multicomp PRO



Single Output Power Supply
MP710086 & MP710087

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Please read these instructions carefully before use and retain for future reference.

- Check that the voltage indicated on the rating plate corresponds with that of the local network before connecting the product to the mains power supply.
- When using electrical appliances basic safety precautions should always be followed.
- Please operate according to this manual, otherwise the protection provided by the device will be impaired or fail.
- There are no user-serviceable parts in this product. Refer servicing to qualified personnel.
- Do not operate this product with a damaged plug or cord, after a malfunction or after being dropped or damaged in any way.
- Check the product before use for any damage. Should you notice any damage on the cable or casing, do not use.
- This product must be earthed using the mains power cord ground connection. The product must be correctly grounded before any connection is made to the output terminals.
- Children should be supervised to ensure that they do not play with the product.
- Always disconnect from the mains when the product is not in use or before cleaning.
- Do not use the product for any purpose other than that for which it is designed.
- Do not operate or store in an environment of high humidity or where moisture may enter the product as this can reduce insulation and lead to electric shock.
- Do not cover or in any way obstruct the cooling vents or the rear fan grille. Use in a well ventilated area.
- Take great care if working on exposed circuitry to avoid risk of electric shock or other injury.

1. Safety Terms and Symbols

Terms in this manual (The following terms may appear in this manual):

Warning: Warning indicates conditions or practices that could result in injury or loss of life.

Caution: Caution indicates the conditions or practices that could result in damage to this product or other property.

Terms on the product. The following terms may appear on this product:

Danger: Indicates an immediate hazard or injury possibility.

Warning: Indicates a possible hazard or injury.

Caution: Indicates potential damage to the instrument or other property.

Safety Symbols

Symbols on the product. The following symbols may appear on the product:


Hazardous Voltage


Refer to Manual


Protective Earth Terminal


Chassis Ground


Public Ground

2. Panel and Interface

2.1.1 Front Panel

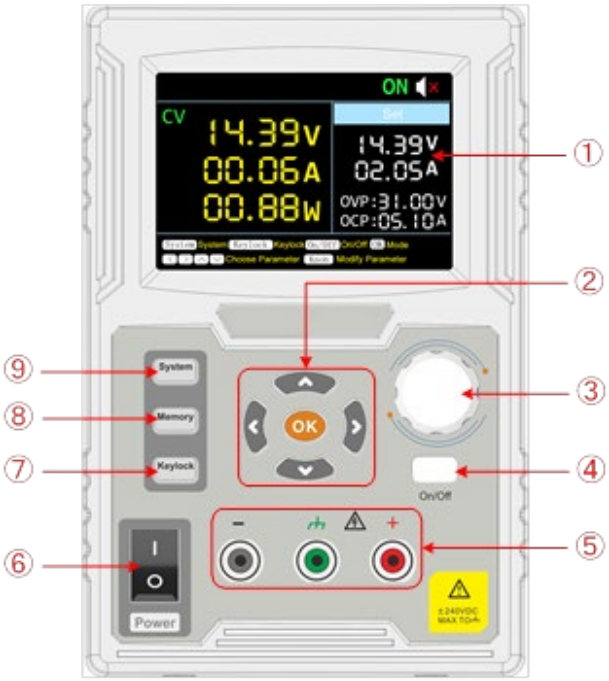


Figure **3-1** Front Panel Overview

①	**Display Area**	Display user interface.
②	**Direction Key**	Select menu; select parameters; Edit the cursor.
	OK Key	1) Enter the menu or confirm the entered parameters. 2) Switch the display mode between Number & Curve.
③	**Rotary control**	Select the main menu or change the value, function equals to the confirmation key.
④	**On/Off Key**	Turn on/off the channel.
⑤	**Channel Output Terminal**	Output access of channel.
⑥	**Power Button**	Turn on/off the instrument.
⑦	**Keylock Key**	Long press this button for more than 5 seconds to lock the panel button. Pressing any other button while locked does not work. Long press this button for more than 5 seconds to unlock.
⑧	**Memory Key**	5 sets of channel parameters can be stored for quick output.
⑨	**System Key**	System settings, interface settings, system information.

Button light instruction

On/Off key：The key lights up when the channel is active.

