disconnecting the connection leads of the circuit being tested, make sure that the power supply is switched off. This prevents the creation of break or closure extra-currents which may melt the fuse at high currents.
- Never exceed a total output of 60V peak in relation to the earth (common mode).
- The instrument must be placed in a ventilated room. Take care not to obstruct the ventilation holes.

## 1.1 International Electrical Symbols



This symbol signifies that the instrument is protected by double or reinforced insulation. Use only specified replacement parts when servicing the instrument.



This symbol on the instrument indicates a WARNING and that the operator must refer to the user manual for instructions before operating the instrument. In this manual, the symbol preceding instructions indicates that if the instructions are not followed, bodily injury, installation/sample and product damage may result.



Risk of electric shock. The voltage at the parts marked with this symbol may be dangerous.

## 1.2 Receiving Your Shipment

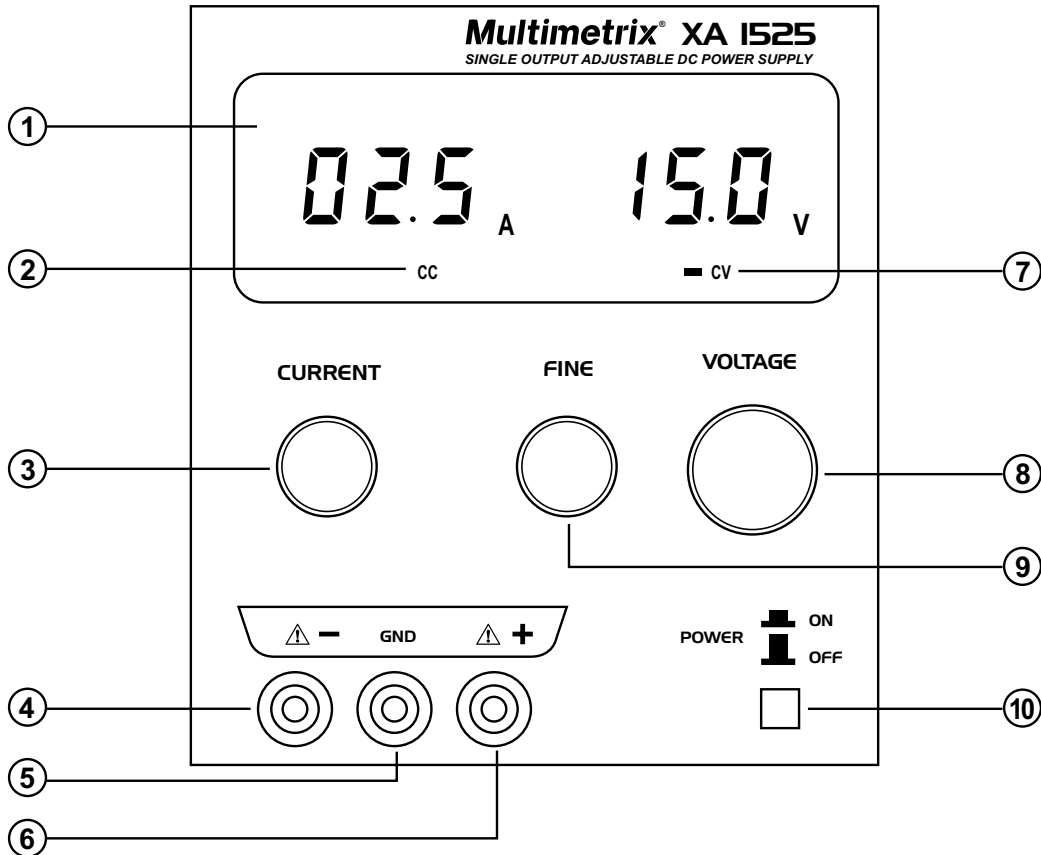
Upon receiving your shipment, make sure that the contents are consistent with the packing list. Notify your distributor of any missing items. If the equipment appears to be damaged, file a claim immediately with the carrier and notify your distributor at once, giving a detailed description of any damage. Save the damaged packing container to substantiate your claim. Do not use an instrument that appears to be damaged.

## 1.3 Ordering Information

**Model XA 1525** ..... **Cat. #MMX-XM1525**  
*Includes DC Power Supply, 120V US Power Supply Cord and User Manual.*

## PRODUCT FEATURES

### 2.1 Control Features



1. Voltage and Current LED Display
2. Constant Current (CC) Indicator
3. Current Adjustment Potentiometer
4. (-) Output Terminal
5. Ground Terminal
6. (+) Output Terminal
7. Constant Voltage (CV) Indicator
8. “Coarse” Voltage Adjustment
9. “Fine” Voltage Adjustment
10. ON/OFF Power Switch

