

USB 2.0 Hi-Power Charging Hub

User's Manual

USB-0824BC / USB-1024BC / USB-2024BC



USB-0824BC



USB-1024BC



USB-2024BC

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Introduction

The Hi-Power Charging hub is a solution for quick charging or sync up to 20 iPads, iPhones iPods and USB charging devices operating simultaneously; this is a perfect tool to effectively perform Sync/Charge Mode switching. Also is ideal for large capacity USB station in-house that enables charging and syncing at a time. Places such as school's classroom, businesses conference or meeting in organizations.

Features

- Compliant with USB Battery Charging Spec 1.2
- Enables to provide up to 1.5A at Sync (CDP mode) or 2.4A at Charge (DCP mode) output current on each port.
- Supports the iOS, Android devices.
- Enables Sync/Charge mode switching upon manually connecting or disconnecting host port.
- If all devices are fully charged at Charge Mode, the unit would cut off the ports LED & power automatically.
- Intelligently detects the power current of each port by the sensing meter with firmware, and enables the port's LED to illuminate its corresponding color. (Charging in progress: red; Disconnected or Fully charged: green)
- Supports Over-Current Protection and $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact) ESD protection on each port.
- Supports 40A (5/50ns) & Peak Pulse Power 60W (8/20 us) Surge and Transient spikes protection on each port.
- Enables Green Energy function automatically shutdown when all the charging is finished at Charge mode. (for 10/20-Port unit)
- For the High-temp protection, if the unit's heat is over the setting, it would cut off all the output current immediately. At the mean time, the whole LEDs of the 8/10/20 ports would be green blinking.
- The rear fans spec: SUNON Vapo DC Fan; Life Expectancy: 60,000 hours (for 20-Port unit only)
- Enables to start/cut off the fans automatically according to the temperatures setup. If the unit's temperature is higher than the setting, it would start the fans automatically. On the contrary, if the unit's temperature is lower from the setting, it would cut off the fans automatically as well. (for 20-Port unit only)

Specification

Model No.		USB-0824BC	USB-1024BC	USB-2024BC
Current per Port	Sync Mode	DC5V 1.5A		
	Charge Mode	DC5V 2.4A		
Speed		480/12/1.5 Mbps		
USB Specification		USB 2.0/1.1/1.0 compliant		
Connector	Upstream	USB B Female		
	Downstream	USB A Female x 8	USB A Female x 10	USB A Female x 20
	Cascade	USB A Female x 2	USB A Female x 1	USB A Female x 1
Power Supply		DC24V 5A (120W)	DC24V 6.25A (150W)	DC12V 24A (288W)
Green Energy Button		n/a	Green Energy button x 1	Green Energy button x 1
LED	Charge Mode	Charging in progress: Red Color x 8	Charging in progress: Red Color x 10	Charging in progress: Red Color x 20
		Disconnected or Fully charged: Green Color x 8	Disconnected or Fully charged: Green Color x 10	Disconnected or Fully charged: Green Color x 20
	SYNC Mode	Orange Color x 8	Orange Color x 10	Orange Color x 20
Operating Temperature		0 ~ 40°C	0 ~ 40°C	0 ~ 50°C
Housing		Aluminum	Metal	Metal
Dimension (L x W x H)		170 x 94.5 x 30mm	268 x 102 x 40 mm	268 x 102 x 40 mm

Cautions

1. End user may extend another unit of USB 2.0 10 / 20-Port charging hub. (It allows connecting or charging maximum up to 20 / 40 USB devices simultaneously.)
2. It may daisy-chain cascade the 8-Port Charging hub up to 6 units. (Total 7 units connection)
3. The specific cable for iPad, tablet isn't included in package accessory. Please check with your distributor regarding of using appropriate cable.
4. If user connects with two units, the 2nd unit may not be detected by some computers which have built in USB 3.0 hub.