2.1.2 Rear Panel

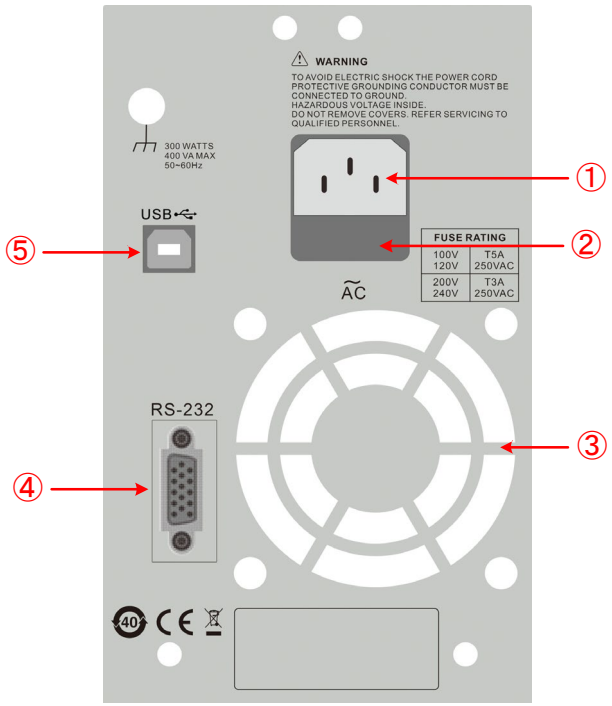


Figure 3-2 Rear Panel Overview

①	**AC Power Input Jack**	AC power input interface
②	**Fuse**	Power fuse
③	**Air Vent**	Air vent
④	**COM port**	Connect the serial port of the instrument and external device
⑤	**USB port**	It is used to transfer data when external USB equipment connects to the power supply regarded as "slave device". Support USBTMC communication protocol.

2.1.3 User Interface

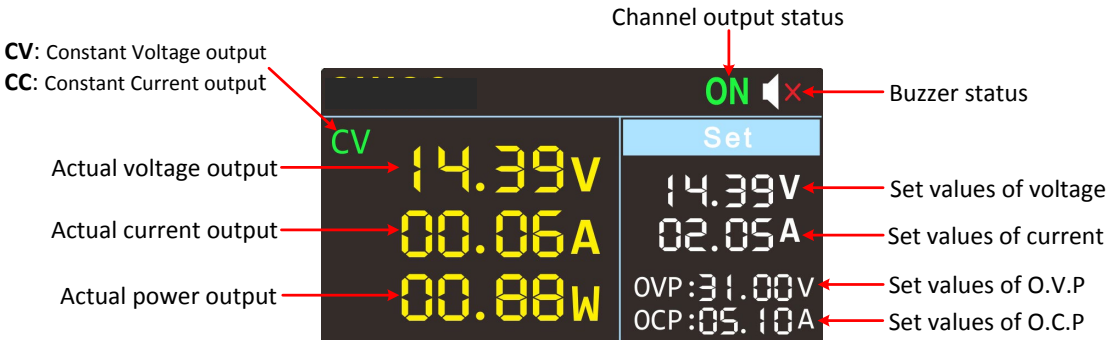


Figure 3-3 User Interface

2.2 General Inspection

When you have got a new power supply, it is suggested that you should perform a general inspection on the instrument according to the following steps.

Check whether there is any damage on it due to transportation

If the packing boxes or foam cushions are found to have serious damage, keep them in a safe place until the complete instrument and accessories have passed the electrical and mechanical tests.

Check the accessories

Check that all the parts and accessories are included and in serviceable condition.

Check the complete instrument

If the instrument is damaged in its appearance or it fails in normal operation or performance test, do not use it and contact the supplier directly.

2.3 Power Inspection

(1) Use the power cord supplied with the accessories to connect the instrument to the AC power.

> **Warning:**
> To prevent electric shock, make sure that the instrument is properly grounded.

(2) Press the **power button** on the front panel, the button light will be on, and the startup screen will be displayed on the screen.

2.4 Output Inspection

Output inspection is to ensure that the instrument can achieve its rated outputs and properly respond to operation from the front panel. For the procedures below, it is suggested that you read "*Turn On/Off the Channel Output*" on page 8 and "*Set the Output Voltage/Current*" on page 7.

