



TSB Group 31 Battery FCC Compliance

Manufacturer: Terra Supreme Battery LLC
1563 E State Rd 8, PO Box 28, Albion, IN 46701, USA
+1-260-636-6618 www.terrasupremebattery.com

Product: TSB-31000 Battery with BLE Module

Description: 12 V / 105 Ah bipolar composite lead-acid AGM VRLA battery with embedded BLE telemetry module

FCC ID: 2BWEA-TSB31000

1. Product Description

The TSB-31000 is a sealed, valve regulated 12 V / 105 Ah bipolar composite lead-acid battery containing an embedded Bluetooth Low Energy (BLE) telemetry module ("eBM-Chip-v2") that broadcasts battery state-of-charge, voltage and temperature data to authorized companion applications (e.g., TSB Sync eBM App). Unlike conventional flat-plate AGM or flooded lead-acid batteries, the TSB-31000 uses a bipolar architecture with a composite grid, delivering millions of partial-state-of-charge (PSOC) cycles while reducing lead content by approximately 10 %. The BLE module is powered from the battery's own cells; there is no external power input to the radio.

Parameter	Value
Nominal Voltage	12 V DC
Nominal Capacity	105 Ah (C20)
Dimensions (L × W × H)	13.27" × 7.13" × 10" (337 × 181 × 254 mm)
Weight	68 lbs (30.9 kg)
Terminals	Dual: SAE + 3/8"-16 (positive), 5/16"-16 (negative); torque 6–8 ft·lb
Charge Voltage	14.3 V (cyclic) / 13.4 V (float) @ 25 °C
Operating / Storage Temperature	–40 °C to +60 °C
Radio	Bluetooth 5.0 Low Energy, 2402–2480 MHz, +8 dBm max
Antenna	Integrated PCB antenna (internal, non-removable)

2. Installation & Safe Use

Install with positive (POS) and negative (NEG) terminals oriented per the case marking. Terminal torque: 6–8 ft·lb. Use only chargers rated for 12 V lead-acid AGM batteries with cyclic charge voltage in the range above.

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Recommended charge algorithm: constant-current (CI) followed by constant-voltage (CV), tapering to $I \leq 1$ A.

Minimum recommended in-rush current 25 A; maximum unlimited.

Temperature compensation: apply ± 0.030 V/°C from the 27 °C reference when charging at non-ambient temperatures.

Storage: keep open-circuit voltage above 12.0 V. If OCV drops below 12.0 V during storage, recharge before continued storage.

Ventilate the installation space; lead-acid batteries can emit hydrogen during charging.

Do not disassemble, incinerate, or short-circuit the battery.

Refer to the safety pictograms and warnings printed on the battery case for complete hazard information.

3. FCC Compliance Statement

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.

(47 CFR §15.19(a)(3))

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

(47 CFR §15.21)

NOTE: 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 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.

(47 CFR §15.105(b))

4. RF Exposure Statement

The device has been evaluated to meet general RF exposure requirement, the device can be used in portable exposure condition without restriction.

