

# X-TRONIC USA

**Soldering Technology  
Professionals Can Trust**



# PX-70

## Instructions



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# SPECIFICATIONS

Model	XTR-PX-70
Power Consumption	160 Watts
Power Cord	USA Type B - 3-pin Grounded Plug
Input Voltage	AC 110V 60Hz
Dimensions	7.25 L x 4.5" W x 9.0" H
Weight	9.5 lbs
Working Environment	32°F ~ 104°F / 0°C ~ 40°C
Storage Environment	-4°F ~ 158°F / -20°C ~ 70°C
Storage Humidity	35% - 45%
Constant Output Voltage Range	0-30V Continuously Adjustable
Voltage Resolution	0.01V
Voltage Output Accuracy	±0.02V
Constant Output Current Range	0-5A Continuously Adjustable
Current Resolution	1 mA
Current Output Accuracy	<0.1 +3 mA
Recovery Time	100uS
Ripple	< 3mArms
Read Back Accuracy	1 mA
Temperature Coefficient	<0.1% +5mA
Read Back Temperature Coefficient	<100 ppm + 5 mA
Output Current Protection (OCP) Current Value	0-5A
OCP Accuracy	0.01A
Signal test frequency range	30~1800MHZ (including cell phone signal test)

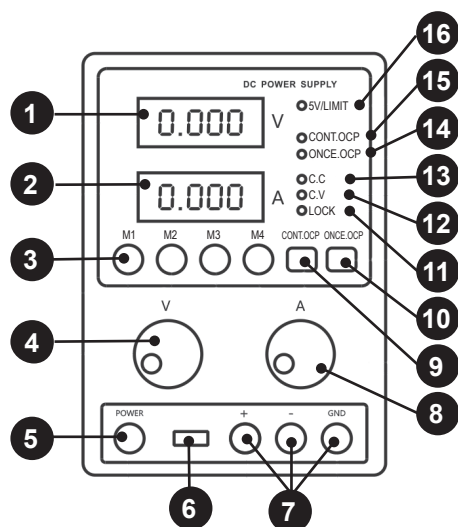
## **PACKAGE CONTENTS**

- 160 Watt Main DC Power Supply Meter
- 3 High Quality Stackable Banana Plug to Alligator Clip Leads (positive, negative, & ground)
- 2 High Quality Banana Plug to Precision Probes (positive & negative)
- 2 High Quality Stackable Banana Plug to Hook/Plunger Leads (positive & negative)
- Magnetic Project Work Mat / Quick Reference Operation Guide
- User Manual
- Power cord

# **SAFETY PRECAUTIONS**

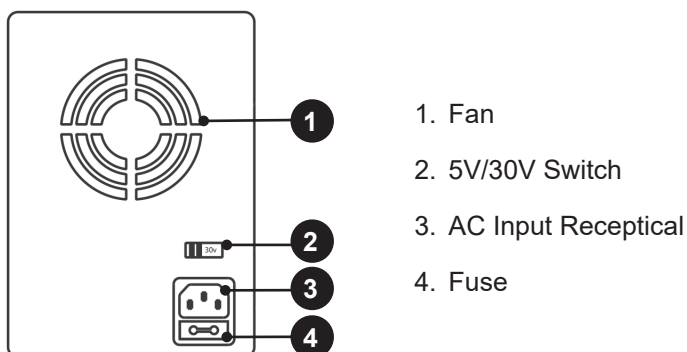
1. Always use a grounded outlet for the unit to avoid shock.
2. Always turn the power off and unplug the unit when not in use.
3. Always ensure the fan and intakes are clear of obstruction and is not blocked/obstructed in any way.
4. Do not modify the unit in any way.
5. When replacing consumable parts, only use approved manufacturer parts.
6. When replacing the fuse, always unplug the unit before changing the fuse. Always replace with a comparable fuse - do not replace with something different.
7. Do not get the unit wet or use when your hands are wet.

