

HITEC



AD380

OPERATION MANUAL

WARNING: THE CHARGING AND DISCHARGING OF RC HOBBY BATTERIES CAN BE DANGEROUS. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL MAY RESULT IN PROPERTY DAMAGE AND/OR LOSS OF LIFE.

INTRODUCTION

Congratulations on purchasing Hitec's AD380 Battery Discharger and Analyzer! Although simple to use, the AD380 does require some basic knowledge for successful and safe operation. The operating instructions included here are designed to ensure that you quickly become familiar with its functions. It is important that you read through this manual in its entirety. Read attentively and completely the Operating Instructions, Warning and Safety Notes BEFORE attempting to use your new discharger for the first time.

Please read this entire operating manual before using the AD380. If you are unsure of its proper operation after reading the manual, please seek advice from an experienced hobbyist or someone familiar with proper battery discharging procedures.



THE CHARGING AND DISCHARGING OF RC HOBBY BATTERIES CAN BE DANGEROUS. FAILURE TO FOLLOW THESE EXPLICIT WARNINGS CAN RESULT IN PROPERTY DAMAGE

Warning AND/OR LOSS OF LIFE.

- ⚠ NEVER LEAVE YOUR DISCHARGER UNATTENDED WHILE IN OPERATION.**
- ⚠ NEVER DISCHARGE ON OR AROUND COMBUSTIBLE MATERIALS.**
- ⚠ NEVER DISCHARGE A DAMAGED BATTERY PACK.**
- ⚠ LOW COST, NO-NAME BATTERY PACKS POSE THE MOST DANGER. WE RECOMMEND YOU ONLY USE BATTERY PACKS THAT ARE SOLD AND WARRANTIED BY A REPUTABLE COMPANY.**
- ⚠ IT IS HIGHLY RECOMMENDED THAT YOU UTILIZE A SAFETY DEVICE SUCH AS A STEEL CASE OR LiPo SACK™ WHILE DISCHARGING LITHIUM CHEMISTRY BATTERIES.**
- ⚠ IT IS HIGHLY RECOMMENDED THAT YOU KEEP AN OPERABLE "CLASS A" FIRE EXTINGUISHER IN THE DISCHARGING AREA.**

FAILURE TO FOLLOW THESE WARNINGS CAN BE CONSIDERED NEGLIGENCE BY THE OPERATOR AND MAY NEGATE ANY CLAIMS FOR DAMAGES INCURRED.

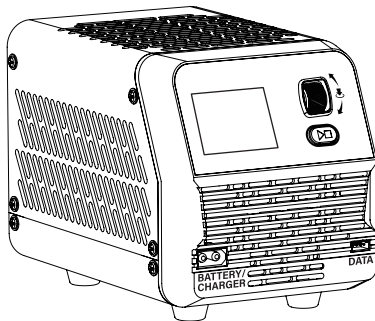
WARNINGS & SAFETY

- ⚠ **Keep the discharger away from dust, damp, rain, heat, direct sunlight and excessive vibration.**
- ⚠ **If the discharger is dropped or suffers any type of impact, it should be inspected by an authorized service station before using it again.**
- ⚠ **This discharger and the battery should be put on a heat-resistant, non-flammable and non-conductive surface.**
- ⚠ **Never place a discharger on a car seat, carpet or similar surface. Keep all flammable volatile materials away from the operating area.**
- ⚠ **Make sure you know the specifications of the battery to be discharged to ensure it meets the requirements of this discharger. If the program is set up incorrectly, the battery and discharger can be damaged.**
- ⚠ **Never attempt to discharge the following types of batteries:**
 - A battery fitted with an integral charge circuit or a protection circuit.
 - A battery pack which consists of different types of cells (including different manufacturer's cells).
 - A battery that is non-rechargeable (these pose an explosion hazard).
 - A faulty or damaged battery.
 - Batteries installed in a device or which are electrically linked to other components.
 - Batteries that are not expressly stated by the manufacturer to be suitable for the currents the discharger delivers during the charge process.