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5. Contact

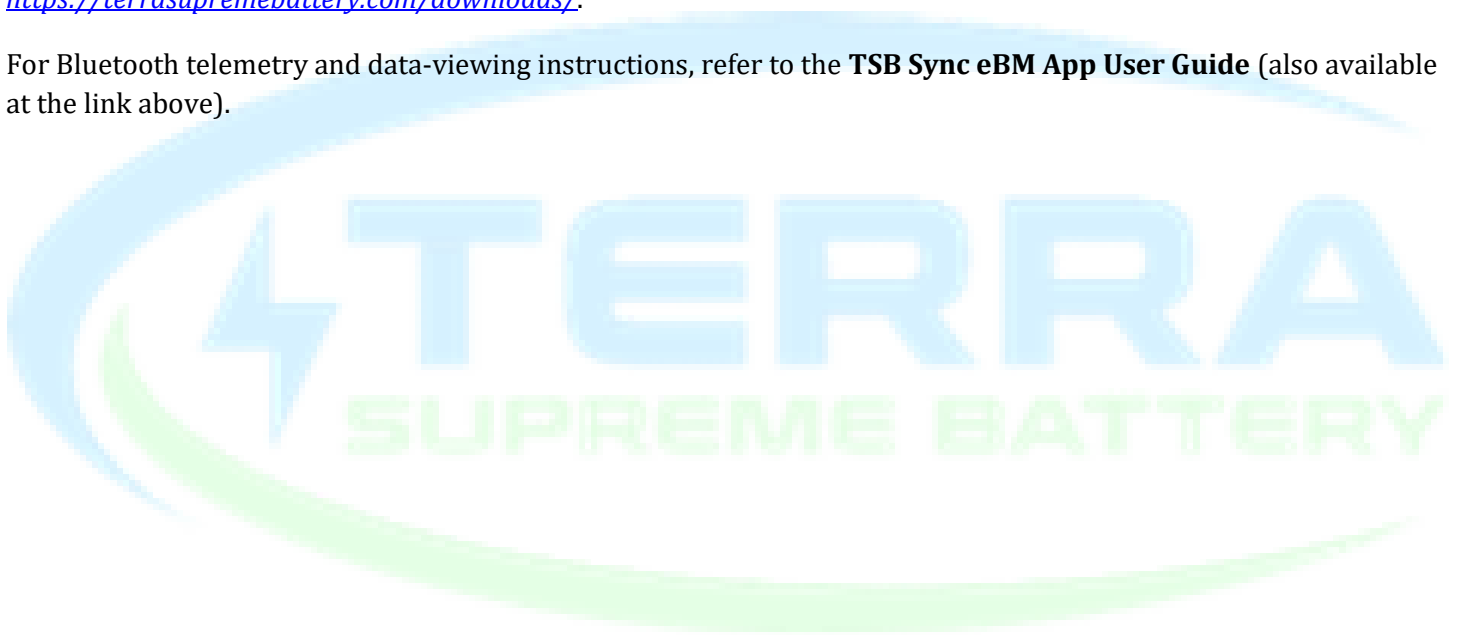
For technical support, warranty service, or compliance questions:

Terra Supreme Battery LLC
art.givens@terrasupremebattery.com
+1-260-636-6618

6. Further Reference

For detailed performance specifications — including cycle life, cranking power (CCA/MCA/PHCA), reserve capacity, internal impedance, and short-circuit current ratings — refer to the **TSB-G31 Datasheet** at <https://terrasupremebattery.com/downloads/>.

For Bluetooth telemetry and data-viewing instructions, refer to the **TSB Sync eBM App User Guide** (also available at the link above).





TCB

GRANT OF EQUIPMENT
AUTHORIZATION

TCB

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

QAI LABORATORIES LTD
3980 North Fraser Way
Burnaby, BC, V5J5K5
Canada

Date of Grant: 06/04/2026

Application Dated: 06/04/2026

Terra Supreme Battery LLC
1563 E State Rd 8, PO Box 28, Albion, IN 46701
Albion, IN 46701

Attention: Art Givens ,

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is
VALID ONLY for the equipment identified hereon for use under the Commission's
Rules and Regulations listed below.

FCC IDENTIFIER: 2BWEA-TSB31000
Name of Grantee: Terra Supreme Battery LLC
Equipment Class: Digital Transmission System
Notes: TSB-31000 Battery with BLE Module

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHz)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
	15C	2402.0 - 2480.0	0.002094		

Power listed is the maximum conducted output power. The antennas used with this
transmitter must be installed to provide a minimum separation distance of at least 20 cm
from all persons and must not be co-located or operating in conjunction with any other
antenna or transmitter, except in accordance with FCC multi-transmitter product
procedures. End-users must be provided with operating procedures for satisfying RF
exposure compliance.



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