



ECHO® UNDER-DASH TRAILER BRAKE CONTROLLER INSTALLATION MANUAL

51190

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NOTICE 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.

This device contains license-exempt transmitter(s) / receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

CONTROLS & COMPONENTS

1. Main module
2. Main module adhesive pad
3. Four 8" zip ties



REMARQUE Cet appareil est conforme à la partie 15 des règles de la FCC. Le fonctionnement de l'appareil est autorisé aux deux conditions suivantes : (1) cet appareil ne peut causer d'interférences nuisibles; et (2) il doit accepter toute interférence reçue, notamment celles pouvant entraîner un fonctionnement indésirable.

L'émetteur ou le récepteur exempté de licence contenu dans le présent appareil est conforme aux Cahiers des charges sur les normes radioélectriques d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exemptés de licence. Le fonctionnement de l'appareil est autorisé aux deux conditions suivantes.

1. Cet appareil ne peut causer d'interférences nuisibles.
2. Il doit accepter toute interférence reçue, notamment celles pouvant entraîner un fonctionnement indésirable.

BEFORE YOU BEGIN

One or more of the following may be needed for installation:

- Brake control harness, supplied with the tow vehicle (if equipped)
- CURT quick plug harness - custom connector for specific vehicles (see the CURT catalog for availability)
- CURT #51515 / #51516 - quick plug with pigtails
- CURT #51500 - universal brake control wiring kit

 **IMPORTANT:** Read and follow installation manual carefully. Failure to do so could result in damage to the brake control unit, loss of trailer brakes or poor brake performance.

Disconnect the electrical plug between the trailer and tow vehicle before testing a breakaway switch. Failure to disconnect may damage the brake control unit. Avoid mounting the brake control module near a CB radio or other RF transmitter.

 **WARNING** The main module must be mounted firmly in place. Failure to do so could lead to improper operation and / or brake failure.

 **WARNING** The main module's positive (with 30-amp circuit breaker) and ground wires must be connected directly to the tow vehicle's battery using a minimum of 10-gauge stranded wire. Connecting to existing wiring or an alternate ground may damage the vehicle's circuits, lead to failure of the brake control module, loss of trailer brakes or vehicle fire. **Note:** Removal of the factory quick plug can void the warranty.

This product IS NOT compatible with Apple CarPlay or Android Auto, however it will not interfere with these features.

This product is designed to provide a Bluetooth connection, without obstructions, up to 50 ft. connection may also be limited by the Bluetooth signal of your device.

 **WARNING** Avoid distracted driving. Only make adjustments when the vehicle is stationary. Please adhere to all applicable traffic laws and motor vehicle safety regulations including, but not limited to, all laws and regulations prohibiting the use of handheld devices while operating a motor vehicle.

 **WARNING** OneControl® app must be operating in the foreground of your cell phone applications. Operating the App in the background of your cell phone applications may cause delays in braking response when using the manual override button.

 **WARNING** Do not mount the Echo® near the exhaust pipe. Failure to do so may result in heat damage, loss of functionality and risk of fire.

 **NOTICE** Prior to driving, test all trailer lights while the trailer is plugged into the Echo®.

WIRING

Disconnect the tow vehicle's negative battery terminal from its battery post before beginning the installation process. Most trucks and utility vehicles are equipped with a plug from the factory that allows quick brake control installation. Check the vehicle owner's manual for plug availability, location and installation. If the mating plug supplied with the vehicle is no longer available, a CURT quick plug can be used. See the CURT catalog or visit curtmfg.com for application information. For tow vehicles not equipped with a factory brake control plug, we suggest purchasing the CURT universal brake control wiring kit #51500.

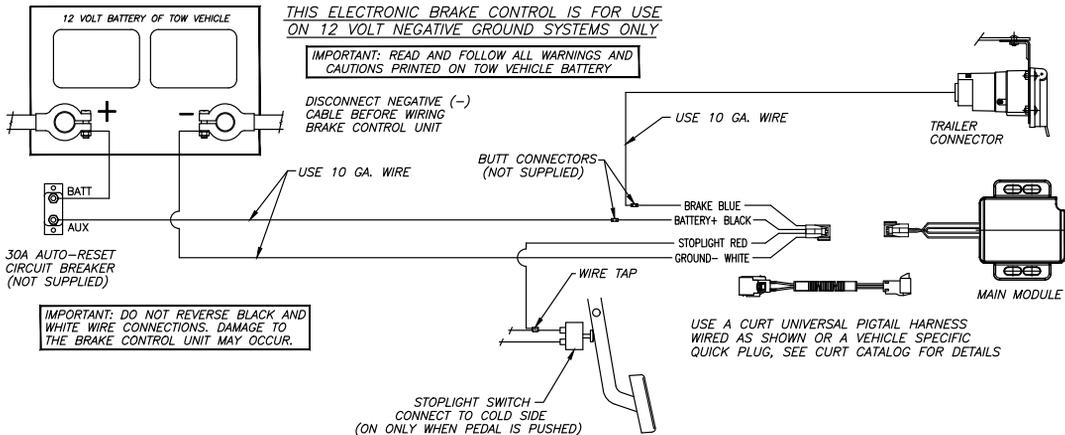
Mount the 30-amp, auto-reset circuit breaker as close to the battery as possible.

