



## witi 2AC7Z-ESP32 Wireless Electric Brake Controller Installation Guide

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**witi 2AC7Z-ESP32 Wireless Electric Brake Controller**



## Operation & Installation Guide

### Warnings & Safety Instructions

Do not operate the WiTi Brake Controller unless you have read and understood this manual and WiTi is installed as per the instructions.

### Contents

WiTi Wireless Electric Brake Controller

### Specifications

- Nominal System Voltage: 12V
- Operating Voltage: 9V – 15V
- Operating Current: 38mA
- Operating Temperature: -20C – 60C
- FCC ID: 2AC7Z-ESP32
- Weight: 45g

### Operation and Installation Instruction

The WiTi Wireless Electric Brake Controller plugs into a standard 12V cigarette lighter socket and includes an LCD screen and a dial for gain adjustment and manual override. The WiTi Wireless Brake Controller Unit has a functional display LCD screen that displays the Trailer Battery Voltage, % Braking that will be applied and the linked status. There is also an emergency Brake Override button supplied in the case of emergency braking being required. The WiTi Brake Controller is a proportional controller that applies braking to the caravan or trailer in proportion to the rate

of deceleration plus it offers two significant safety innovations – Hill Descent Control and Brake Smoothing. Hill Descent Control improves safety and control when descending steep hills. All proportional brake controllers use inertia to determine the braking force applied to the brakes. The firmer the braking the more inertia is generated and braking is applied on the caravan or trailer in proportion. However, when descending steep hills the driver of the tow vehicle typically feathers the brakes to maintain speed – this generates no inertia as there is no deceleration. As a result there is no braking applied to the caravan or trailer and the tow vehicle is being pushed down the hill. WiTi Hill Descent Control eliminates this by measuring the angle of descent and applying the brakes relative to the gain setting on the dash mounted dial. The steeper the descent the more braking is applied resulting in a safer more controlled descent. Brake Smoothing eliminates the sharp and annoying jolting that may occur with other brake controllers. With WiTi the output to the electric brakes on the caravan or trailer is measured and smoothed electronically to provide a more comfortable and safer towing experience and eliminate harsh jolting. To adjust braking sensitivity the dial can be turned to the left to reduce trailer braking or to the right to

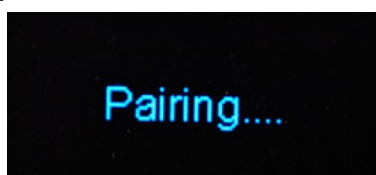
increase trailer braking, the LCD screen will display the new setting as a percentage gain that will be applied. Adjust the brakes to a level where trailer braking is felt to assist with overall braking of the tow vehicle and caravan. Different trailer weights and driving conditions will require different settings to provide safe braking operation on the trailer. Experiment with the settings to determine the ideal braking settings for your trailer or caravan. Braking to the trailer or caravan can be applied manually by pressing the brake controller dial. This will apply braking at the level indicated on the LCD screen. Turn the dial to the left for less braking and to the right for more braking. In manual mode Hill Descent Assist and Brake Smoothing are disabled.

## Pairing a WiTi Wireless Electric Brake Controller to the WiTi Anti-Theft System

1. Ensure the WiTi Anti-Theft System is powered on and within 10 meters of the WiTi Wireless Brake Controller.
2. On the WiTi Anti-Theft System press and hold the PAIR Button.
3. While the PAIR Button is still depressed, press the RESET Button for half a second and then let go of the RESET button whilst still depressing the PAIR Button.

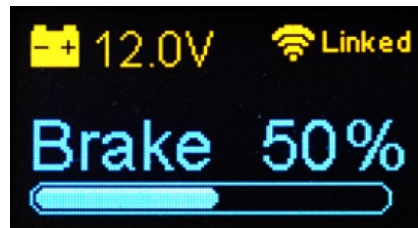


4. When the RESET button is released, you will notice the red LED flashing rapidly while the amber LED is still solid. Let go of the PAIR button. The WiTi Wireless Communication Module is now in PAIRING mode. The unit will stay in pairing mode for five minutes while searching for a WiTi Wireless Brake Controller to connect to.
5. While the WiTi Wireless Communication Module is in PAIRING mode, retrieve the WiTi Wireless Brake Controller. Turn the ignition in the tow vehicle on to ensure there is power available at the 12V cigarette lighter socket. Press and hold the emergency Brake override button on the WiTi Wireless Brake Controller. While the Brake override button is still depressed, insert the WiTi Wireless Brake Controller into the vehicle 12V cigarette lighter socket.
6. The WiTi Wireless Brake Controller LCD Screen will now display the "Pairing Successful" Message. You can now release the Brake override button. The "Pairing Successful" message will display for 5 seconds and then the WiTi Wireless Brake Controller will exit PAIRING Mode and return to normal operation. The Battery Voltage and Linked Icon will now also be displayed.



7. On successful power and pairing the WiTi Anti-Theft LEDs will flash simultaneously for 5 seconds to indicate that it has successfully paired with the WiTi Wireless Brake Controller. Once the LED's stop flashing the WiTi Anti-Theft will exit PAIRING Mode and return to normal operation. Both the Amber LED and the Red LED will

now be illuminated while the WiTi Wireless Brake Controller is within wireless range of the caravan / trailer.



8. If the Anti-Theft System unit did not detect a PAIRING partner during the pairing sequence, then the red and amber LEDs will flash in an alternating sequence for 5 seconds. This indicates that pairing has failed and the unit will then return to normal operation mode with just the amber LED illuminated.
9. If the WiTi Wireless Brake Controller did not detect a PAIRING partner during the pairing sequence, the display will show a message reading, "Pairing Timeout" followed by a message "Pairing Failed". Repeat the pairing.