2.4.1 Voltage Output Inspection

The following steps verify basic voltage functions without load:

(1) When the instrument is under no load, select a channel and ensure the output current setting for this channel is not at zero.
(2) Turn on the channel output, then ensure the channel is in Constant Voltage output mode.
(3) Set some different voltage values on this channel; check if the actual voltage value displayed is close to the set voltage value, and also that the actual current value displayed is nearly to zero.
(4) Check that if the output voltage can be adjusted from zero to the maximum rating.

2.4.2 Current Output Inspection

The following steps check basic current functions with a short across the power supply's output:

(1) Connect a short across (+) and (-) output terminals with an insulated test lead on this channel. Use a wire size sufficient to handle the maximum current.
(2) Set the output voltage to the maximum rating on this channel.
(3) Turn on the channel output. Ensure the channel you used is in Constant Current output mode.
(4) Set some different current values on this channel; check if the actual current value displayed is close to the set current value, and to check if the actual voltage value displayed is nearly zero.
(5) Check that if the output current can be adjusted from zero to the maximum rating.
(6) Turn off the channel output and remove the short circuit from the output terminals.

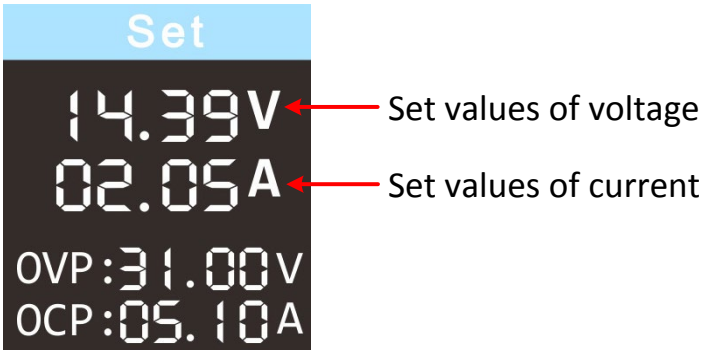
3. Panel Operation

3.1.1 Turn On/Off the Channel Output

Press the **On/Off** key to turn on/off the channel.

3.1.2 Set the Output Voltage/Current

In the channel setting area, press the ∧ / ∨ keys to move the red cursor between parameters. After selecting the output voltage/current setting value, turn the rotary control to change the current cursor value, and press < / > key to move the cursor position.

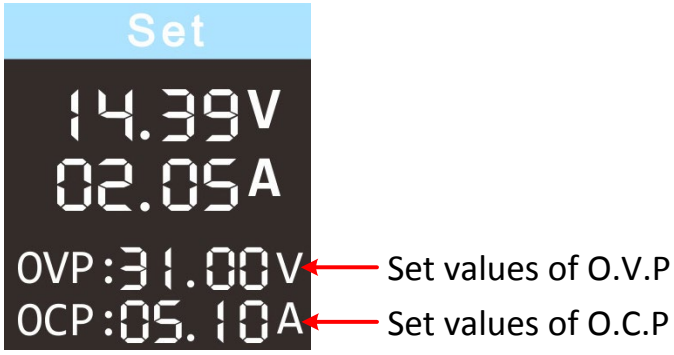


3.1.3 Over Voltage/Current Protection

When the Over Voltage Protection (O.V.P) or Over Current Protection (O.C.P) is enabled, once the output voltage/current reaches the set value of O.V.P/O.C.P, the instrument will cut off the output, a warning will show on the screen.

Note:
When the instrument disables the output due to protection, after you make some adjustments, the channel must be restarted to output normally.

This function can keep the power output from exceeding the load rating to protect the load.
In the channel setting area, press the ∧ / ∨ keys to move the red cursor between parameters. After selecting the overvoltage/overcurrent protection value, turn the Rotary control to change the current cursor value, and press the < / > direction key to move the cursor position.



3.1.4 Memory key shortcut settings

Press **Memory** key on front panel, the M1, M2, and M3 keys can store five sets of channel parameters M1, M2, M3, M4, and M5, respectively, for quick output.

