

# Tiny One

## RGB LED light controller manual



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**BrightBeats, LLC**

# Important Information

## Warnings

- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place heavy objects on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- This unit is equipped with a dedicated ground connection to prevent electrical shock. Before connecting the power plug to an AC outlet, be sure to ground the unit. If the power cord has a three-pin plug, it will provide sufficient grounding so long as the AC outlet is grounded correctly.
- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power cable plug from the electrical outlet.
- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.
- Use only the included power cord for this unit. Using other types may be a fire and electrical shock hazard.
- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.
- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.

## Cautions

- Keep this unit away from the following locations:
  - Locations exposed to oil splashes or steam, such as near cooking stoves, humidifiers, etc.
  - Locations exposed to excessive heat, such as inside a car with all the windows closed, or places that receive direct sunlight.
  - Locations subject to excessive humidity or dust accumulation.
- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.
- To relocate the unit, turn the power switch off, remove the power plug from the AC outlet, and remove all connecting cables. Damaged cables may cause fire or electrical shock.
- When setting up the product, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.
- If you know you will not use this unit for a long period of time, such as when going on vacation, remove the power plug from the AC outlet. Leaving it connected is a potential fire hazard.
- To prevent electrical shock when cleaning the unit, remove the power plug from the AC outlet.

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## **Interference**

NOTE: This equipment has been tested and found to comply with the limits of 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.

## **Tiny One Exclusion of Certain Responsibility**

Manufacturer, importer, or dealer shall not be liable for any incidental damages including personal injury or any other damages caused by improper use or operation of the Tiny One.

## **Static Electricity precautions (ESD):**

Even though the Tiny One controller has built in protection for ESD discharge, damage can still occur. Care should be taken to ground your body before touching any of the connectors. The best method would be to touch some part of the chassis to discharge any voltage before working with it.

# Setting up your system

Depending on what type of drums and LED's you have the installation will vary. A typical system will consist of the Tiny One controller, AC power supply or battery pack, trigger for the drum to be lit and a length of LED's to be driven for that drum.



## DC Power connection

The DC power jack is a 5.5mm x 2.1mm barrel connector. If you purchased the AC power supply with the unit you can safely power up to 4 amps through the unit. If you have multiple Tiny One units you could power more than one from the same AC power supply using widely available DC splitter cables as long as the total power draw doesn't exceed the capacity of the power supply which is 5.5 amps.

Note: The AC power supply has a 5.5mm x 2.5mm barrel connector and is supplied with an adapter.

## Using a battery pack

If you choose to use a 12 volt battery as a power source you must make sure that the voltage is regulated or doesn't exceed 12.5 VDC so as not to damage the LED strip. The Tiny One controller has a built in voltage regulator for the microprocessor but does NOT regulate the output to the LED's. **There is NO short circuit protection on the output when using a battery pack. This MUST be incorporated into the battery back and must be limited to 4 amps.**

## Input Jack

The input channel of the Tiny One is a ¼ inch mono connector. In general, the safe input range is from 0-10 volts. These inputs can be connected to various devices depending on how you wish to trigger the LED's. In addition to triggers, musical instruments, audio outs and similar devices can be used to trigger *but care must be taken not to overdrive the input or damage may occur.*

This system has also been tested with Roland VDrum controllers as well as 2Box. You can split the trigger output from a drum or cymbal with a "Y" cable and feed both the drum controller and the Tiny One. If the drum is a dual zone with a TRS connector, you can plug in a TRS cable directly to the Tiny One and it will only trigger off of the tip and sleeve. The ring is left floating on the input of the Tiny series units.

## Output Connection

The Tiny unit has a 4-pin Molex Mini-Fit Jr output connector. This will drive up to 4 amps at 12 volts for your LED's.



The pinouts are as follows:

- Pin 1: Red output (neg)
- Pin 2: Green Output (neg)
- Pin 3: Blue Output (neg)
- Pin 4: +12 volts

**If you are making your own cables be sure to use the proper gauge to minimize voltage drop and have the ampacity to safely carry the current for your LED's!**

# Software configuration

The Tiny One has a single rotary adjustment knob which gives visual feedback by varying the intensity and color to indicate what the current setting is.



The default color upon boot-up is aqua. This is the running color or top of the menu tree.

The control knob is also a push button. Pushing the knob cycles through the menu for each setting. The breakdown for the menu is as follows:

## Aqua: **Menu top**

- Red – Red LED intensity
- Green – Green LED intensity
- Blue – Blue LED intensity
- Yellow – Fade speed
- Purple – Hold time
- White – Trigger sensitivity

The visual feedback from the knob tells you the approximate setting by dimming the light output as the setting drops down or increasing the brightness as the setting goes up. When the setting is at zero or off the knob will flash the appropriate color. The light output is meant as a rough guide. If unsure of the setting, you could rotate the knob counter-clockwise until the knob flashes to indicate zero and then rotate clockwise using the following table as a guide.