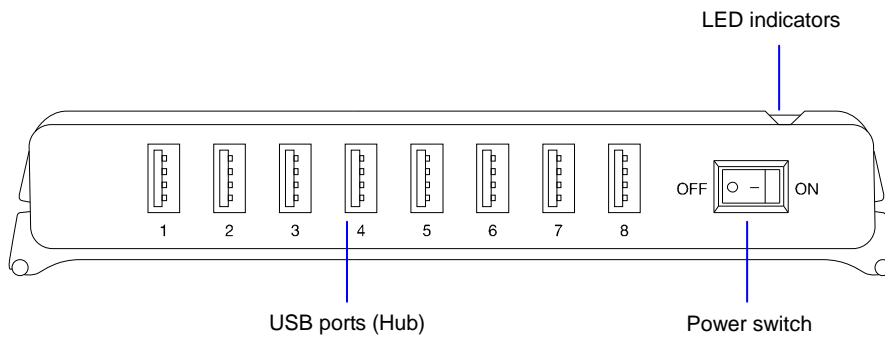
Package Contents

1. USB 2.0 Hi-Power Charging Hub
2. Power supply with power cord
3. USB 2.0 A/M to B/M cable
4. Mounting brackets with screws (for 10/20-Port charging hub)
5. User manual

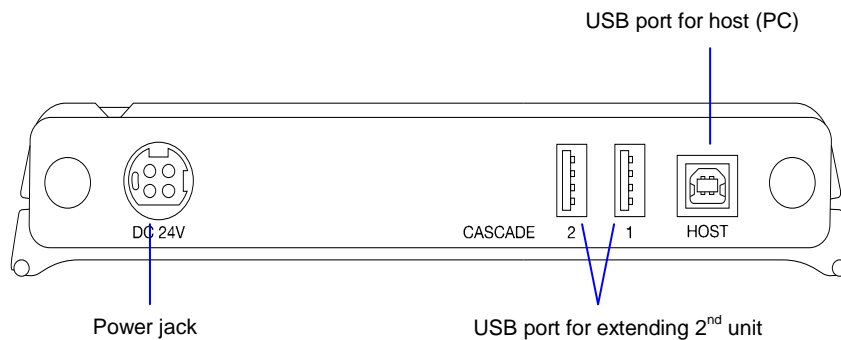
Physical Diagram

8-Port Charging hub

<Front View>

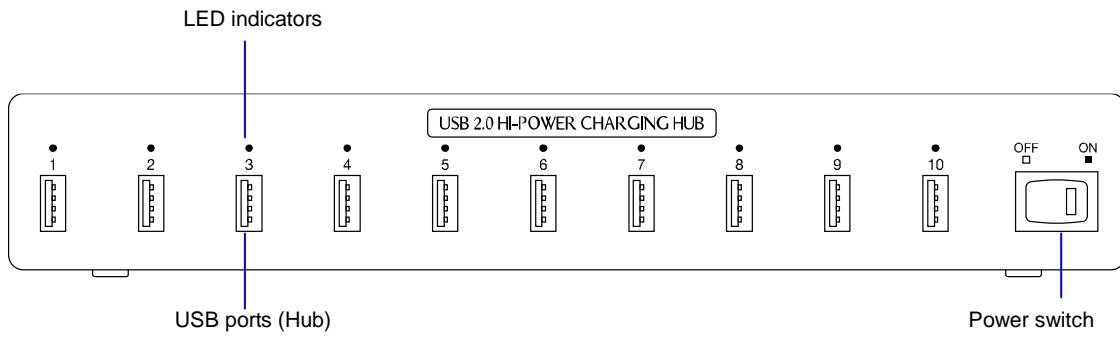


<Rear View>

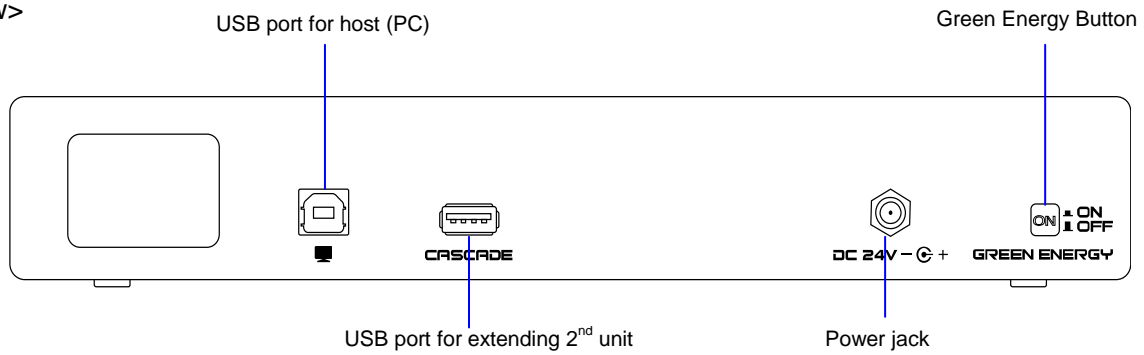


10-Port Charging hub

<Front View>

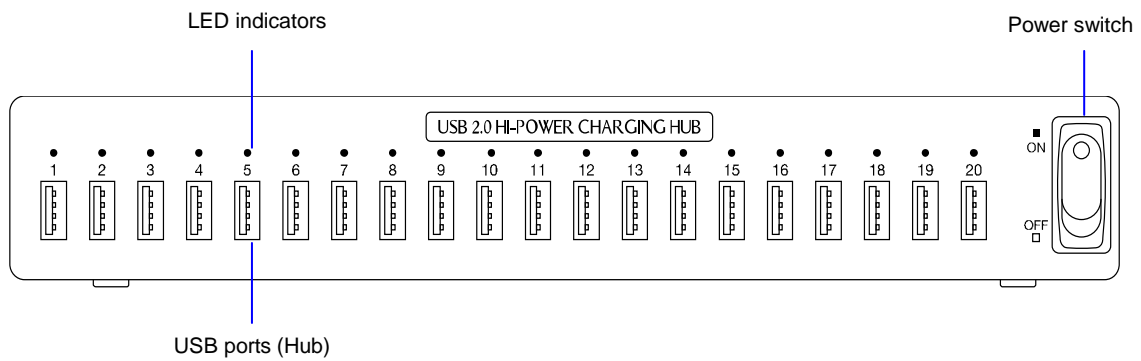


<Rear View>

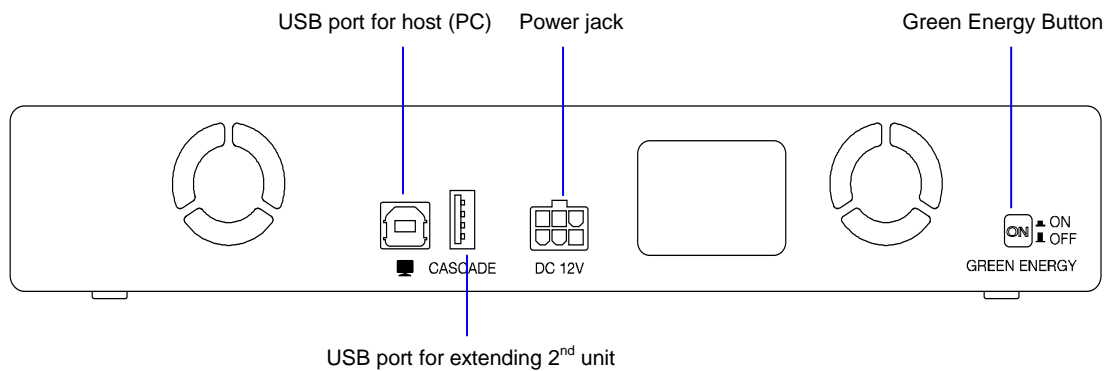


20-Port Charging hub

<Front View>



<Rear View>

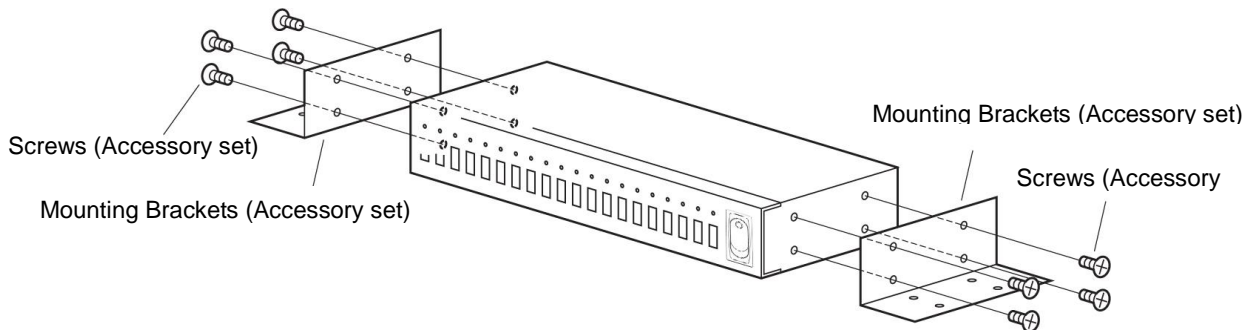