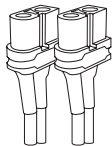
PLEASE CHECK THE FOLLOWING POINTS BEFORE YOU BEGIN CHARGING:

- Did you select the appropriate program suitable for the type of battery you are discharging?
- Did you set up the adequate current for discharging?
- Have you checked the battery voltage? Lithium battery packs can be wired in parallel and in series, i.e. a 2-cell pack can be 3.7V (in parallel) or 7.4V (in series).
- Have you checked that all connections are firm and secure?
- Make sure there are no intermittent contacts at any point in the circuit.

PACKAGE CONTENTS



AD380 Discharger



XT60 Cable



DATA Cable

DISCHARGER FEATURES

- Displays real-time battery voltage, discharged capacity, and discharge current
- Tests battery capacity to aid in selecting batteries with desired capacity
- Saves time for storing large-capacity batteries
- Provides your batteries with optimal performance for competition
- Supports Android & iOS App for convenient usage
- Detects the quality of the DC-stabilized power supply

DISCHARGER LAYOUT

COOLING FAN

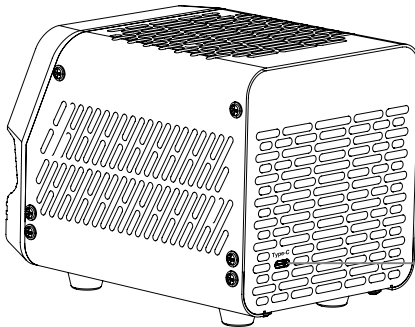
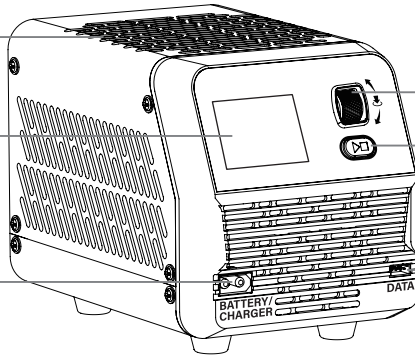
LCD DISPLAY
SCREEN

XT60 MAIN PORT

INTERFACE KNOB

ON/OFF BUTTON

DATA PORT



USB-C PORT

DISCHARGER SPECIFICATIONS

OPERATING VOLTAGE	DC	3.0–30.0V
DISCHARGE VOLTAGE RANGE	MAIN PORT	5.9–30.0V
	EXTERNAL POWER SUPPLY*	3.0–30.0V
ERROR THRESHOLDS	LOW VOLTAGE	Less than 3.0V
	HIGH VOLTAGE	Higher than 30.5V
DISCHARGE POWER	–	Approx. 380W
DISCHARGE CURRENT	–	0.3A–40.0A
CONNECTOR INTERFACE	–	XT60
OPERATING MODES	CC CONSTANT CURRENT	0.3–40.0A
	CR CONSTANT RESISTANCE	1–100Ω
	CP CONSTANT POWER	1–380W
	CV CONSTANT VOLTAGE	180W MAX
COOLING	–	Heatsink & Fan
OVERTEMP. PROTECTION	–	Supported
COMMUNICATION	Bluetooth®	Supported
WORKING ENVR.	–	32°F–104°F 5%–75% Humidity
STORAGE ENVR.	–	14°F–158°F 5%–75% Humidity
SIZE	–	6.2 x 4.8 x 4.3 in
NET WEIGHT	–	2.43 lbs.

