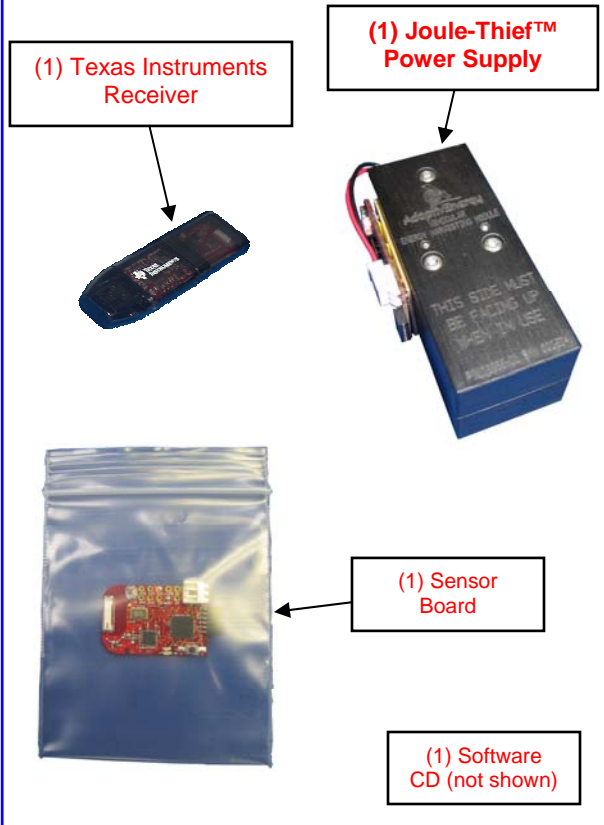


Kit Contents



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Joule-Thief™ Demonstration Kit Important Notice

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Joule-Thief™

DC Power Supply Demonstration Kit Quick Start Guide



PT103400 K1-JTRA-e5mini
(Random Vibration Demonstration Kit)

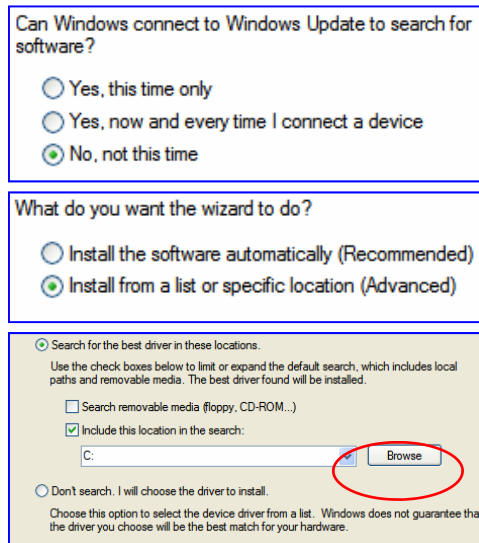


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Joule-Thief™ is a miniature DC power supply that creates electrical energy from mechanical vibration. The power supply is ideal for battery extension or replacement in wireless sensing and other low power applications. Built on AdaptivEnergy's **Powered by RLP™** technology platform, this kit demonstrates battery-less wireless transmission from **random vibrations** to a USB-based receiver.

1. Insert the included CD to install the **Joule-Thief™** software. Follow the on-screen instructions or refer to the installation manual on the CD. You DO NOT need to restart your computer after the install if prompted.
2. After the **Joule-Thief™** software has been installed, insert the TI receiver module into a USB port on the computer. Windows will begin the driver installation process (dialog box appearance may vary according to your operating system). Make the following selections when prompted:



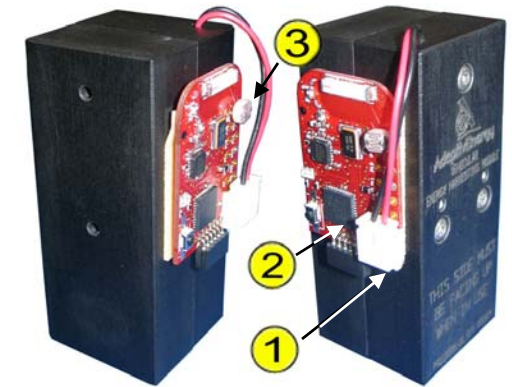
3. Use the “Browse” button to locate the “**RandomVibeProject**” sub-folder that has been placed in the Windows “**Program Files**” folder. The drivers for the TI MSP430 Application UART are located there.

4. Plug the module’s female connector into the male connector on the sensor board. The connector is keyed and should only go in one way. Attach the sensor board to the **Joule-Thief™** power supply with a piece of double-sided tape.
5. Launch the **Joule-Thief™** software from the shortcut “**Joule-Thief Random Vibe**” on your desktop. Press the “**Run Demonstration**” button to access the data acquisition screen.
6. Press the button “**Connect to eZ430-RF2500**”. If the screen LED lights green, go to step 6. If a dialog box titled “**Select COM Port for TI MSP430-RF2500**” is displayed, the appropriate COM port must be selected. Navigate to the Control Panel ==> System ==> Hardware ==> Device Manager ==> Ports (COM & LPT). Note the COM port next to the device “**MSP430 Application UART**”. Select this COM port in the **Joule-Thief™** software dialog screen. The screen LED should light green.

7. Click on the button “**Start Acquisition**”.
8. Lightly tap the power supply on the table or in your hand. After approximately 10-20 seconds you should see a red LED flash on the sensor board.
9. You should also see readings from the sensor board module appear on the software interface. Refer to supplied documentation for further information.

See the enclosed CD for complete documentation

Hardware Locations



1. Female connector
2. Temperature sensor
3. Light sensor

Trouble Shooting Guide

COM port not found or error	<ol style="list-style-type: none"> 1. Make sure the TI receiver is plugged in and the green LED is blinking when the red light blinks on the sensor board. Check Device Manager in the control panel to see if the COM port detected the TI receiver.
Data not displayed	<ol style="list-style-type: none"> 1. Make sure that the Joule-Thief™ DC Power supply is on a suitable vibration source. 2. Ensure that the red LED on the <i>Joule Thief™</i> is blinking (note: the LED may not blink for several seconds until the initial charge has been reached). 3. Make sure the TI receiver is plugged in and the green LED is blinking. Check Device Manger in the control panel to see if the com port detected the TI receiver. 4. EXIT the <i>Joule Thief™</i> software and repeat Step 6 if data is still not displayed