1. USB Ports (Hub) - Allows connecting iPad, tablet or USB devices
 - Beware that this unit does not require a host computer connected to the hub for it to charge compatible devices.
 - This unit does not contain accessory set of cables for iPad, tablet. Please check with your distributor regarding of using appropriate cable.
2. LED Indicators
 - a. Fully charged or devices disconnected: Green LED illuminates
 - b. The ports of charging in progress: Red LED illuminates
 - c. Syncing: Orange LED illuminates
3. Power switch
 - User may switch power to on / off.
4. Power jack
 - To use with power adaptor provided.
5. USB port for extending 2nd unit
 - It is available to connect with another unit for extending purpose.
6. USB port for host (PC)
 - It is available to connect with host computer by USB cable.
7. Green Energy button
 - It is available to automatically shutdown upon fully charged.

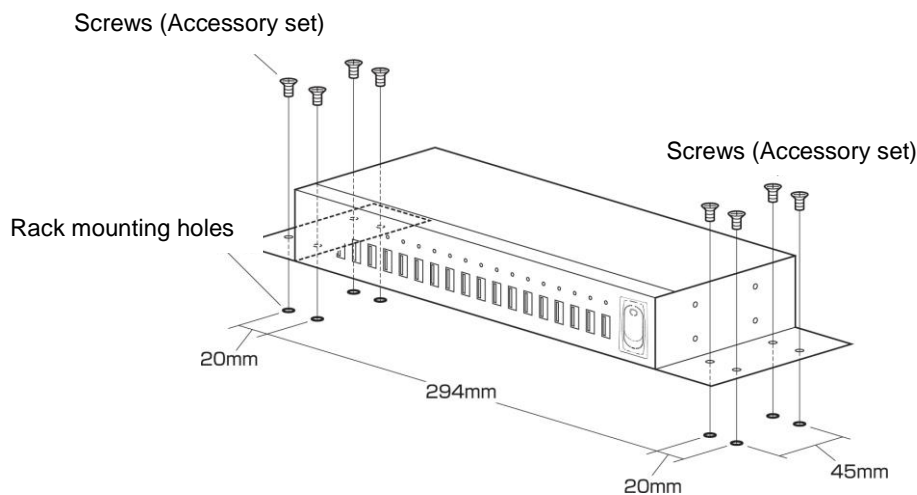
Rack Mounting

To install, attach the mounting brackets to the unit's side panels (one on each side) and secure them with the screws provided.

- (1) Use the mounting brackets and screws onto rack.



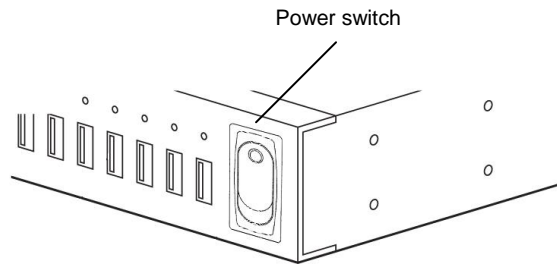
- (2) User may install on the applicable cabinet, rack environments such as a cage or trolley cart.