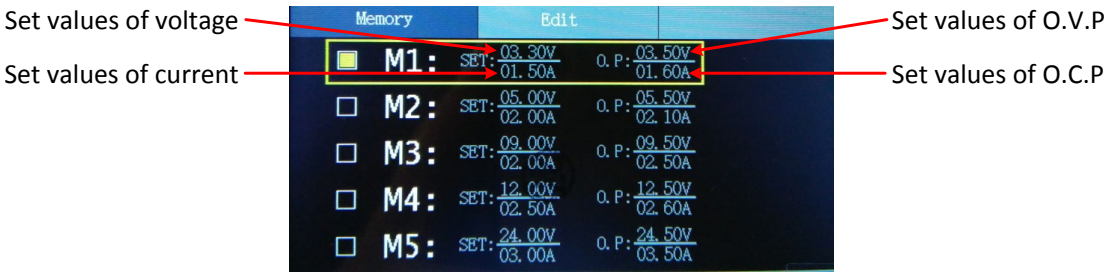
3.1.5 Quick output

To output a set of parameters from M1 to M5, follow these steps:

(1) Press **Memory** key on front panel, the shortcut interface will display.

(2) Press V key and shows the yellow select box. Press ∧ / V to move the select box.

(3) After selecting the certain parameter, press **rotary control** or **OK** on the panel to confirm the input value.



3.1.6 Edit

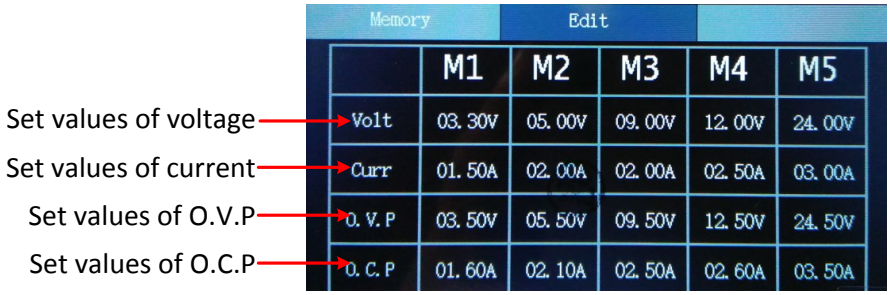
To edit the channel parameters of M1 to M5, follow these steps:

(1) Press the front panel **Memory** button, the screen displays the quick setup interface.

(2) Press the > arrow keys to display the editing interface.

(3) Press the ∨ keys to show a red cursor.

(4) Press the ∧ / ∨ / < / > keys to move the red cursor between parameters. Turn the **rotary control** to change the current cursor value, press the < / > arrow keys to move the cursor.



4. System Settings

4.1.1 Display Brightness

Press the System softkey and turn the **rotary control** to highlight the **System** main menu. Press the ∨ keys to highlight the **Brightness** submenu. Press the < / > keys to adjust the brightness of the screen. The adjustment range is from 1 to 100.

4.1.2 Language Setting

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose the **language**. Press the < / > arrow keys to select the desired language. Supported languages include Chinese and English.

4.1.3 Buzzer

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **buzzer** submenu. Press the < / > arrow keys to toggle the beeper on/off. When the buzzer is on, the status bar icon lights up. When the system prompts, it beeps, such as when the output is cut due to overvoltage/overcurrent protection.

4.1.4 Display (Only for MP710086 and MP710087)

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **Display** submenu. Press the < / >

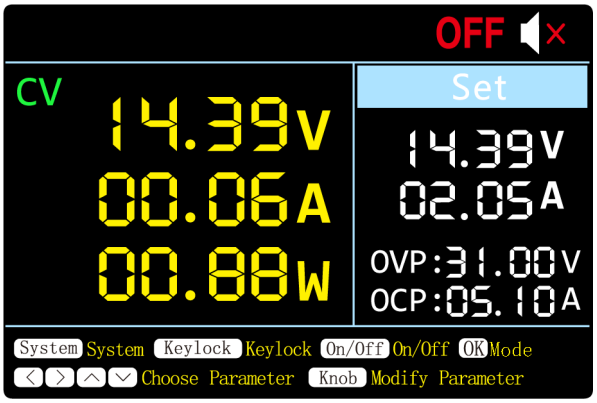
arrow keys or turn the **rotary control** to set the display mode to **Number** or **Curve**.