 **IMPORTANT:** When passing wires through sheet metal, always go through an existing grommet. If there is no grommet, install one or use silicone sealant to protect the wires from sharp edges.

Insert two 10-gauge wires, one white and one black, from the mounted brake control to the battery area. Using a ring terminal, connect the black wire to the 'AUX' side of the 30-amp circuit breaker. Leave the white wire to be connected later. Using a 10/12-gauge butt connector, attach the black wire from the 'AUX' side of the 30-amp circuit breaker to the brake control's black wire. Again using a 10/12-gauge butt connector, attach the white wire from the battery area to the brake control's white wire. Run a 10-gauge blue wire from the tow vehicle's trailer plug 'BRAKE' terminal to the brake control. Using a 10/12-gauge butt connector, connect this wire to the brake control's blue wire.

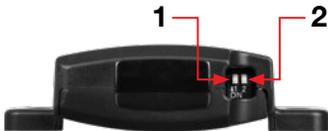
 **NOTICE** If the device application cannot connect to the unit due to an incorrect or missing PIN, contact CURT product support. They will need the serial number located on the label of your unit.

WIRING DIAGRAM



SET MANUAL CONTROL OUTPUT AND BRAKE LIGHT SWITCHES

There are two small switches located at the front of the unit, next to the port on the module. Once accessed, the switch positions can be changed using a small pointed tool.



In the illustration above, the switch on the left (#1) controls the unit's brake light activation feature. The factory default setting is the 'ON' position with the switch down. This setting activates the tow vehicle and trailer brake lights when the manual control is actuated. Moving the switch up to the 'OFF' position turns off the brake light activation feature and the brake lights are not activated when the manual control is actuated.

In the illustration above, the switch on the right (#2) controls the level of output available to the trailer brakes when using the manual control. The factory default setting is the 'ON' position with the switch down. This setting limits the manual control output to the level set using the output control. Moving this switch up to the 'OFF' position allows 100% of the output to the brakes when the manual control is actuated regardless of the output control setting.

MOUNTING THE MODULE

- Once the CURT quick connector or splice-in harness is installed, determine a suitable mounting location for the module.
 - The module must be mounted securely to a solid surface under the dash. The orientation of the module does not matter.
 - This module should be easy to access for troubleshooting. It can be installed out of sight to reduce contact with operator.



Figure 1

- See the 'Set Manual Control Output and Brake Light Switches' section in the previous section before mounting the module.
- Secure the module in place using the provided adhesive pad and zip-ties.
- Plug in the module to the pigtail harness or vehicle-specific quick plug. If harness is unavailable, hard wiring will be necessary.

DOWNLOAD THE MOBILE APPLICATION

Mobile applications are available for Apple and Android OS. They can be accessed in the App Store or Google Play by scanning the respective QR code below or searching for 'OneControl® Auto'.

- Apple OS Requires iOS 14 or higher
- Android OS requires Android 9.0 or higher
- Bluetooth must be enabled on your device for pairing to occur
- After the app is installed, follow the prompts for setup



INITIAL SETUP FOR BLUETOOTH CONNECTION

NOTICE The vehicle needs to be running or the ignition in the 'ON' position with the vehicle in park.

NOTICE At any moment during setup, if the LED on the Echo under-dash is red, stop and refer to the 'Troubleshooting Guide'.

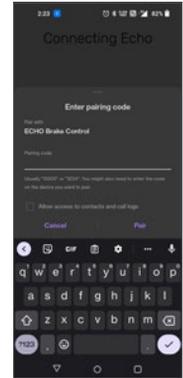
1. Enable Bluetooth in your mobile device settings. This will allow you to detect your Echo® device.

NOTICE Pairing of the app to the Echo device will happen within the app. Device **should not be paired** within the smartphone's Bluetooth settings menu.

2. Open the app after installation and follow the on screen prompts, agree to the end user agreement and complete the initial registration

Once registration is created, you will utilize the credentials for future logins.