# PANEL DIAGRAM - FRONT



- |  |   |
|--|---|
| 1. Voltage Display Meter                                 | 10. Single Overcurrent Protection Button        |
| 2. Current / Amperage Display Meter                      | 11. Lock Indicator                              |
| 3. Memory Recall Buttons                                 | 12. Constant Voltage Output Indicator           |
| 4. Voltage Regulation Knob                               | 13. Constant Current Output Indicator           |
| 5. Power Switch  | 14. Single Overcurrent Production Indicator     |
| 6. USB Output  | 15. Continuous Overcurrent Protection Indicator |
| 7. Power Output Terminals (Positive, Negative, & Ground) | 16. 5V Output Limit Indicator                   |
| 8. Current Adjusting Knob                                |   |
| 9. Continuous Overcurrent Protection Button              |   |

## UNIT DIAGRAM - BACK



## FEATURES / MODES

### Voltage Regulation

Briefly press the Voltage (V) knob to select the digit that you want to adjust, the digit will blink when it is selected. Then turn the Voltage knob to adjust the voltage to the required setting.

### Current/Amperage Regulation

Briefly press the Amperage (A) knob to select the digit that you want to adjust, the digit will blink when it is selected. Then turn the Amperage knob to adjust the amps to the required setting.

### Adjustable USB Interface

The USB port is also regulated by the voltage and current settings on the unit. Make sure to set a safe voltage and current/amperage when using this USB port. To use the USB port, plug in an USB adapter to the unit and the other end into the device that requires power.

### Constant Voltage (CV) Mode

This is the default mode for the power supply. Once the voltage and current limits have been set, the device that is being powered is connected and the power supply is turned on, the unit will output the voltage limit while varying the amps, the C.V indicator will be lit. If the unit reaches the amperage limit that is set, it will automatically switch to constant current (CC) mode.



## **Constant Current (CC) Mode**

In order for the unit to switch to CC Mode, the Amperage limit needs to be set lower than what is needed based on the Voltage limit set. Once the device being powered pulls enough current / amps to hit the set limit, the unit will automatically switch to CC Mode, the C.C indicator will be lit and the Volt will start to vary while keeping the Amps constant. CC Mode will not be triggered if either of the OCP features are activated.

## **Continuous Overcurrent Protection**

This is the most commonly used mode of protection. In CONT.OCP mode the output will be shut down when the current draw hits the limit set by the user. The unit will continue to test this limit after the protection has been triggered keeping the output at zero until the load is removed. Once the device is disconnected from the leads the voltage and amperage are immediately restored and output automatically resumes.

Press the CONT.OCP button on the front of the unit to enable this feature, the unit will beep once, and the LED will indicate that the feature is enabled.

When the current draw reaches the value set by the user the output will halt, the display panel will show all zeros for both voltage & amperage and the unit will beep continuously for two seconds to alert the user that the CONT.OCP has been triggered.

Once CONT.OCP has been triggered, the leads will need to be disconnected from the device to remove the load and restore the output. At that time the voltage and current regulations will be able to be adjusted.

## **Once Overcurrent Protection**

In ONCE.OCP mode the output will be shut down when the current draw hits the limit set by the user.

Press the ONCE.OCP button on the front of the unit to activate this protection mode, the unit will beep once, and the LED will indicate that the feature is enabled.

While in this mode, the output will be shut down when the current draw reaches the value set by the user. The display panel will show all zeros for both voltage & amperage and the unit will beep continuously for 2 seconds to alert the user that the ONCE.OCP has been triggered.

Once this has been triggered, disconnect the leads from the device

to remove the load and press the ONCE.OCP button. The voltage and current regulations will be restored and output will resume.

## **LOCK / UNLOCK**

Press and hold the Voltage knob for two seconds to lock all of the settings currently programed in the unit. Only the Power button will still function when the unit is locked. To unlock the unit, press and hold the Voltage knob for two seconds again.

## **5V Limit Mode**

This unit comes with an option to limit the voltage output to 5V when working on delicate components. To switch the available voltage output from 30V to 5V, ensure the unit is powered off and slide the switch on the back of the unit to read 5V. When the unit is powered back on, the 5V indicator on the front of the unit will be lit and the voltage output will not be able to be set above 5V. When working with sensitive low voltage parts, this can help to ensure they are not overloaded.

## **Over Temperature Protection (OTP)**

The unit is equipped with a self-regulating fan to ensure that the unit does not overheat. The fan will not run under normal circumstances, however if the unit temperature rises to a point that the fan is needed it will automatically kick in to dissipate the heat from the unit. It is important that the back of the unit has plenty of space behind it for this to work effectively.

## **OVER POWER PROTECTION (OPP)**

The unit also has Over Power Protection.