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# CHAPTER 3

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## SPECIFICATIONS

### 3.1 Electrical Specifications

	<b>XA 1525</b>	<b>XA 3051</b>
<b>Voltage Output</b>	0 to 15VDC	0 to 30VDC
<b>Current Output</b>	0 to 2.5A	0 to 5A
<b>Display Accuracy</b>	Volts: $\pm 1\% + 2\text{cts}$ Amps: $\pm 2\% + 2\text{cts}$	
<b>Line Regulation</b>	CV: $\pm 0.05\% \pm 5\text{mV}$ CC: $\pm 0.5\% \pm 3\text{mA}$	
<b>Power Supply</b>	115VAC $\pm 10\%$ , 230VAC $\pm 10\%$ , 50/60Hz	

### 3.2 Mechanical Specifications

**Display:** Two 3-Digit Red LED Displays  
Voltage & Current displayed simultaneously on separate displays  
CV or CC operation indication with LED

**Dimensions:** 10.6 x 5.2 x 6.3" (270 x 132 x 160mm)

**Weight:** 14 lbs (6.3kg)

### 3.3 Safety Specifications

Immunity: EN 55024

Emission: EN 55022 – EN 61000-3-2 – EN 61000-3-3

Cat II, 300V, Pollution Degree 2



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# CHAPTER 4

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## OPERATION

### 4.1 Before Using the Instrument

- When the required voltage and current parameter values are not known, start by using the lowest values.
- Before disconnecting the leads of the circuit under test, make sure that the power supply is turned off. This prevents the creation of break or closure extra-currents which may melt the fuse at high currents.
- Never exceed a total output of 60V peak in relation to the ground.
- The instrument must be placed in a ventilated room. Do not obstruct the ventilation holes.
- Before opening the instrument, disconnect it from all sources of electric current and from the measuring circuits; make sure that you are not charged with static electricity, which could irreparably damage the instrument's internal components.



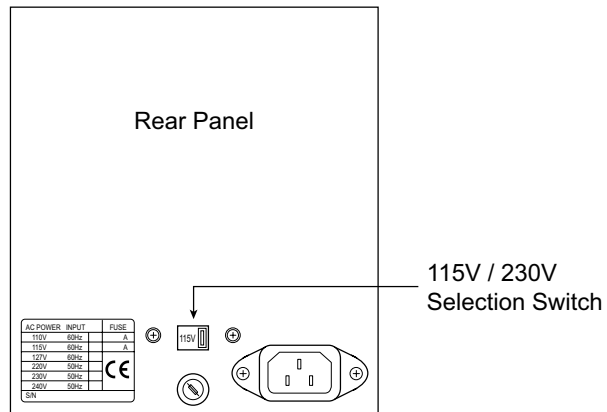
**When the instrument is open, some of the internal capacitors may be dangerous, even once the instrument has been powered down.**

**In the event of faults or abnormal constraints, turn the instrument OFF and do not use it until it has been checked.**

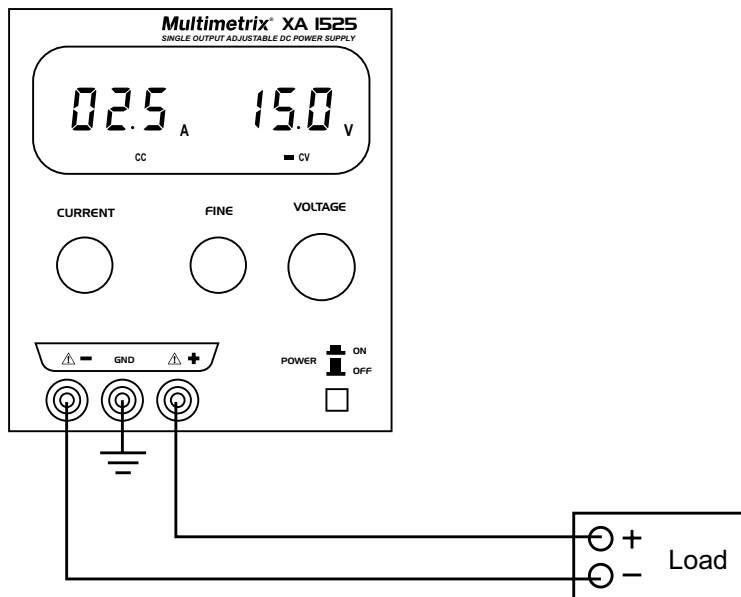
## 4.2 Operating Instructions

### 4.2.1 Setting the Supply Voltage

To set the supply voltage from 115V to 230V or from 230V to 115V, slide the switch to the appropriate setting on the rear panel of the instrument.



### 4.2.2 Voltage and Current Adjustment



- Turn the Power Supply off.
- Connect the load as shown above.
- Turn the Current and Voltage output to zero (the left).
- Turn the Power Supply on.
- Adjust the Current and Voltage as needed.
- Current and Voltage output level will be indicated by LEDs.
- Adjust the output to the desired value.



### **4.2.3 Using the unit as a Current Constant Source**

- Turn the Power Supply off.
- Turn the Voltage and Fine adjustments clockwise (right turn) all the way to the end, and the Current Adjustment Potentiometer counter-clockwise (left turn) to the end (to zero).
- Then connect the load.
- Turn the Power Supply on.
- Turn the Current Adjustment Potentiometer to get desired current.
- The CC LED indicator should be on.