## **Menu Table:**

Each setting has the following approximate number of turns for the full range:

Red LED intensity – 2 turns

Green LED intensity – 2 turns

Blue LED intensity – 2 turns

Fade speed – 2 turns (Rotating fully left to zero shuts off fading)

Hold time – 5.25 turns

Trigger sensitivity – 1.5 turns

***Tech Tip:** While adjusting the Fade Speed if you drop it to zero or off while the LED's are still lit and fading they will become locked on. To get around this just raise the fade speed until the LED's go off and then drop the setting to zero.*

After making adjustments and if the knob is no longer turned or pushed, it will revert to the top menu after 10 seconds. This is also when the new settings are saved to flash memory. If you were to remove the power before the unit returned to the top menu or aqua color the changes would be lost.

There is also a default RAM function. This will wipe out the memory settings to factory default.

### **To erase the unit back to factory default:**

Remove power to the unit

Hold in the function knob

Plug the unit in and continue holding the knob for 10-12 seconds until the knob changes color

Release the knob and wait until it returns to the aqua color

Factory settings are the following:

Red LED intensity – 100%

Green LED intensity – 100%

Blue LED intensity – 100%

Fade speed – 80% (very fast)

Hold time – 1%

Trigger sensitivity – 85%

## Input Settings

The input level adjusts how sensitive the input will be. 0% is off and 100% is crazy sensitive! You will want to set this so that it's just slightly above the point at which the trigger fires. Try playing different things and see if you get the response you like. Setting the input higher will give a different response depending on what is being played and how the output settings are configured. Remember that the output settings play a big part in this too.

## Trigger Placement

The Tiny One input can be set to be very sensitive. This allows for many options when triggering. Typically triggers can be placed in the traditional way directly on the head of the drum or they can be placed on the shell of the drum if a stick-on model is used. Every situation is different so a test should be conducted to determine what the best method is to achieve the best response and also to reduce cross triggering.

## Output Settings

The color settings will define what percentage of brightness the output will emit. You can increase or decrease them to get different colors on the channel.

The **Hold** setting will set how long the channel will keep its output on after the trigger hit is detected. Set it to about 1%, for example, for very fast snare rolls.

The **Fade** setting controls the fade speed of the output channel.

The fade will not become active until after the hold time has expired. Lots of different combinations can be achieved with these settings. You can also use the fade to achieve a color blend on the fade. If you set a color to 100% and then set the others at a lower percentage, the color at the lower setting will fade out first leaving the higher color on last.

## Foot Switch Jack

The **Foot Switch** input is a tip, ring, sleeve configuration. The sleeve is ground, the ring is **Output on** and the tip is **Disable Output**.

A very basic dual foot switch is all that is needed. No active components can be in the foot switch. Simply grounding the proper pin will activate the function. A good example of this type of switch would be a Vox VFS-2.

\*\*Under no circumstances should any voltage be applied to the **Aux** input. Damage can occur!

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# Bright Beats, LLC LIMITED WARRANTY

*Effective Date: January 2016*

## What This Warranty Covers

Your Bright Beats, LLC Warranty covers defects in material and workmanship in Bright Beats, LLC products purchased and serviced in the U.S.A.

## What This Warranty Does Not Cover

The Warranty does not cover: (1) damage caused by accident, misuse, abuse, improper installation or operation, rental, product modification or neglect; (2) damage occurring during shipment; (3) damage caused by repair or service performed by persons not authorized by Bright Beats, LLC; (4) products on which the serial number has been altered, defaced or removed; (5) products not purchased from an Authorized Bright Beats, LLC Dealer.

## Who This Warranty Protects

This Warranty protects only the original retail purchaser of the product.

## How Long This Warranty Lasts

The Warranty begins on the date of purchase by the original retail purchaser. The duration of the Warranty is as follows:

## **Tiny One lighting controller and power supply (1 Year)**

## What Bright Beats, LLC Will Do

We will repair or replace (at Bright Beats, LLC's discretion) products covered by warranty at no charge for labor or materials. If the product or component must be shipped to Bright Beats, LLC for warranty service, the consumer must pay shipping charges.

## How To Get Warranty Service

(1) Take the defective item and your sales receipt or other proof of date of purchase to your Authorized Bright Beats, LLC Dealer.

OR

(2) email [sales@usabrightbeats.com](mailto:sales@usabrightbeats.com) with a detailed description of the problem, together with a copy of your sales receipt or other proof of date of purchase as evidence of warranty coverage. Also provide a complete return address.

## Limitation of Implied Warranties

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*This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.*

If you have any questions about this warranty or service received or if you need assistance in locating an Authorized Service Center, please contact Bright Beats, LLC

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*Feature and specifications subject to change without notice.*

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