## **MEMORY RECALL BUTTONS**

This unit has 4 memory recall buttons that can be programmed so you can save commonly used settings. The voltage, amps, continuous/once output current protection (CONT.OCP), and constant current/voltage settings will all be saved in the memory button.

To save the current settings of the unit to a memory button, press and hold the memory button of choice for two seconds, the unit will beep indicating it has saved the settings.

To choose a preset, simply press the memory recall button briefly and the settings on the unit will update automatically.

## **INITIAL SET-UP**

1. Open the package and check that all parts are present and are not damaged. If anything is missing or damaged, please contact X-Tronic immediately for assistance (see back cover for contact information).
2. Plug the power cord into the back of the unit.
3. Plug the 3-Prong AC cord into a 110/120V grounded outlet to prevent electric shock or injury.

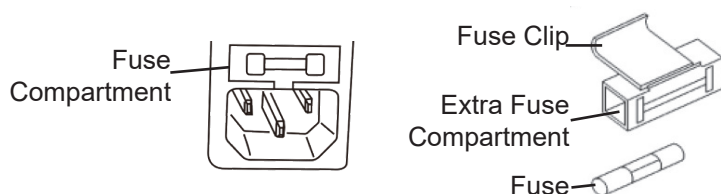
## **OPERATING INSTRUCTIONS**

1. With the unit OFF - Determine if the component / device being powered is delicate and sensitive to high voltage. If it is, considering switching the 5V switch on the back of the unit to limit the voltage to 5V to prevent damage while powering the component/device.
2. Press the power switch on the bottom left front side of the unit to turn it on - do NOT have any component / device hooked up to receive power yet.
3. Set the Voltage and Amperage Limits required for the type of component /device being powered.
4. Determine if OCP (Continuous or Once) would be helpful - if so, press the respective button on the front of the unit, the indicator light will show that the appropriate OCP is active.
5. Now that the unit is set, turn the power off (the settings will be retained when the unit is powered back on).
6. Attach the appropriate leads to the unit by plugging the banana plugs into the output power terminals and attaching the other end to the component / device.
7. Press the power button to turn the unit back on and start the power flow.

# MAINTENANCE

1. Keep the unit plugged into a GROUNDED outlet at all times during operation.
2. When the unit is not in use, ensure the unit is powered OFF and unplugged.
3. Keep the unit and all components free from dirt, debris, and liquid at all times.
4. Make sure the power cord is plugged in correctly and safely off the floor to prevent accidents.
5. Keep all cords in the immediate workspace and avoid letting them hang off the side of a table or bench top.
6. Wipe the unit down, when needed, with a dry, static-free cloth.

## REPLACING THE FUSE



1. Unplug the power cord from the outlet.
2. Remove the fuse compartment by pressing a flat head screwdriver into the divot just inside the power socket under the fuse compartment.
3. The fuse that is in use will be in the fuse clip, the extra fuse is below it. If the fuse is damaged, replace it with the new fuse.
4. Insert the fuse compartment back into the unit.

# TROUBLESHOOTING

ISSUE	POSSIBLE SOLUTIONS
Unit does not have power	<ul style="list-style-type: none"> <li>• Ensure that the outlet is functional.</li> <li>• Check to see if fuse needs to be replaced. (See page 10)</li> <li>• Contact X-Tronic International for technical assistance - Contact information on back of manual</li> </ul>
Hear a "clicking" noise	<ul style="list-style-type: none"> <li>• A relay switch has been activated - the clicking indicates that the unit is being overloaded -Back down on the voltage or increase current/ amperage to lessen the load</li> </ul>
Unit is not outputting power	<ul style="list-style-type: none"> <li>• Ensure leads are disconnected from the device.</li> <li>• ONCE.OCP may be triggered, press the ONCE.OCP button once to restore power</li> <li>• Power unit down and restart unit.</li> </ul>
Unit will not go into CC (Constant Current) Mode	<ul style="list-style-type: none"> <li>• The current / amperage limit set on the unit may be too high. (See C.C Mode on page 10)</li> </ul>

# **X-Tronic International Inc.**

# **3-YEAR LIMITED WARRANTY**

**THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS, AS THEY VARY FROM STATE TO STATE.**

**THIS LIMITED WARRANTY CAN ALSO BE FOUND ON OUR WEBSITE AT [WWW.XTRONICUSA.COM/SUPPORT/WARRANTY](http://WWW.XTRONICUSA.COM/SUPPORT/WARRANTY).**