Connection

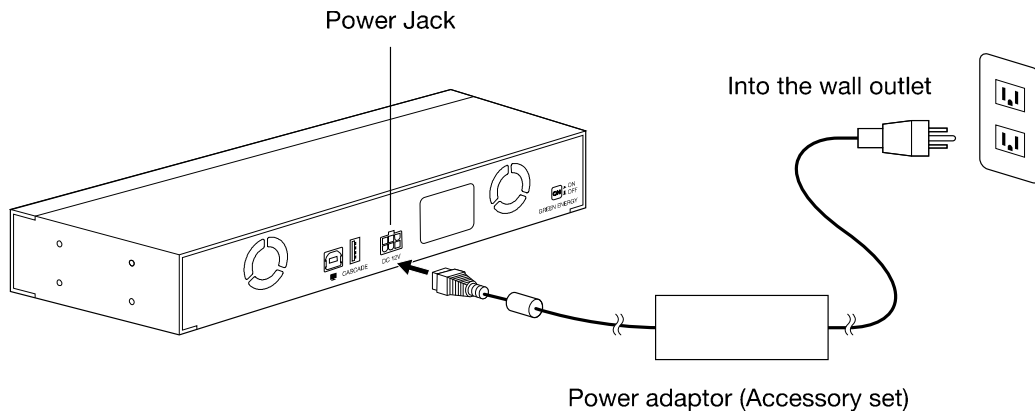
- (1) To turn off the power switch.

<Front Panel>



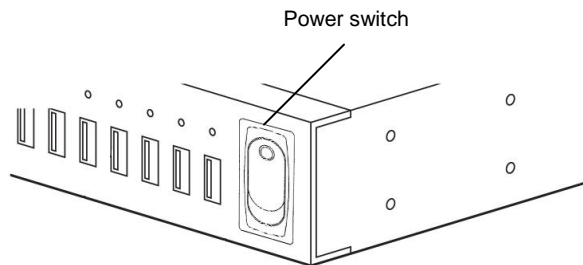
- (2) Plug the power adaptor to the unit's power jack.
- (3) Put the plug of power adaptor into the wall outlet.

<Rear Panel>



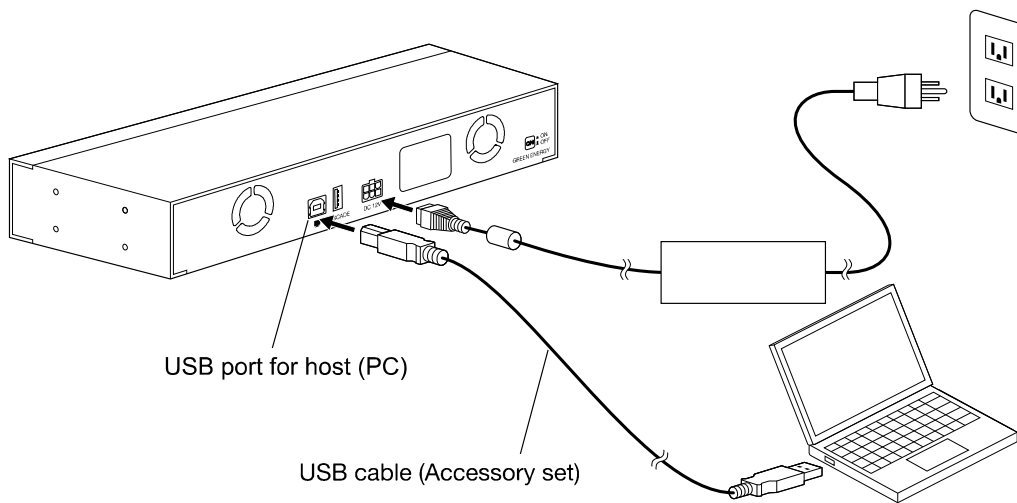
- (4) Turn on the power switch.

<Front Panel>



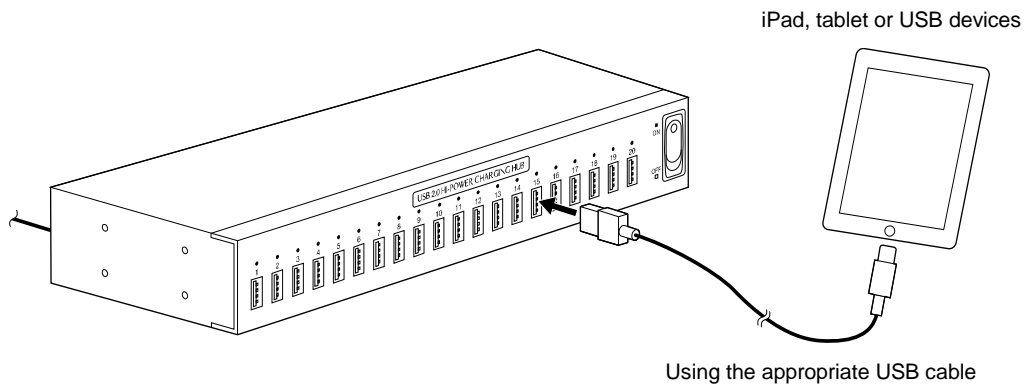
- (5) Using the USB A to B cable provided and connects the USB B end on the unit.
- (6) Using the USB A end and connects to your host computer.
- (7) Connects host computer with the unit.