### **4.2.4 Using the unit as a Constant Voltage Source**

- Turn the Power Supply off.
- Set the Current Adjustment Potentiometer to its maximum value.
- Turn the unit on and adjust the Voltage Coarse and Fine adjustments.
- To adjust the current limit, turn the Power Supply off and short-circuit the (+) and (-) outputs.
- Turn the Power Supply back on, then turn the Current Adjustment Potentiometer to the desired limit current.
- Turn the Power Supply off. Remove the short-circuit and connect the load.
- Turn the Power Supply back on.
- The CV LED indicator should be on.

To get a more accurate measuring value, you should calibrate by external circuit with precision measuring instrument.

# MAINTENANCE

### 5.1 **Warning**

- For maintenance use only specified factory replacement parts.
- To avoid electrical shock, do not attempt to perform any servicing unless you are qualified to do so.
- To avoid electrical shock and/or damage, do not get water or other foreign agents into the case. Turn the instrument OFF and disconnect the unit from all the circuits before opening the case.

### 5.2 **Fuse Replacement**

The fuse protects the primary coil of the power supply transformer against line voltage errors. The fuse location is on the rear panel.

Before opening the power supply to change the fuse, you must disconnect the leads and power cord.

**Only use a fuse of the following type:**

- Model XA 1525 - T 1.5A / 250V
- Model XA 3051 - T 2A / 250V

### 5.3 **Cleaning**

- Disconnect the instrument, then clean it with a cloth lightly moistened with soapy water.
- Wipe with a clean dry cloth. Make sure it has completely dried before use.
- Do not use abrasives or solvents.

### 5.4 **Storage**



**An abrupt change in the ambient temperature may lead to condensation inside the instrument and cause short circuits.**

**Let the power supply stabilize in temperature before use.**

- To ensure proper operation, wait for the instrument to return to normal measuring conditions if it has been stored in extreme environmental conditions for a long period of time.

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## Repair and Calibration

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To ensure that your instrument meets factory specifications, we recommend that it be scheduled back to our factory Service Center at one-year intervals for recalibration, or as required by other standards or internal procedures.

### For instrument repair and calibration:

You must contact our Service Center for a Customer Service Authorization Number (CSA#). This will ensure that when your instrument arrives, it will be tracked and processed promptly. Please write the CSA# on the outside of the shipping container. If the instrument is returned for calibration, we need to know if you want a standard calibration, or a calibration traceable to N.I.S.T. (Includes calibration certificate plus recorded calibration data).

**Ship To:** Multimetrix®  
15 Faraday Drive  
Dover, NH 03820 USA  
Tel: (800) 945-2362 (Ext. 360)  
(603) 749-6434 (Ext. 360)  
Fax: (603) 742-2346 or (603) 749-6309  
repair@multimetrix.com

(Or contact your authorized distributor)

Costs for repair, standard calibration, and calibration traceable to N.I.S.T. are available.

**NOTE: You must obtain a CSA# before returning any instrument.**

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## Technical and Sales Assistance

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If you are experiencing any technical problems, or require any assistance with the proper operation or application of your instrument, please call, mail, fax or e-mail our technical support team:

Multimetrix®  
200 Foxborough Boulevard  
Foxborough, MA 02035 USA  
Phone: (800) 343-1391  
(508) 698-2115  
Fax: (508) 698-2118  
techsupport@multimetrix.com  
www.multimetrix.us

**NOTE: Do not ship Instruments to our Foxborough, MA address.**

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## Limited Warranty

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The Model XA 1525 and XA 3051 are warranted to the owner for a period of one year from the date of original purchase against defects in manufacture. This limited warranty is given by Multimetrix®, not by the distributor from whom it was purchased. This warranty is void if the unit has been tampered with, abused or if the defect is related to service not performed by Multimetrix®.

**For full and detailed warranty coverage, go to [www.multimetrix.us](http://www.multimetrix.us). The warranty information is located in our customer service section.**

### **What Multimetrix® will do:**

If a malfunction occurs within the one-year period, you may return the instrument to us for repair, provided you submit a proof of purchase. Multimetrix® will, at its option, repair or replace the faulty material.

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## Warranty Repairs

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### **What you must do to return an Instrument for Warranty Repair:**

First, request a Customer Service Authorization Number (CSA#) by phone or by fax from our Service Department (see address below), then return the instrument along with the signed CSA Form. Please write the CSA# on the outside of the shipping container. Return the instrument, postage or shipment pre-paid to:

Multimetrix®  
Service Department  
15 Faraday Drive • Dover, NH 03820 USA  
Tel: (800) 945-2362 (Ext. 360)  
(603) 749-6434 (Ext. 360)  
Fax: (603) 742-2346 or (603) 749-6309

**Caution:** To protect yourself against in-transit loss, we recommend you insure your returned material.

**NOTE:** You must obtain a CSA# before returning any instrument.

# ***Multimetrix***<sup>®</sup>

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[www.multimetrix.us](http://www.multimetrix.us)