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# Universal Charger (U150) User's Manual

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The Universal Charging Cradle (U150) is designed to charge all Aarcomm remote control products. It can operate over a wide temperature range enabling it to be mounted in a vehicle cab.

## Technical Specifications

Input: USB PD (USB-C), direct wire (only available on some models)

Output: 5W - 15W

Operating temperature range: -40C to +60C

Compatibility: H106, H212, S111, J116

## Power Inputs

### USB-C

USB PD (Minimum 9V, 30W).

### Wired Directly to Machine (some models)

#### Wire Colours and Pin-Out

Wire Colour	Name	Notes
Red	Power	+12V (2.5A) or +24V (1.25A)
Black	Ground	
Yellow	Alarm Enable	Connect to power to enable alarm. Can be left unconnected if unused.
Green	Alarm Output	If the <b>Alarm Enable</b> is connected to the battery, the <b>Alarm Output</b> will output the battery voltage if the handheld is NOT attached to the charger. If the handheld is on the charger, the <b>Alarm Output</b> wire will be at 0V. This output can provide up to 500mA.

#### Alarm Option

The use of the **Alarm Output** is optional. The purpose of this output is to allow the user to control an external device (LED, buzzer, relay, etc.). For example, this output can be configured to turn on when the remote control is missing from the charger AND the parking brake or ignition is turned on.

The output is enabled by connecting **Alarm Enable** to a power wire. If the handheld is not on the charger and **Alarm Enable** is on, the **Alarm Output** wire will provide power (+12V or +24V).

## DIP Switch Settings

Switch	Description
1	High Power Mode - Turn this off to work with older remote controls that won't charge in high power mode.
2	Not used
3	Not used
4	Not used
5	CAN Termination – Turn off to disable 120 ohm CAN termination resistor (only applicable for CAN-capable chargers).
6	Buzzer – Turn off to silence the charger.

## Mute Button (for applicable chargers)

While charging, the button LED will be off.

When not charging, the button LED will flash and the alarm buzzer will sound until the remote control is returned to the charger.

Mute – To temporarily mute the alarm, press the button. The LED will repeatedly flash three times followed by a pause and the alarm will be silenced for 30 minutes.

Silence – Hold the button for 3 seconds. The button LED will turn off and the alarm buzzer will be silenced indefinitely.

Putting a remote control on the charger will automatically clear “Mute” or “Silence” modes.

## LEDs

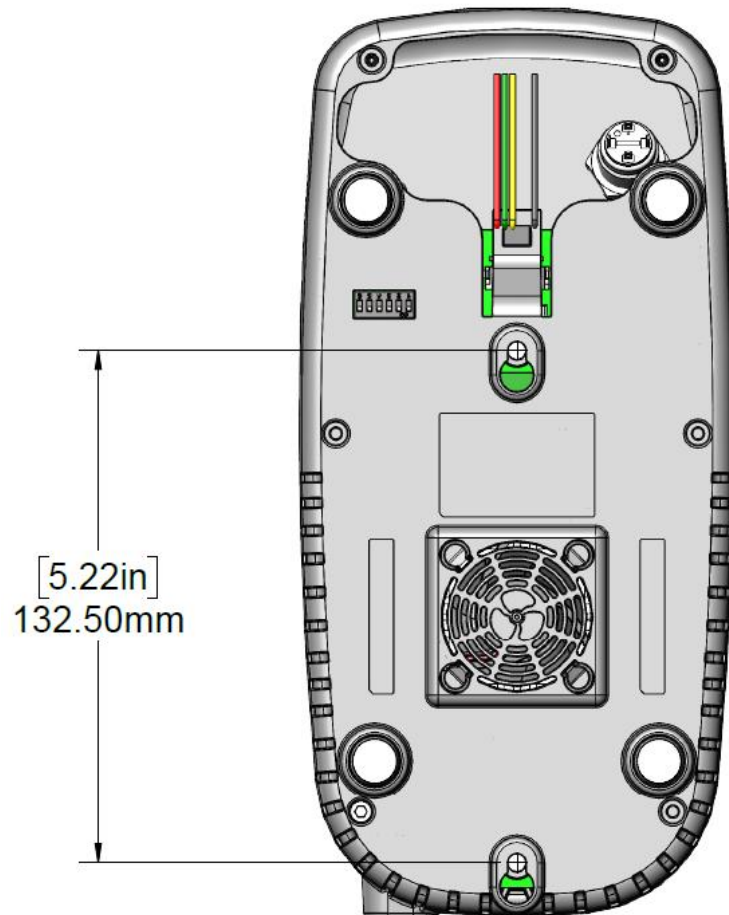
### *Left LED*

Reserved for future use

### *Right LED*

Colour	Description
Flashing Green	Insufficient power source. Ensure that the charger is being powered by +12V to +24V (when wired directly) or that a USB-C to USB-C cable is being used with a valid power supply (USB PD) capable of providing at least 30W.  <b>Note: USB-A to USB-C cables will not provide sufficient power for the Universal Charger.</b>
Solid Green	Charger powered with sufficient power supply.
Solid Magenta	Low power charging mode (5W).
Solid Blue	High power charging mode (up to 15W).

## Mounting Information



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## FCC Statement

### Declaration of Conformity with FCC Rules for Electromagnetic Compatibility

This equipment 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 (15.19).

### Federal Communications Commission Interference Statement

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 and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instructions as documented in this manual. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

### Important Note: Industry Canada Statement

This device complies with RSS-216 of the Industry Canada 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, including interference that may cause undesired operation of the device. Radiation Exposure Statement: This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 10cm between the radiator and your body.

### Note Importante: Énoncé d'Industrie Canada

Ce dispositif est conforme à la norme CNR- 216 standard d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif

ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

### Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.