<Rear Panel>



(8) To use USB cable and connects with tablet or USB devices to the USB ports (Front Panel).

<Front Panel>



Charging & Syncing:

Please follow below ways for charging or syncing USB devices.

- (1) Follows the step of connection with host computer, and connects host computer with the unit.
 - This unit does not contain accessory set of cables for iPad, tablet. Please check with your distributor regarding of using appropriate cable.
- (2) Connect your USB devices to the USB ports on the hub.
 - Sync mode - As soon as the Charging hub connects to a computer, turn the power on; the charging hub may charge and sync at a time either at single unit or cascade connecting.
 - Charge/Sync mode switching –
 - a. While the Charging hub disconnects the computer, it will switch function to Charge mode. Re-connect the computer and it will switch function to Sync mode again either at single unit or cascade connecting.
 - b. The hub will shutdown in 60 seconds if it idles without devices connected. You may manually turn on the power switch either at single unit or cascade connecting and start charging again.
 - c. Or you may re-connect to the computer to restart the charging hub and it will switch function to Sync (CDP mode) again either at single unit or cascade connecting. (Make sure their power switches of the both hubs are turned at 'ON')
 - If all devices are fully charged at Charge mode, the charging hub will shutdown automatically. You may manually turn on the power switch or re-connect to the computer and start charging again.
 - Re-start the hub on cascade connections – If the 2 hubs are cascade connecting, you must turn their power switches on for the both hubs. Once the 1st hub is disconnected to the computer, the both 2 hubs will switch to Charge mode and work on same function. On the contrary; once the 1st hub is connected to the computer again, the both 2 hubs will re-start and switch to Sync mode, and work on same function. (Make sure their power switches of the both hubs are turned at 'ON')
- (3) The Green Energy function (for 10/20-Port unit)

When charging is at Charge mode; the charging hub designed with the Green Energy function (push button at the rear panel) may cut off the power when all the charging is finished.

- ◆ Green energy ON: Button's green LED illuminating. When all devices are fully charged, the charging hub

will shutdown automatically. You may manually turn on the power switch or re-connect to the computer and start charging again either at single unit or cascade connecting.

- ◆ Green energy OFF: Button's green LED lights off. When all devices are fully charged, the hub still keeps operating; and the port LEDs keep green illuminating. Once it senses the device's battery consumed, the hub starts recharging.

Note:

The Charging hub can be used with iTunes & Apple Configurator for synchronization and management of iPads and other iOS devices. For this and any other application (on Windows, Linux, etc.) the charging hub acts as a USB hub. While these instructions are specific to iPads, virtually the same steps can be used for iPhones and iPod Touch devices.

Please note that the charging hub only serves as a pathway for communication between your devices and the computer. Actual management and synchronization is handled by software or apps independent of this charging hub.

☒ [For host computer configuring iTunes]

- Please create a library folder on host computer for synchronizing and transfers data to iPad.
- Recommends automatic updates in your iTunes preferences (to avoid interference with automatic syncing). Please check for updates manually to keep your software up to date.

☒ [For iPad, tablet configuring]

- Ensure each iPad, tablet has been charged completely at first if the objective iPad, tablet is new goods.
- Please use the unit to synchronize iPad, tablet one after another, and configure at same way. (Login name, ID, the data you want to synchronize etc.)
- The user may adjust the brightness of screen when you are using the unit to synchronize iPad.
- When the user may be requested by iTunes to configure manually, you will have to copy the configuration manually for each iPad.

☒ [For host computer connection & sync]

- Connect iPad, tablet to the USB ports of front panel if each iPad, tablet is configured completely.
- This unit does not contain accessory set of cables for iPad, tablet. It is especially important to use appropriate cables (USB-A to device-specific connector) provided by the device manufacturer.
- Get started synchronizing automatically once you connect the unit.
- It may take a little while for this unit to recognize and sync. Please do not stop by the way once the unit starts synchronizing.