In system main interface, you can also press the **OK** key or press the **rotary control** to toggle between **Number** and **Curve** display mode.

Number

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **Display** submenu. Press the < / > arrow keys or turn the **rotary control** to set the display mode to **Number**.

In system main interface, you can also press the **OK** key or press the **rotary control** to select the **Number** display mode. When the power supply is powered on, the default display mode is Number.



Curve

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **Display** submenu. Press the < / > arrow keys or turn the **rotary control** to set the display mode to **Curve**.

In system main interface, you can also press the **OK** key or press the **rotary control** to select the **Curve** display mode.

4.1.5 Curve Type

You can set the type of the displayed curve to voltage curve or current curve.

1) Voltage Curve

Two methods to set the curve type to voltage curve.

1st Method:

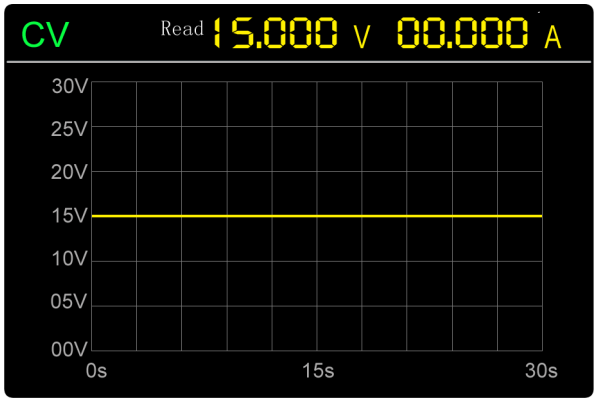
Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **Display** submenu. Press the < / > arrow keys or turn the **rotary control** to set the display mode to **Curve**. Press the ∨ arrow keys to choose **CurveType** submenu, press the < / > arrow keys or turn the **rotary control** to set the curve type to **Volt**.

2nd Method:

In system main interface, you can also press the **OK** key or press the **rotary control** to select the

Curve display mode. Press the ∧ / ∨ arrow keys to select the **Volt** curve type.

The display mode of Volt curve is as below:



Note: In Volt curve display mode, you can still set the value of voltage or current. Press the < / > arrow keys or turn the **rotary control** to enter editing mode (edit voltage first). If the value is not changed, editing mode will be exited.

2) Current Curve

Two methods to set the curve type to current curve.

1st Method:

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **Display** submenu. Press the < / > arrow keys or turn the **rotary control** to set the display mode to **Curve**. Press the ∨ arrow keys to choose **CurveType** submenu, press the < / > arrow keys or turn the **rotary control** to set the curve type to **Curr**.

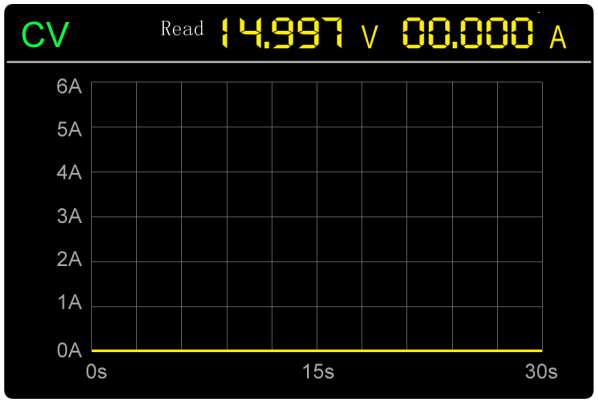
2nd Method:

In system main interface, you can also press the **OK** key or press the **rotary**

control to select the

Curve display mode. Press the ∧ / ∨ arrow keys to select the **Curr** curve type.