**When the battery voltage to be discharged is below 6V, you must power the discharger via the Type-C port with a 3A adapter.*

MAXIMUM DISCHARGE POWER

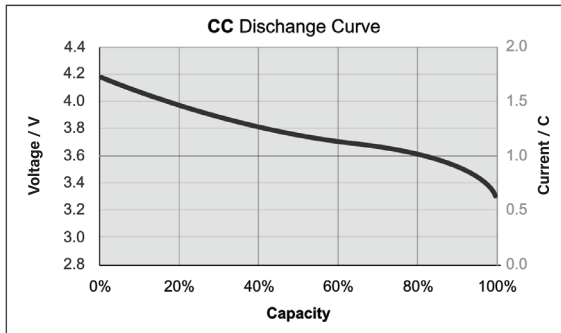
BATTERY TYPE	CELL #	MIN. CUT-OFF	VOLTAGE	MIN. DISCHARGE	MAX. DISCHARGE
LiPo	2S	6.08	8.40	40.00	40.00
	3S	9.00	12.60	30.15	40.00
	4S	12.00	16.80	22.61	31.66
	5S	15.00	21.00	18.09	25.33
	6S	18.00	25.20	15.07	21.11
	7S	21.00	29.40	12.92	18.09
LiHV	2S	6.28	8.70	40.00	40.00
	3S	9.30	13.05	29.11	40.00
	4S	12.40	17.40	21.83	30.64
	5S	15.50	21.75	17.47	24.51
	6S	18.60	26.10	14.55	20.43
	7S	21.70	30.45	12.47	17.51
NiMH	6S	5.49	9.00	40.00	40.00
	7S	6.30	10.50	36.19	40.00
	8S	7.20	12.00	31.66	40.00
	9S	8.10	13.50	28.14	40.00
	10S	9.00	15.00	25.33	40.00
	11S	9.90	16.50	23.03	38.38
	12S	10.80	18.00	21.11	35.18
	13S	11.70	19.50	19.48	32.47
	14S	12.60	21.00	18.09	30.15
	15S	13.5	22.50	16.88	28.14
	16S	14.40	24.00	15.83	26.38
	17S	15.30	25.50	14.90	24.83
	18S	16.20	27.00	14.07	23.45
	19S	17.10	28.50	13.33	22.22
20S	18.00	30.00	12.66	21.11	

OPERATING MODES

The AD380 has four different operating modes specialized for different use cases.

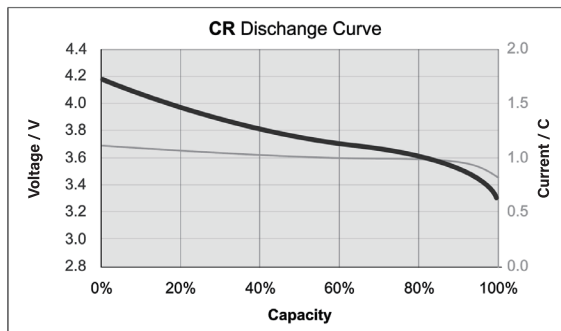
Constant Current (CC) Mode

In this mode, the AD380 maintains a constant current output regardless of changes in resistance or voltage. This mode emphasizes predictable energy depletion, ideal for precise capacity testing and battery health assessments.



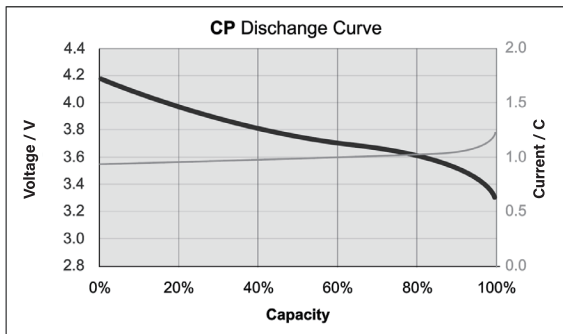
Constant Resistance (CR) Mode

In this mode, the AD380 maintains a constant resistance load, simulating devices with fixed resistance characteristics. This mode is useful for capturing the simulation of a constant resistive load, offering a realistic scenario for evaluating energy storage under consistent conditions.