☒ [For iOS update]

- User may not perform the iPad update when iPad is connected. You must update iOS on iPad one after another.

Daisy-chain (Cascade) connection

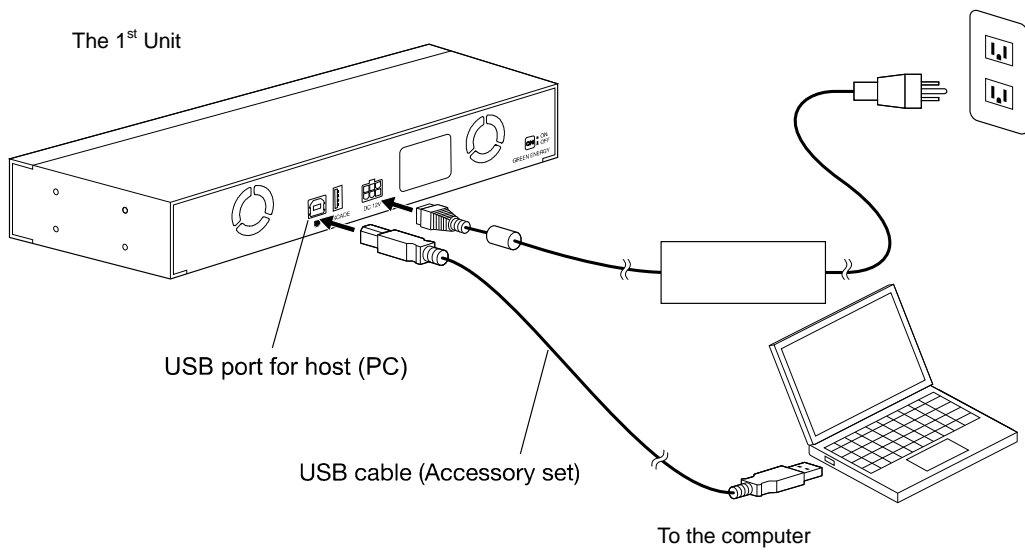
It may daisy-chain cascade the 8-Port Charging hub up to 6 units. (Total 7 units connection)

The 10/20-Port charging hub can extend another unit for Daisychain (Cascade) connection, the 2nd unit can sync simultaneously as well.

- Maximum 2 units can be connected. (It allows connecting or charging maximum up to 20/40 USB devices simultaneously.)
- If user connects with two units, the 2nd unit may not be detected by some computers which have built in USB 3.0 hub.

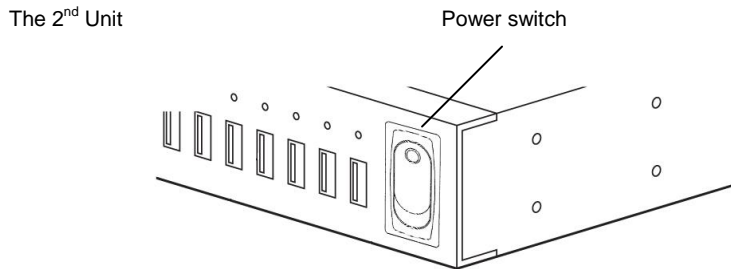
(1) Follows the step of connection with host computer, and connects host computer with the 1st unit.

<Rear Panel>



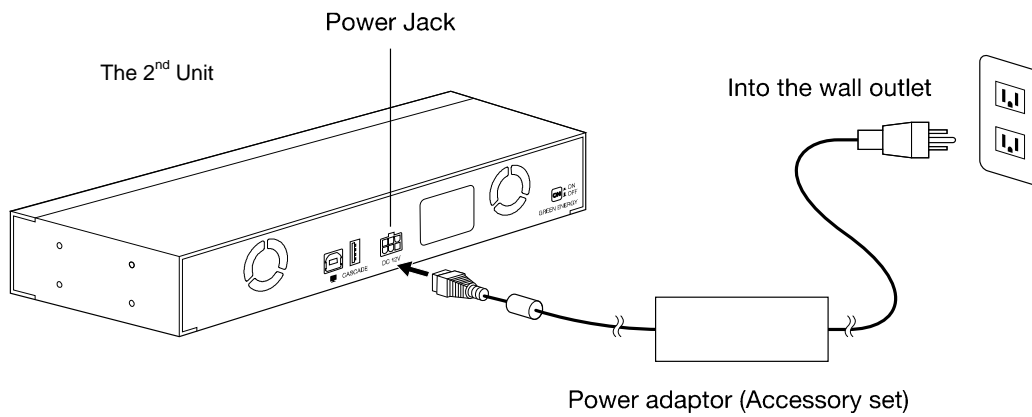
(2) Turn off the power switch of the 2nd unit.