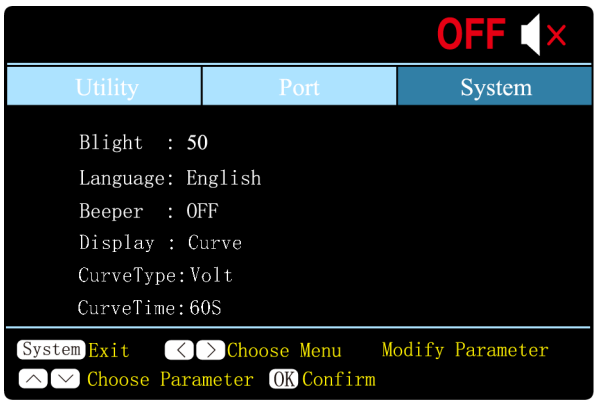
The display mode of Curr curve is as below:



Note: In Curr curve display mode, you can still set the value of voltage or current. Press the < / > arrow keys or turn the **rotary control** to enter editing mode (edit current first). If the value is not changed, editing mode will be exited.

Curve Time

Press the **System** softkey and turn the **rotary control** to select the [Utility] menu. Press the ∨ arrow keys to choose **CurveTime** submenu. Press the < / > arrow keys or turn the **rotary control** to set the display mode to **Curve**. Press the ∨ arrow keys to choose **CurveTime** submenu, press the < / > arrow keys or turn the **rotary control** to set the curve time to **30S** or **60S.**.



5. Interface Setting

(1) Press the ∨ arrow keys to select the **baud rate**, and press the < / > arrow keys to set the baud rate of the RS232 serial interface. The optional values for the baud rate are: 2400, 4800, 9600, 19200, 38400, 57600, 115200, and the factory default setting is 115200. Make sure the instrument's baud rate setting matches the baud rate setting of the computer you are using.

(2) Press the ∨ arrow keys to select the **check digit** and press the < / > arrow keys to toggle None, Odd, Even.

(3) Press the ∨ arrow keys to select the **stop bit**, and press the < / > arrow keys to toggle 1 or 2.

Note: The **data bits** submenu cannot be set, and the data bits are fixed at 8 bits.

6. System Information

6.1.1 Review System Information

Press the **System** softkey and turn the **rotary control** to select the **[SYSTEM]** menu. The screen shows the model number, version number, and serial number of the machine.

6.1.2 Restore Factory Settings

Press the **System** softkey and turn the **rotary control** to select the **[SYSTEM]** menu. Press ∨ arrow keys to select the **Factory Reset** submenu. Press **OK** to restore the factory default settings. See the factory setting detail table below

	Voltage	**Current**
Output	5 V	2 A

	Voltage	**Current**
Limit	MAXOUT	MAXOUT

System	Backlight		50%	
	Buzzer		On	
	Port	Port Setting	Baud Rate	115200
			Data Digit	8
			Parity Check	None
			Stop Digit	1
	Display (Only for special models)		Number	

7. Troubleshooting

1. The instrument is powered on but no display showing.

- Check if the power is connected properly.
- Check if the fuse which is below the AC Power socket is used appropriately and in good condition (the cover can be pried open with a straight screwdriver).
- Restart the instrument after the steps above.

2. The output is abnormal:

- Check if the output voltage is set to 0V. If so, set it to other value.
- Check if the output current is set to 0A. If so, set it to other value.
- When in programmable output status, check if there is any voltage/current value is set to 0. If so, set it to other value.

8. Appendix

8.1.1 Appendix A：Accessories

standard:



Power Cord



RS232 Cable



User Manual



Fuse



USB Cable

optional：



Banana plug to crocodile clip test leads



USB2.0 to S232 common port connector

8.1.2 Appendix B: General Care and Cleaning

General Care

Do not store or leave the instrument where the liquid crystal display could be exposed to direct sunlight for long periods of time.

Caution: To avoid any damage to the instrument, do not exposed it to any sprays, liquids, or solvents.

Cleaning

Inspect the instrument as often as operating conditions require. To clean the instrument exterior, perform the following steps:

Wipe the dust from the instrument surface with a soft cloth. Take care not to scratch the transparent LCD protection screen when cleaning.

Clean the instrument with a lightly damp soft cloth. It is recommended to wipe with mild detergent or fresh water. To avoid damage to the instrument, do not use any corrosive chemical cleaning agent.

Warning: Before re-applying power, ensure that the instrument is completely dry, avoiding any electric shock or electrical short circuit resulting from moisture.

INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT.

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Contact your local authority for details of recycling schemes in your area.

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