



WORLD
PRECISION
INSTRUMENTS

INSTRUCTION MANUAL

A362

Battery Charger

Serial No. _____

www.wpiinc.com

111723

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ABOUT THIS MANUAL

The following symbols are used in this guide:



This symbol indicates a CAUTION. Cautions warn against actions that can cause damage to equipment. Please read these carefully.



This symbol indicates a WARNING. Warnings alert you to actions that can cause personal injury or pose a physical threat. Please read these carefully.

NOTES and TIPS contain helpful information.

INTRODUCTION

The Model A362 Battery Charger is specifically designed to recharge the batteries of WPI's second generation high voltage stimulus isolators. These new isolators, which include Models A360R and A320R, operate from long-life, nickel-cadmium battery stacks. The A362 Charger provides the optimum combination of short recharging time and the assurance that the batteries can be neither overcharged nor damaged, even if left continuously connected.

SPECIFICATIONS

Outputs (two).....	5 mA DC, constant current, 150 V DC, typical (each)
Power.....	95-130 V AC or 190-260 V AC, switch selectable single phase, 50/60 Hz, 10 VA
Temperature.....	10°C (50°F) to 40°C (104°F)
Dimensions.....	4.1 x 2.75 x 5 in. (10.5 x 7.0 x 12.7 cm)
Weight.....	2 lb (0.9 kg)
Shipping weight.....	4 lb (1.8 kg)

OPERATING DIRECTIONS

General

The A362 Battery Charger becomes operational simply by connecting the input to a source of mains power and the output to the instrument in need of charging.

Upon detecting mains power, the green POWER ON lamp will light. The A362 simultaneously charges two stacks of nickel-cadmium batteries. If the instrument to be charged contains viable batteries, both the red OUTPUT A and B lamps will light as soon as current starts to flow into the batteries. If only one lamp is lit, one of the battery stacks may be disconnected or defective. Consult with your instrument manual on the proper method of accessing the batteries. If both lamps fail to light,

check that the instrument under charge is switched into the “charge” mode.

The output of the A362 is current regulated and thus by design is short circuit proof. The internal fuse of the Charger is a back-up to protect the batteries in the case of an unlikely, catastrophic failure of the current regulating circuitry. Repeated blowing of this fuse, requires repair, not replacement!

With completely discharged batteries, 16 hours of continuous charging will completely replenish the batteries. With partially discharged batteries, proportionally fewer hours are required. The Charger is designed for continuous duty and maintaining it connected for more than 16 hours, will not harm the batteries.

Cleaning



CAUTION: *Do not use alcohol, aromatic hydrocarbons or chlorinated solvents for cleaning. They may adversely react with plastic materials used to manufacture the instrument.*

The exterior of this instrument may be cleaned periodically to remove dust, grease and other contamination. There is no need to clean the inside. Use a soft cloth dampened with a mild solution of detergent and water. Do not use abrasive cleaners.

PREPARATION FOR USE

General

This section describes the initial preparations required when the Model A362 is first placed into operation. Review the Safety guidelines provided below, before proceeding.

Shipping Information

The Model A362 is packaged and shipped in a foam-packed container. This manual will be included with the instrument. Upon receipt of the the instrument, make a thorough inspection for proper contents and possible shipping damage. If reshipment is necessary, use the original container. If the original container is not available, use any suitable substitute that is rigid and of adequate size. Wrap the instrument in paper and surround with at least 100 mm (four inches) of shock absorbing material.

Safety



WARNING: THIS INSTRUMENT IS FOR INVESTIGATIONAL USE ONLY IN ANIMALS OR OTHER TESTS THAT DO NOT INVOLVE HUMAN SUBJECTS.

Power Source

This instrument is intended to operate from a power source that will not apply more than 250 volts rms between the supply (mains) conductors or between either supply conductor and ground. A protective (safety) ground connection by way of the grounding conductor (green with yellow stripe) in the power cord is essential for safe operation.

Grounding the Instrument

This instrument is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the instrument output terminals. A protective ground connection by way of the grounding conductor in the power cord is essential for safe operation.



WARNING: YOU MUST NOT REMOVE OR IN ANY WAY BYPASS THE GROUNDING PIN OF THE POWER CORD.

Use the Proper Power Cord

Use only the power cord specified for your instrument and locale. Use only a power cord that is in good condition.

Use the Proper Fuse

To avoid a fire hazard, use only the fuse specified for your instrument. Replacement fuses shall be identical in type, voltage rating, and current rating.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this instrument in an atmosphere of explosive gases.

Do Not Remove Cover

To avoid personal injury, do not remove the cover from this instrument. Do not operate the instrument without a properly installed cover.

