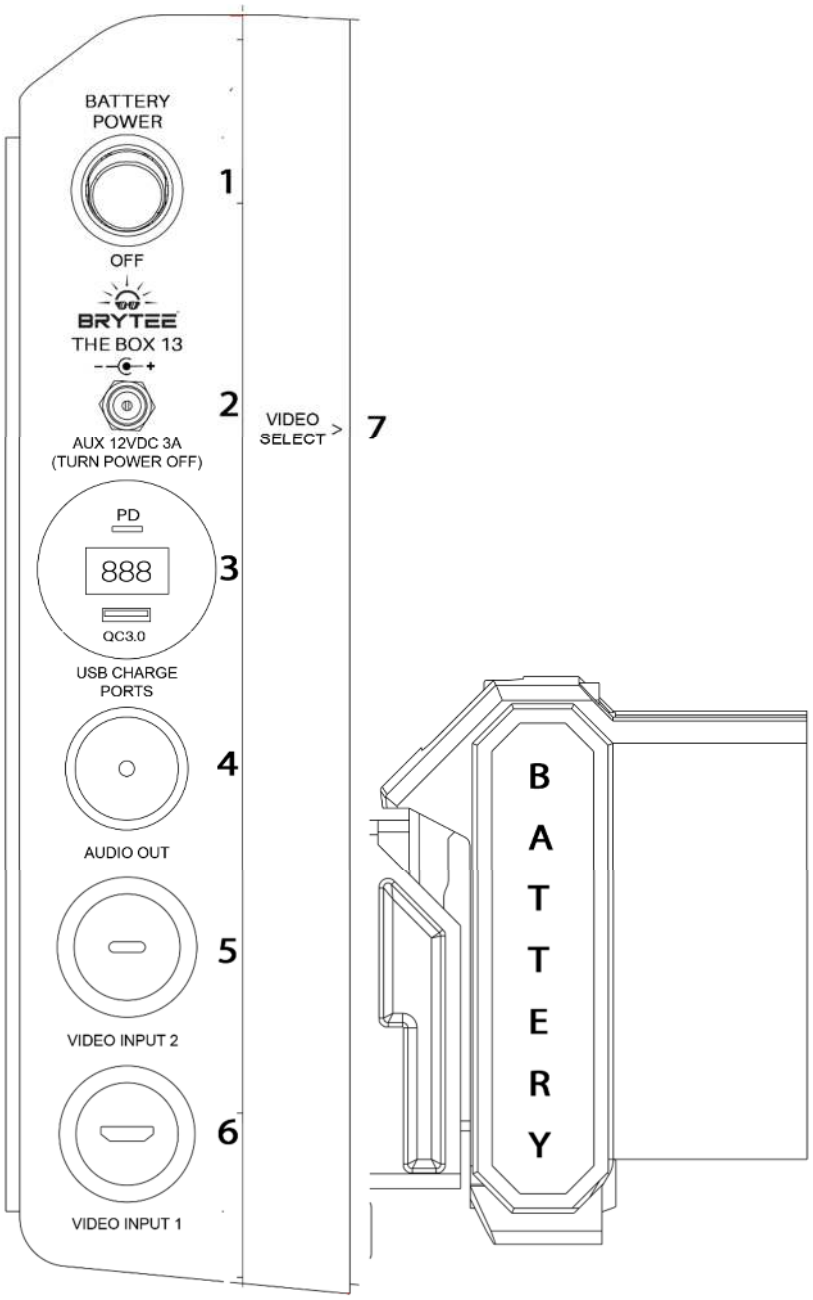
BRYTEE® BOX 13 OPERATING INSTRUCTIONS – V1.1

July 2024



1. **Battery Power ON/OFF Switch**
   Engages battery to the system

2. **AUX 12VDC 3A**
   Auxiliary power input (5.5mmx2.1mm barrel plug). For when external power is available. This bypasses the Battery Power switch. 12VDC source should be able to supply at least 3A of current.
   Notes:
   a. *To conserve battery power, turn Battery Power OFF when using AUX power.*
   b. Center pole is positive (+).

