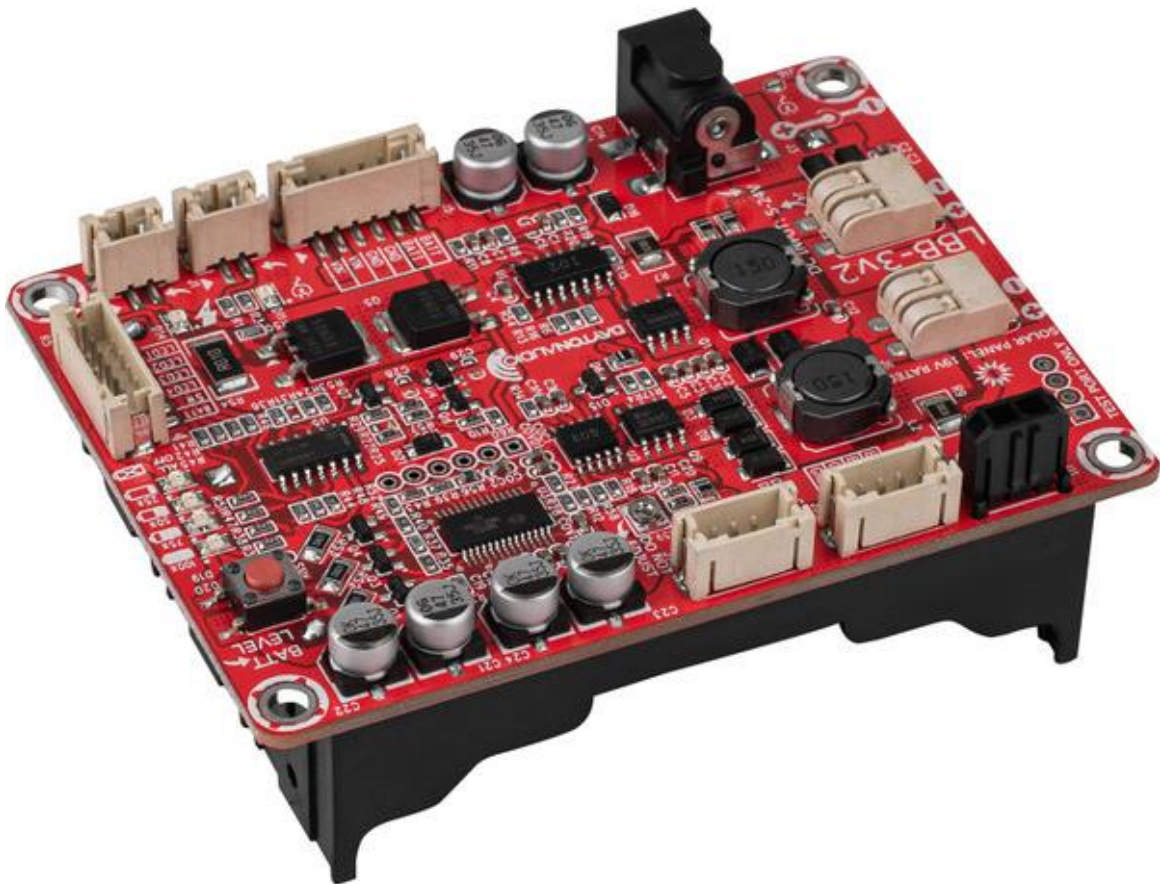


# DAYTONAUDIO



**Dayton Audio LBB-3v2 Lithium Battery Charger**

## Dayton Audio LBB-3v2

- Batteries sold separately: 18650 x3
  1. Use only flat top 18650 batteries, and not 18650 batteries with a button top on the positive side
- Package includes
  1. LBB-3v2 x1
  2. 20" 2-conductor cable
  3. 8" 4-conductor cable

## Power Supply

- Between 5 VDC and 24 VDC, center positive
- Recommended 1.5A capable
- 2.1 x 5.5mm center positive coax plug