INSTALLATION

Input Power

 **CAUTION** *The Model A362 may be damaged if the Line Voltage Selector switch is not set to match the applied AC power source.*

This instrument operates from either a 120V or 240V nominal AC power source. The rear panel is marked at the factory with the user's expected mains power. Before connecting the power cord, verify that, in fact, the correct mains power setting was provided. If any doubt remains, the internal Line Voltage Selector switch may be adjusted.

 **WARNING: BEFORE REMOVING THE COVER, DISCONNECT THE INSTRUMENT FROM THE AC POWER SOURCE.**

The switch is located inside the instrument. To verify the voltage setting:

1. Remove the four screws from the bottom.
2. Remove the instrument cover by sliding it straight backward.
3. Locate the slide switch on the printed wiring board and slide to the appropriate voltage setting. The actuator is marked and the visible marking is the actual voltage setting, i.e. 115V or 230V.
4. Reassemble the instrument by reversing the order of the above steps.

Output Fuse

 **WARNING: BEFORE ATTEMPTING FUSE REPLACEMENT, DISCONNECT THE INSTRUMENT FROM THE AC POWER SOURCE.**

The instrument contains one fuse, located inside, on the printed wiring board. To obtain access to the fuse, follow the steps given above for removing the cover. Verify that the fuse contained in the fuseholder matches the values marked on the board. If necessary, replace the fuse with the type and rating specified.

DECLARATION OF CONFORMITY



WORLD PRECISION INSTRUMENTS, LLC.
Telephone: (941) 371-1003 Fax: (941) 377-5428
e-mail wpi@wpiinc.com

DECLARATION OF CONFORMITY CE

We: World Precision Instruments, Inc.
175 Sarasota Center Boulevard
Sarasota, FL 34240-9258, USA

as the manufacturer/distributor of the apparatus listed, declare under sole responsibility that the product(s):

A362

To which this declaration relates is/are in conformity with the following standards or other normative documents:

Low Voltage Directive (Safety) 2014/35/EU:

- EN 61010-1:2010+A1:2019

EMC Directive 2014/30/EU:

- EN IEC 61326-1:2021
- EN IEC 61326-2-3:2021
- EN IEC 61000-3-2:2019+A1:2021
- EN IEC 61000-3-3:2013+A2:2021


Cory Boyes / Director of Design and
Development

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Europe Representative
Mr Andrew Waldes
Managing Director
World Precision Instruments Germany GmbH,
Pfungstweide 16, 61169 Friedberg, Germany

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Warranty

WPI (World Precision Instruments, Inc.) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of one year* from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

CLAIMS AND RETURNS

- Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within 10 days after receipt of shipment. Claims for lost shipments must be made within 30 days of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim settles. In some instances, photographic documentation may be required. Some items are time sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container.
- WPI cannot be held responsible for items damaged in shipment en route to us. Please enclose merchandise in its original shipping container to avoid damage from handling. We recommend that you insure merchandise when shipping. The customer is responsible for paying shipping expenses including adequate insurance on all items returned.
- Do not return any goods to WPI without obtaining prior approval and instructions (RMA#) from our returns department. Goods returned unauthorized or by collect freight may be refused. The RMA# must be clearly displayed on the outside of the box, or the package will not be accepted. Please contact the RMA department for a request form.
- Goods returned for repair must be reasonably clean and free of hazardous materials.
- A handling fee is charged for goods returned for exchange or credit. This fee may add up to 25% of the sale price depending on the condition of the item. Goods ordered in error are also subject to the handling fee.
- Equipment which was built as a special order cannot be returned.
- Always refer to the RMA# when contacting WPI to obtain a status of your returned item.
- For any other issues regarding a claim or return, please contact the RMA department.

Warning: This equipment is not designed or intended for use on humans.

** Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.*

USA

175 Sarasota Center Blvd., Sarasota FL 34240-9258
Tel: 941-371-1003 • Fax: 941-377-5428 • E-mail: sales@wpiinc.com

UK

1 Hunting Gate, Hitchin, Hertfordshire SG4 0TJ
Tel: 44 (0)1462 424700 • Fax: 44 (0)1462 424701 • E-mail: wpiuk@wpi-europe.com

Germany

Pfingstweide 16, D-61169 Friedberg (Hessen), Germany
Tel: +49 (0)6031 67708-0 • Fax: +49 (0)6031 67708-80 • E-mail: wpide@wpi-europe.com

China & Hong Kong

WPI Shanghai Trading Co., Ltd. Rm 2608
Tongmao Mansion, No 357, Songlin Road, Pudong New District, Shanghai, PR China
Tel: +86 21 6888 5517 • Toll Free: 400 688 5517 • E-mail: chinasales@china.wpiinc.com

Internet

www.wpiinc.com • www.wpi-europe.com • www.wpiinc.net