Constant Power (CP) Mode

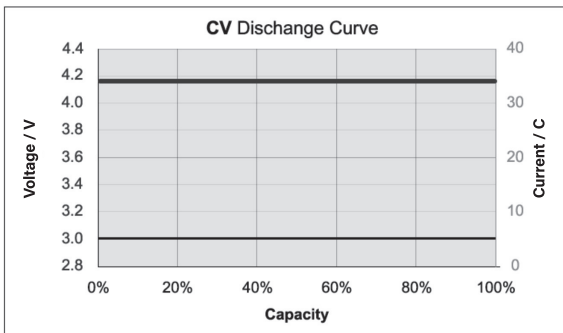
In this mode, the AD380 delivers a constant power output regardless of variations in voltage or current. This is beneficial for reflecting the ability to maintain constant power output, adapting to the needs of diverse applications that require steady power delivery.



Constant Voltage (CV) Mode

In this mode, the AD380 enables you to monitor the voltage output of the power supply itself. Stable performance from the power supply would involve maintaining a constant and unvarying voltage output without significant fluctuations over time. This function ensures that your power supply delivers a steady and reliable output, irrespective of changes in the load. (Note: The power supply must support Constant Current (CC) mode.)

NEVER CONNECT A BATTERY IN CV MODE.

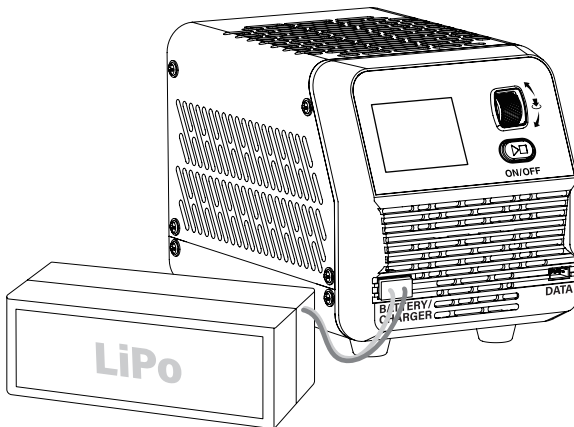


DISCHARGER OPERATION

1. Connect the battery to your AD380. Once connected, the AD380 will power on and begin start up.
2. Choose the operating mode that best suits your application.
3. Set parameters such as discharge time & cut-off voltage via the interface knob. (*Depending on the selected mode, parameters such as current, resistance, voltage and power will also need to be set.*)
4. Once the settings have been determined, press and hold the start button to begin the discharging process.

During the discharging process, you can use the interface knob to monitor the capacity and power of the current discharge. You are also able to monitor internal temperature.

If it is necessary to stop the current discharging process, press and hold the start button to abort the current process.



DISCHARGER SETTINGS

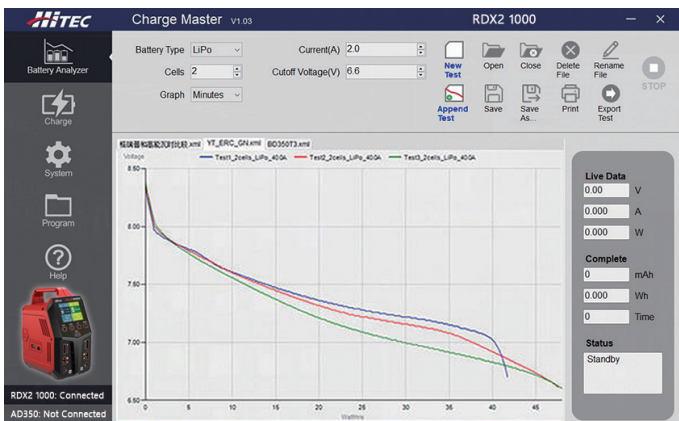
To enter your AD380's settings, press and hold the interface knob.

ITEM	OPTION	DESCRIPTION
Volume	Off / Low / Middle / High	Adjusts the key tone volume.
LCD Backlight	Low / Middle / High	Adjusts the AD380's display backlight brightness.
Power Limit	100-380W	Limit the output power of the AD380.
Language	English / Spanish / French / German / Chinese / Japanese	Selects the device's display language.
Factory Reset	Yes / No	Restores all settings to default.
System Information	—	View full system information.
System Upgrade	Yes / No	Choose whether to upgrade the system's firmware. Must be connected to a computer.