<Front panel>



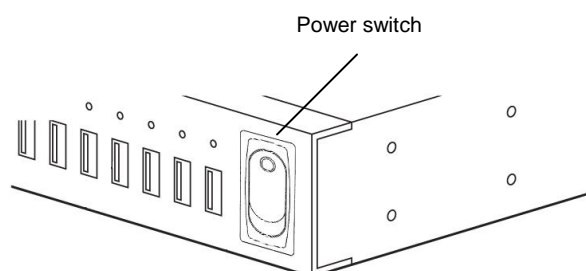
- (3) Plug the power adaptor to the power jack of the 2nd unit.
- (4) Put the plug of power adaptor into the wall outlet.

<Rear Panel>

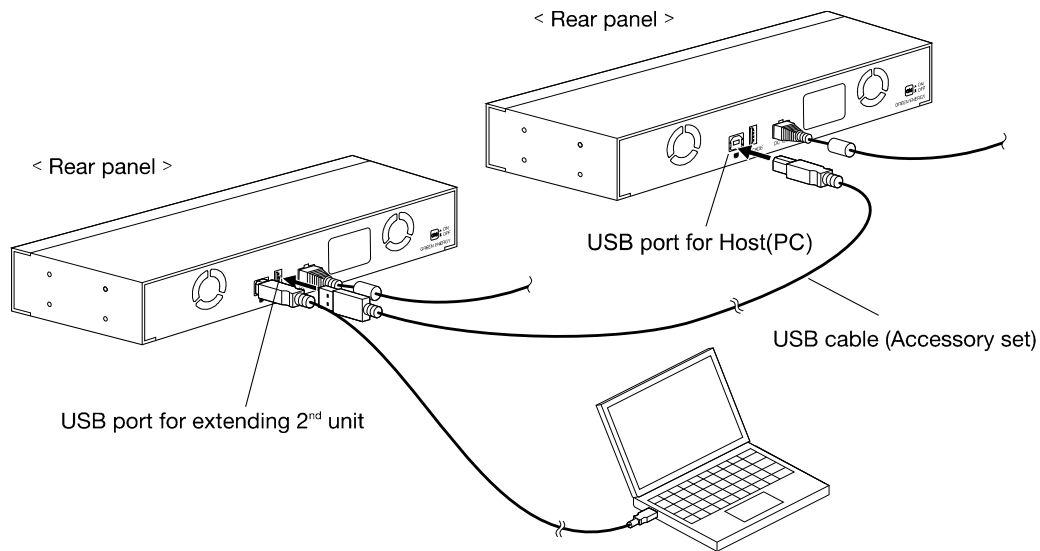


(5) Turn on the power switch of the 2nd unit.

<Front Panel>



(6) Use the USB cable provided and connects both USB ports of the 1st and 2nd units.



Additional info:

The 20-Port unit may start/cut off the fans automatically when the unit temperature goes higher/lower limits. (Not recommend putting the unit at places of high temperature such as computer facilities, boiler/steam room, glass workshop, casting work, kiln plants etc.)

For the High-temp protection, if the unit's heat is over the setting, it would cut off all of the output current immediately. At the mean time, the whole LEDs of the 8/10/20 ports would be green blinking. [\(the rear fans start working for 20-port unit\)](#)

If you still cannot diagnose the problem, please call your distributor for technical support.

Regulatory Compliance

Disclaimer

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CE Certification

This equipment complies with the requirements relating to electromagnetic compatibility. It has been manufactured under the scope of RoHS compliance.

FCC Compliance Statement

This equipment generates and uses radio frequency and may cause interference to radio and television reception if not installed and used properly. This equipment has been tested and found to comply with the limits of 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.

You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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



WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.