3. **USB Charge Ports and System Voltmeter**
   a. **PD** - USB-C type Power Delivery 3.0 fast charge outlet
   b. **QC3.0** - USB (1.4 style) Quick Charge 3.0 outlet
   Note: USB charge ports provide a maximum of 38W of output.

   c. **Voltmeter** – Measures system voltage. When under battery power it displays battery voltage. When under AUX power and Battery Power switch is **OFF,** it displays the AUX power voltage. When under AUX power and Battery Power switch is **ON,** it continues to display battery voltage.

4. **Audio Out** – Standard 3.5mm analog stereo audio port. Volume is controlled from the monitor OSD menu (see Brytee Monitor B001A User Manual)

5. **Video IN 2** – USB-C video port

6. **Video IN 1** – HDMI video port

7. **Video Select** – Press push button to switch between video inputs – (needs powered video source to switch)

Additional Notes:

1. The Box 13 Kit ships with the batteries not connected to the Control Panel due to shipping restrictions. Once a battery is clicked into the yellow power mount, the system will activate via the Battery Power On/Off Switch.

2. With the Battery Power On/Off Switch in the ON position and the Monitor power button ON (see Brytee B001A User Manual), do not close the Box 13 lid for extended periods of time as that could potentially cause any items and components in the box (including the monitor) to overheat. Plus, it will discharge the battery. The total power draw of the Box 13 system plus monitor is roughly 25 watts.

   As an extra precaution against inadvertent powering of the system with the lid closed, we recommend the monitor itself also be turned OFF at the end of the day. If the OSD Red/Green status light is ON, even if there is no video source connected and no image on the screen, the monitor backlight will still be activated. This will not happen if the OSD based monitor power button is pressed while the Box 13 system is powered (i.e., either via battery or AUX). Of course, this also means that the monitor will need to be turned on via the OSD (with the Box 13 system powered) for it to resume operation.

3. The Box 13 Kit also ships with a 1-inch-thick internal foam cover. We strongly recommend customers keep this cover particularly if additional loose items are to be carried in the box. The front glass of the monitor is quite rugged and extremely scratch resistant. However, dense or heavy objects with exposed corners that are loosely carried in the storage compartment, could crack the front glass under extreme conditions if the foam cover is not used. These conditions would include:
   a. Dropping the closed box to the ground,
   b. Violently shaking the closed Box 13,
   c. Getting into an accident during vehicle transport,
   d. Closed Box 13 tumbling down a steep incline,
   e. Come up with your own favorite “How to Break a Monitor” scenarios…

   Needless to say, these would also void the warranty. So, please keep and use the foam cover.

4. It is well known that Li-Ion batteries do not like to be deeply discharged which is a sure way to kill them. The Brytee monitor video board operates at 12VDC and the batteries output as much as 20.5V which in general is above the acceptable operating voltage of the video board. Therefore, to obtain the power storage benefit of the DeWalt-compatible batteries, we use a voltage converter to efficiently match the battery output to the video board power input. We have designed the Box 13 battery voltage converter to stop taking power from the battery when the battery voltage reaches a safe lower limit of approximately 14.5V. At this point the converter shuts down power draw from the battery turning off the monitor. However, as soon as the power load is removed, the battery voltage quickly rises which will reengage power draw and turn the monitor back on.

   This cycle will make the monitor screen flash on and off giving a visible indication that it’s time to swap out the battery. The cycling of the monitor is not harmful and, if not interrupted, will continue for as long as 20 minutes or so. While we do not recommend leaving the system in this state, the voltage converter will ultimately protect the battery from destructive battery discharge. Nevertheless, we recommend swapping the discharged battery or turning system power off.

   Also, once the battery is discharged it should be recharged at least to roughly 50% as soon as convenient. To not store a discharged battery in its low voltage state for long periods of time. Definitely do not store a discharged battery as this is likely to kill it and will void the warranty.