

# Techarra SurgeGuard

Wireless Surge Guard System

## User Manual

# 1 Introduction

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Thank you very much for choosing TecharraSurgeGuard. TecharraSurgeGuard is an intelligent surge protection system designed to protect RVs and other setups from surges and other electrical issues. It features surge protection, remote monitoring, and the ability to automatically cut off power in hazardous situations such as wiring problems, overvoltage or current overload.

## Key Features:

- Surge protection with joule rating.
- EPO (Emergency Power Off) automatically shuts off power in hazardous situations.
- Real-time monitoring with LCD screen.
- Real-time monitoring via app.
- Weatherproof design, operable in windy and rainy conditions.
- Replaceable surge module (available on certain models).

## **2 Setup and Install**

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### **2.1 Install TecharraSurgeGuard app**

Go to your app store and search for ‘TecharraSurgeGuard’ to locate the app, download and install the app on your phone.

### **2.2 Power On the TecharraSurgeGuard**

Plug the TecharraSurgeGuard into the Shore Power. Ensure there are no wiring error messages displayed on the TecharraSurgeGuard LCD screen. If errors appear, contact the park manager.

### **2.3 Sync the TecharraSurgeGuard**

Ensure your Bluetooth is on, then launch the TecharraSurgeGuard app. Tap on the ‘+’ in the menu, tap on ‘Allow’ in the pop-up window. Now the app can use your camera to scan a QR code.

Scan the QR code located on the TecharraSurgeGuard to sync the app and the TecharraSurgeGuard. Add a name for the TecharraSurgeGuard in the detail sceen, tap ‘save’ to save.

### **2.4 Connect to the TecharraSurgeGuard**

Tap the ‘Scan’ in the menu and select the TecharraSurgeGuard name, tap ‘Connect’ to connect to the TecharraSurgeGuard. After connected to the TecharraSurgeGuard, you will view the real-time monitor data in the monitoring screen.

### **3 How to Operate the TecharraSurgeGuard**

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Step 1) Ensure the park breaker is in the off position.

Step 2) Plug in the TecharraSurgeGuard without connecting the RV.

Step 3) Turn on the park breaker.

Step 4) Check the TecharraSurgeGuard LCD screen:

If there are no error messages, turn OFF the breaker, plug in the RV, and turn the breaker back ON.

If an error message appears, identify the issue and contact park management for help.

If the LCD does not light up, there may be no neutral connection in the park. Contact park management.

Step 5) Monitor your RV:

If everything is working, the RV is running, and real-time data can be viewed via the app.

The TecharraSurgeGuard will automatically shut off the RV if voltage exceeds 104–132V or if there's a ground wire, neutral wire, or polarity issue. These problems will be displayed on the LCD or app.

Step 6) Automatic Shutoff and Recovery:

If the TecharraSurgeGuard shuts off power, it will monitor the situation. Once the issue is resolved and stable for 90 seconds, power will be restored.

Step 7) Surge Protection:

The TecharraSurgeGuard continuously protects against voltage surges and spikes. If surge protection is depleted, a "surge failure" message will appear on the LCD, and you'll be notified on your phone.

## 4 Issues

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### 4.1 LINE 1 VOLTAGE ERROR

The TecharraSurgeGuard has detected that the park voltage has exceeded 132V or dropped below 104V, will shut off the RV power. The TecharraSurgeGuard will continuously monitor the voltage, and once it stays within the safe range for 90 seconds, the TecharraSurgeGuard will turn the power back on. You can check the voltage on the TecharraSurgeGuard LCD screen or using the "Real-Time Readings" button in the app. If the voltage remains below 104V or above 132V, please contact the park management.

### 4.2 LINE 2 VOLTAGE ERROR

The TecharraSurgeGuard has detected that the park voltage has exceeded 132V or dropped below 104V, will shut off the RV power. The TecharraSurgeGuard will continuously monitor the voltage, and once it stays within the safe range for 90 seconds, the TecharraSurgeGuard will turn the power back on. You can check the voltage on the TecharraSurgeGuard LCD screen or using the "Real-Time Readings" button in the app. If the voltage remains below 104V or above 132V, please contact the park management.

### 4.3 LINE 1 OVERCURRENT

The TecharraSurgeGuard has detected that you have exceeded the rated current. If the park breaker has not tripped, it means the current you're drawing exceeds your RV capacity. Go inside the RV and turn off major appliances like the air conditioner and TV to reduce current consumption. Open the app to check the park's voltage on your phone—low voltage can cause excessive current draw. Report this situation to the park management.

### 4.4 LINE 2 OVERCURRENT

The TecharraSurgeGuard has detected that you have exceeded the rated current. If the park breaker has not tripped, it means the current you're drawing exceeds your RV capacity. Go inside the RV and turn off major appliances like the air conditioner and TV to reduce current consumption. Open the app to check the park's voltage on your phone—low voltage can cause excessive current draw. Report this situation to the park management.

### 4.5 LINE 1 NEUTRAL REVERSED

The TecharraSurgeGuard has detected a critical issue: the park's power lines are reversed somewhere. This can cause serious damage to your appliances. Please contact the park

management and inform them that the neutral and live wires are reversed. In this situation, the TecharraSurgeGuard will not allow the park power to pass through. Once the issue is resolved, the watchdog will automatically restore power after a 90-second delay.

## 4.6 LINE 2 NEUTRAL REVERSED

The TecharraSurgeGuard has detected a critical issue: the park's power lines are reversed somewhere. This can cause serious damage to your appliances. Please contact the park management and inform them that the neutral and live wires are reversed. In this situation, the TecharraSurgeGuard will not allow the park power to pass through. Once the issue is fixed, unplug the TecharraSurgeGuard and replug to reset it.

#### FCC Warning

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.

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

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.

#### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.