CHARGE MANAGER

The AD380 can work in conjunction with Hitec's RDX2 800 and RDX2 1000 chargers when connected via the provided DATA cable. When working in tandem, they can support computer connection and control capabilities.

Hitec's Charge Manager software is a prerequisite for establishing this connection and control ability. Visit our official site, HitecRCD.com, to download the latest Charge Manager software on your device.



Use this QR code to visit our software download page.

HITEC LINKPOWER X

The discharger has a built-in Bluetooth 5.0 module, allowing users to easily control the AD380 discharger and analyze their battery through the Hitec LinkPower X app. Even when you are racing outside or at the flying field, you can test and check the battery performance and curve anytime and anywhere.



REGULATORY/COMPLIANCE INFORMATION

FCC Note - This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or change to this equipment. Such modifications or change could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

Hitec's AD380 complies with FCC Part 15 Subpart B: 2019.

WARRANTY, SERVICE & REPAIR

LIABILITY EXCLUSION

This discharger is designed and approved exclusively for use with the types of batteries stated in this Operation Manual. Hitec RCD USA accepts no liability of any kind if the discharger is used for any purpose other than that stated. We are unable to ensure that you follow the instructions supplied with the discharger, and we have no control over the methods you employ for using, operating and maintaining the device. For this reason, we are obliged to deny all liability for loss, damage or costs which are incurred due to any misuse or operation of our products. Unless otherwise prescribed by law, our obligation to pay compensation, regardless of the legal argument employed, is limited to the invoice value of Hitec RCD USA products which were immediately and directly involved in the event in which the damage occurred.

ONE YEAR LIMITED WARRANTY

For a period of one year from the date of purchase, HITEC RCD USA shall REPAIR OR REPLACE, at our option, defective equipment covered by this warranty. Otherwise, the purchaser and/or consumer is responsible for any charges for the repair or replacement of the discharger. This warranty does not cover cosmetic damages and damages due to acts of God, accident, misuse, abuse, negligence, improper installation, or damages caused by alterations by unauthorized persons or entities. This warranty only applies to the original purchaser of this product and for products purchased and used in the United States of America, Canada and Mexico. Plastic cases are not covered by this warranty.

THIS WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND WHETHER EXPRESS OR IMPLIED. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY. HITEC RCD USA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY RELATING TO THIS PRODUCT, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE DURATION OF THIS WARRANTY, REPAIR AND SERVICE.



Note

THE AD380 WARRANTY IS VOID IF SOLD AND/OR OPERATED OUTSIDE THE UNITED STATES.

SERVICE AND REPAIR INFORMATION - To have your Hitec discharger serviced:

1. Visit the Hitec website at **www.hitecrd.com** and download the service request form.
2. Fill out the service request form completely and include a copy of your original receipt showing the purchase date.
3. Package your product in its original packaging or use a suspension-type packaging (foam peanuts or crumpled newspaper). Hitec RCD USA shall not be responsible for goods damaged in transit.
4. Ship prepaid (COD or postage-due returns will not be accepted) via a traceable common courier (UPS, insured parcel post, FedEx, etc.) to:

Hitec RCD USA / Customer Service Center, 9320 Hazard Way, Suite D. San Diego, CA 92123



This symbol indicates that when this type of electronic device reaches the end of its service life, it cannot be disposed of with normal household waste and must be recycled. To find a recycling center near you, refer to the internet or your local phone directory for electronic waste recycling centers.

STATE OF CALIFORNIA PROPOSITION 65 WARNING:

This product contains chemicals known to the State of California to cause cancer. Use caution when handling this product and avoid exposure to any electronic components or internal assemblies.

This manual is subject to change without notice.
Please refer to the Hitec RCD USA website for the latest version.

www.hitecrd.com





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