### **Brake Controller Brake Calibration**

The WiTi Wireless Brake Controller integrates with the WiTi Anti-Theft Unit installed in the caravan or trailer. The WiTi Anti-Theft Unit should be installed vertically and facing either to the front or the rear of the caravan or trailer. The WiTi Brake Controller uses input from the accelerometer located in the trailer unit and uses gravity as a reference point for calibration. The WiTi Trailer Unit is calibrated at factory however, in the event it requires re-calibration or the installation or caravan / trailer is not level when hitched, please follow the following steps:

1. WiTi must be paired and linked status on the LCD Screen must be lit indicating a paired state
2. The Caravan / Trailer must be stationery (any movement will prevent the calibration)
3. The Caravan / Trailer must be on a level surface (if not level a faulty calibration will result)
4. Turn the dial to the left until it displays 0 then press the button. The Menu screen will appear
5. Use the dial to highlight "BRAKE CAL" and press the button. The screen will display "Brake Calibration in progress" followed by "Calibration Successful".

### **Brake Controller Voltage Calibration**

The WiTi Wireless Brake Controller displays the voltage of the batteries in the caravan. Occasionally the voltage displayed may be different to the actual voltage in the caravan and a calibration is required. To calibrate the Brake Controller voltage to the caravan battery voltage.

1. Turn the dial to the left until it displays 0 then press the button. The Menu screen will appear
2. Use the dial to highlight "VOLTAGE CAL" and press the button. The screen will display the voltage. Adjust the voltage up/down by turning the dial. When the voltage is correct press the button and the screen will display "Volt Calibration Successful".

### **Limited Warranty**

If Leisure Technologies determines that you are covered by a warranty as set in the Australian consumer law the company shall at its expense:

- repair the product, or replace the product with a new unit (which may have used refurbished parts of similar

quality);

- ship the repaired or replaced unit back to you;
- warrant the repaired or replaced product for a reasonable period; and/or
- refund money paid for the product.

The Company has the discretion as to which remedy applies.

### **Warranty period**

The warranty period starts on the date of purchase and ends 24 months later. For the purpose of this limited warranty, the date of purchase is the date indicated on the original bill of sale or receipted invoice for the product from the vendor from which you acquired this product.

### **How to get warranty service**

During the warranty period, if you wish to return a defective product you may contact us via [www.witi.com.au](http://www.witi.com.au). You may then return the defective product to the address given accompanied by an acceptable proof of purchase (a bill of sale or receipted invoice).

### **What is not covered**

The limited warranty does not cover a product:

- for which you are not the original purchaser;
- that is damaged by using in a way that was unreasonable or unintended;
- that is returned after the applicable warranty period set out above has expired;
- that has been installed other than per the product installation guidelines;
- that has been maintained, altered or modified, opened or repaired, other than by the company or by a company authorized service centre;
- that has been physically damaged, other than by the company or a company authorized service centre.

To the extent permitted by law, Leisure Technologies, its directors, officers, employees, suppliers and agents, shall not be liable for injury to persons or property, or for any indirect, special, incidental or consequential, punitive or exemplary damages and liability and shall be limited to the amount you paid for the product.

### **Disclaimer**

- WiTi products are designed for installation by reasonably competent consumers. Consumers are taken to have sufficient knowledge of the intended caravan or trailer unit and its appropriateness for the installation of any WiTi products.
- Installation of WiTi products may require consumers to have knowledge and experience using powered tools and electrical wiring. Consumers without such knowledge are to refrain from attempting any installation of WiTi products and to consult their nearest WiTi specialist or qualified Auto Electrician.
- Prior to the installation of any WiTi product consumers are taken to have comprehensively read and understood the appropriate WiTi operation and installation guide included with the product.
- It is the consumer's sole responsibility to have WiTi products properly installed on their vehicle and/or trailer units along with any modifications necessary for the proper installation of WiTi products.
- Consumers are solely and completely responsible for evaluating their trailer units to ensure that the trailer units, and each part thereof, is appropriate, adapted, and applicable for installation and use of WiTi products.
- Any and all WiTi unit damages caused by a consumer's failure to modify the caravan or trailer properly for

installation and use of one or more WiTi products not covered by this disclaimer is the sole responsibility of the consumer.

- Leisure Technologies Pty Ltd and their distributors and resellers also expressly disclaims all liability for direct, indirect, special, incidental, or consequential damages, including but not limited to, damage or loss of property or equipment, injury to person whether physical or not, loss of profits or revenue, cost of purchase or replacement of goods, or claims of customers of the purchaser that result from the incorrect installation of any WiTi Anti-Theft unit or subunit.

### Other important notices


To the extent permitted by law, this limited warranty constitutes the entire agreement on the subject matter and supersedes any prior agreement or understanding, written or oral. Where used herein, the company shall mean Leisure Technologies Pty Ltd and its subsidiaries and associates. Our goods come with guarantees that cannot be excluded under the Australian consumer law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under your warranty are in addition to other rights and remedies under the law in relation to the product.



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### Documents / Resources

	<p><a href="#">witi 2AC7Z-ESP32 Wireless Electric Brake Controller</a> [pdf] Installation Guide 2AC7Z-ESP32 Wireless Electric Brake Controller, 2AC7Z-ESP32, Wireless Electric Brake Controller, Electric Brake Controller, Brake Controller, Controller</p>
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### References

- [witi<sup>®</sup> WiTi Anti-Theft, Wireless Towing, Wireless Brake Controller](#)
- [witi<sup>®</sup> WiTi Anti-Theft, Wireless Towing, Wireless Brake Controller](#)