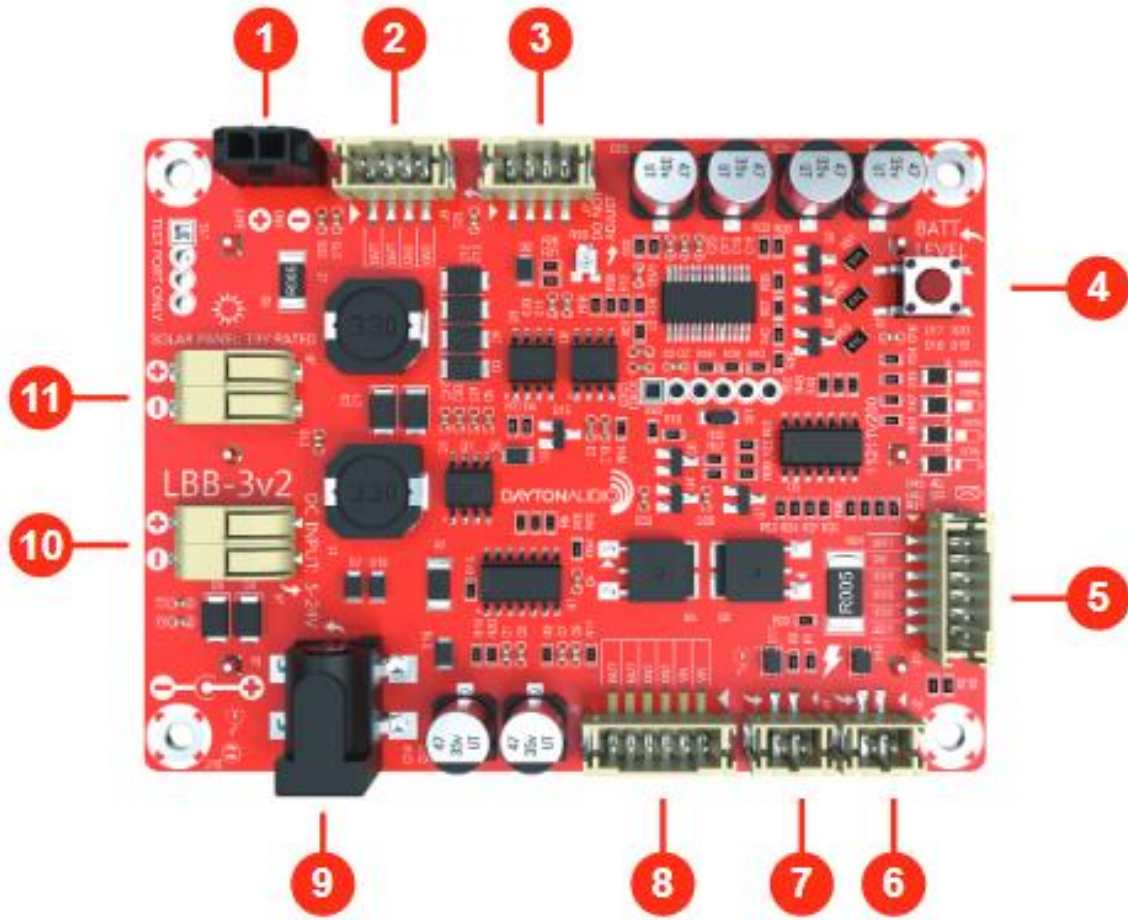
## Installing Batteries

- Plug in all wiring harnesses necessary for project before installing batteries
- Match the + side of the battery with the + marker on the LBB-3v2
  - If a battery's polarity is not marked, check for vent holes or a dimple around the rim of the positive side

## Charging Tips

- The LBB-3v2 uses a BMS (Battery Management System) to monitor the voltage of each cell individually in order to charge them to the same capacity
- If one battery is significantly lower in charge than the others, it may take days for all batteries to reach full capacity
  - Higher charge level batteries will be slowly drained before all cells are charged up together
- It is necessary to start with all new batteries with the same mAh capacity
- Remove the batteries before storing LBB-3v2 for a prolonged amount of time
- You must plug in the power supply to activate the battery board
- If a battery goes bad, the board will cease all output

## Quick-Start Wiring Guide



- |  |   |
|--|---|
| <b>1. J11:</b> 12 VDC power output                               | <b>7. J1:</b> External power port indicator LED, see page 5 |
| <b>2. J9:</b> 12 VDC power output                                | <b>8. J5:</b> Feature extension port, see page 5            |
| <b>3. J7:</b> 12 VDC power output                                | <b>9. J3:</b> 5 – 24 VDC power input                        |
| <b>4. S1:</b> Momentary push button to show battery level status | <b>10. J4:</b> 5 – 24 VDC power input                       |
| <b>5. J12:</b> External battery level status, see page 5         | <b>11. J6:</b> Solar panel input                            |
| <b>6. J2:</b> External charging LED indicator, see page 5        |   |