**WE WARRANT THAT DURING THE WARRANTY PERIOD, THE PRODUCT WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP.**

**WE LIMIT THE DURATION AND REMEDIES OF ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY.**

**SOME STATES HAVE DIFFERENT LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

**OUR RESPONSIBILITY FOR DEFECTIVE GOODS IS LIMITED TO REPAIR, REPLACEMENT OR REFUND AS DESCRIBED BELOW IN THIS WARRANTY STATEMENT.**

## **WHO MAY USE THIS WARRANTY?**

X-Tronic International Inc. located at 2159 Magnum Circle, Lincoln, Nebraska 68522 ("we") extend this limited warranty only to the consumer who originally purchased the product in the United States, the District of Columbia or Canada ("you"). It does not extend to (a) any subsequent owner or other transferee of the product, (b) any product shipped outside of the United States, the District of Columbia or Canada, or (c) anyone who may have purchased it from someone other than X-Tronic International Inc.. Proof of purchase is required for in-warranty service. We recommend you promptly register this product on our website ([www.XTronicUSA.com](http://www.XTronicUSA.com)) to facilitate verification of the date of the original purchase. Keep the product manual and your sales receipt together for future reference.

## **WHAT DOES THIS WARRANTY COVER?**

This limited warranty covers defects in materials and workmanship of the product for the Warranty Period as defined below. In addition, during the Initial Warranty Period, this limited warranty also covers defects occurring in the initial shipment of the product to you.

## **WHAT DOES THIS WARRANTY NOT COVER?**

This limited warranty during the Warranty Period does not cover any damage due to: (a) improper use; (b) failure to follow the product instructions or to perform any preventive maintenance; (c) modifications; (d) unauthorized repair; (e) normal wear and tear that comes with household use; or (f) external causes such as accidents, abuse, or other actions or events beyond our reasonable control. It also does not cover consumable parts.

## **WHAT IS THE PERIOD OF COVERAGE?**

This limited warranty starts on the date of your purchase and lasts for 3 years ("The Warranty Period"), which shall be divided into two periods: (1) the first 30 days from the date of your purchase ("Initial Warranty Period"); and (2) the remainder of the 3 year period after the Initial Warranty Period has expired (the "Remainder Warranty Period"). The Warranty Period is not extended if we repair or replace the product. We may change the availability of this limited warranty at our discretion, but any changes will not be retroactive.

## **WHAT ARE YOUR REMEDIES UNDER THIS WARRANTY?**

With respect to any defective product during the Initial Warranty Period, we will, in our sole discretion either (a) replace such product (or the defective part) free of charge, or (b) refund the purchase price of such product.

With respect to any defective product during the Remaining Warranty Period, we will repair such product free of charge and provide a full-service inspection of your product. You will be responsible for all shipping and handling fees to and from our facility.

## **HOW DO YOU OBTAIN WARRANTY SERVICE?**

To obtain warranty service, you must call 844-861-4762 or email us at [Info@XTronicUSA.com](mailto:Info@XTronicUSA.com) during the Warranty Period to open a service request. Proof of purchase will be required to open a service request.

## **LIMITATION OF LIABILITY**

THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES AND OUR ENTIRE LIABILITY FOR ANY BREACH OF THIS LIMITED WARRANTY. OUR LIABILITY SHALL UNDER NO CIRCUMSTANCES EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE PRODUCT, NOR SHALL WE UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT.

SOME STATES HAVE DIFFERENT LIMITATIONS OF LIABILITY AND EXCLUSIONS, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

# QUESTIONS, PROBLEMS OR COMPLIMENTS?

*Thank You for purchasing this  
X-Tronic International Product!  
We are grateful for your business!*

All of our X-Tronic International Products are inspected then sealed with our NEW Product Seal prior to shipment. Our goal is to ensure Quality, Completeness, and Satisfaction for your order.

**For Any Questions, Problems, or  
Compliments please call or email us.**



**Toll Free: 844-861-4762**



**Info@XTronicUSA.com**

Our Business Hours are:  
Monday - Thursday: 8am - 4pm CST  
Friday: 8am - Noon CST

If you would like to shop for other X-Tronic International Products  
Please visit our website  
[www.XTronicUSA.com](http://www.XTronicUSA.com)

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