## Pinouts

J1 Pin	Value
1	LED+
2	LED-

J2 Pin	Value
1	LED+
2	LED-

J4 Pin	Value
1	DC+
2	GND

J5 Pin	Value
1	VIN
2	VIN
3	GND
4	GND
5	BATT
6	BATT

J6 Pin	Value
1	VIN
2	GND

J7 Pin	Value
1	BATT
2	BATT
3	GND
4	GND

J9 Pin	Value
1	BATT
2	BATT
3	GND
4	GND

J11 Pin	Value
1	BATT
2	GND

J12 Pin	Value
1	BATT
2	SWITCH
3	LED4
4	LED3
5	LED2
6	LED1

## Output Current Capabilities

How much current your project draws will be the limiting factor when using any battery pack. **Do not connect project directly to batteries, use only the voltage output ports of the LBB-3v2. Otherwise, over-current protection will not function.**

Use the following guidelines to determine which LBB-3v2 output ports will work best for your project:

- Higher Current Applications – Use J11 when a high amount of current is needed for extended periods of time
  - Examples of high current uses: larger amplifier boards, LED arrays, large DC motors
- Lower Current Applications – Use J9 when less current is needed
  - Examples of lower current uses: small/medium amplifier boards, smartphone battery bank, PC fans
- Maximum Current – The LBB-3v2 is capable of supplying 5A total at 12VDC from the outputs, for a combined output of 60W

## **Dayton Audio LBB-3v2**

### **J1 – External power port indicator LED**

J1 can be used as an external indicator to display the ON/OFF status of the battery board. Following the pinout on page 4, an LED can be connected such that an ON status indicates the board is active and an OFF status indicates the board is inactive. This external LED will serve the same purpose as D11 on the board just above J1.

### **J2 – External charge indicator LED**

Similar to the function described above in J1, J2 is used as an external indicator to display the charging status of the battery board. ON indicates the board is charging, OFF indicates the board is not charging, or has completed charging if the board is plugged in. This serves the same function as D14 on the board just above J2.

### **J5 – Feature extension port**

The feature extension port is a part of what makes the Dayton Audio line of battery modules so versatile. Being mindful of the pinout on page 4, accessories can be plugged into J5 to expand the options the battery board provides. The Dayton Audio LBB-5EB Expansion Board is an easy and effective way to add a 5VDC output to your project. This will allow you to charge smartphones and power other 5VDC devices. The LBB-5EB also has a DC jack to charge the battery board externally.

J5 power specification: 5VDC, 2A maximum output

### **J12 – External battery status indicator LEDs**

J12 can be used as an external indicator to display the battery level status of the board, serving the same purpose as D17, D18, D19, D20, just above J12. Following the pinout on page 4, four LEDs and a momentary button can be connected such that the battery level is displayed by the 4 LEDs while the button is depressed. The Dayton Audio LBB-5CL is an easy way to implement all external LED functions. Pressing the momentary button will illuminate the number of LEDs corresponding to the approximate status of the battery.

1 LED = 25%

2 LEDs = 50%

3 LEDs = 75%

4 LEDs = 100%

## **Troubleshooting**

*Battery board not supplying power* – Remove then replace one battery (new battery not necessary) and momentarily plug in your power supply. This will restart the charging circuit and will reactivate the battery supply

*LBB-5EB expansion not working* – ensure the LBB-5EB is plugged into the extension port (J5) and not the external battery charge status socket.

## **Dayton Audio LBB-3v2**

**Note:** The Dayton Audio LBB-3v2 is an independent battery holder board and its design does not work with Dayton Audio KAB board's built-in charge circuit. Plug the LBB-3v2 into the two wire DC input on the KAB boards or use Dayton Audio battery board KAB-BE with Dayton Audio KAB Bluetooth amp boards.

### **Specifications**

**Output voltage:** 12 VDC @ 5A Max (combined outputs)

**Supply:** 5 – 24 VDC, at least 1.5A recommended

**DC jack:** 2.1 x 5.5mm center positive

**Dimensions:** 3.60 x 2.70 x 1.30 inches