3. Once registered and logged in, select 'Pair Device' under the Echo® brake icon on the home screen.
4. Prior to scanning for an Echo® brake device, grant location permissions to the app and enable device location.
5. The app will begin scanning for an Echo® device. Once the 'Echo® Brake Controller' is visible, select it. Once detected, select 'Connect' to pair the device. You will then be prompted to enter the six-digit PIN, found on the side of the brake controller unit or on the provided quick reference card. Once pairing is complete, you will receive a pairing successful notification and the LED light on the Echo® device will be solid blue.



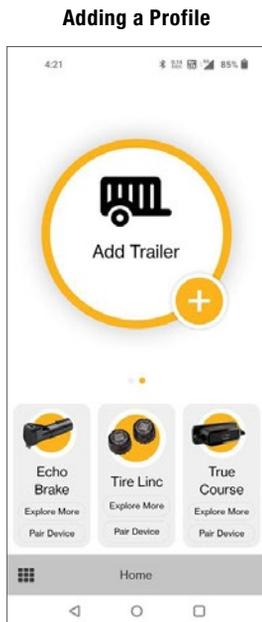
APPLICATION SETUP

After pairing with the Echo®, you will be directed to the 'Controller Profiles' to setup your trailer's profile. You can create and save profiles for multiple vehicles, trailers and load conditions.

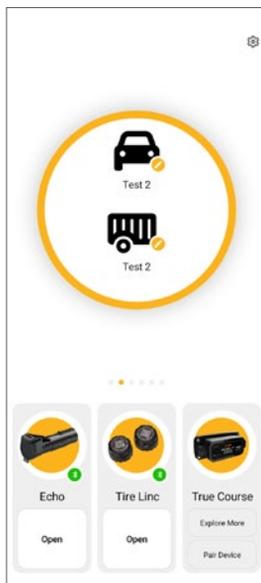
Note: Setting configuration is required when trailer conditions change or if the brake controller is being used for a different trailer / vehicle.

Controller Profile

- In this menu, you can access the five most recently used settings. These settings are stored within the Echo® device. This option allows you or others who borrow your Echo® to access pre-configured tow settings quickly and easily.
- Your active profile will display in the foreground within the active orange circle.



Activating a Profile



ADDING A PROFILE

1. Select the '+' symbol in the orange controller profile menu.
2. Now you will be able to modify the description of your vehicle and trailer.
3. Click 'OK' to confirm.
4. You are also able to modify an existing trailer name by swiping left on the profile.
5. Repeat steps 1 – 3 for additional trailers.

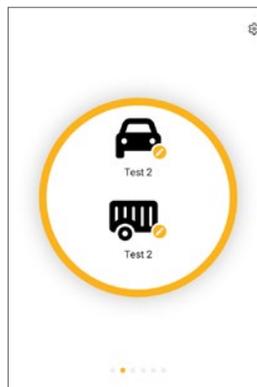
ACTIVATING A PROFILE

1. You can switch between different profiles by swiping left or right on the active controller profile on the home screen.
2. Once the chosen profile is set to active, select 'Open' under the connected Echo® device.

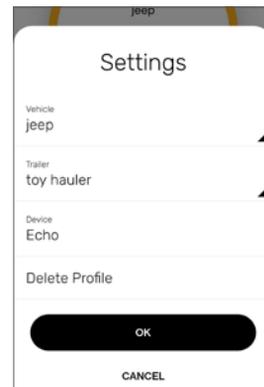
MODIFYING OR DELETING A PROFILE

1. Select the profile you would like to delete by swiping left or right.
2. Select the pencil or 'edit' icon next to the tow vehicle or trailer icons to enter settings.
3. If you would like to modify the profile, change the respective tow vehicle name or trailer name and select 'OK'.
4. If you would like to delete the profile, select 'Delete Profile' and select 'OK'.

Modifying / Deleting Profile



Settings



CONFIGURING PROFILE SETTINGS

To enter 'Active Profile', tap the 'Open' button shown under the image of Echo®. In your 'Active Profile' screen, you can adjust settings and use the Echo® Brake controller.

1. Manual Brake Activation

Activate manual braking, press and hold the orange button.

Manual brake controller activation is used in situations where a slow reduction in speed is desirable. As the manual control is activated, the Echo® begins to apply the trailer brakes. Manual output can be activated by pressing and holding the orange button in the app.

2. Brake Output Indicator

The orange outer ring indicates current brake output level.

The orange outer ring is a visual indicator of the current level of power being applied to the trailer brakes. When the vehicle's brakes are fully applied, the level of power and position of the ring is determined by your max output setting.

3. Max Output

The maximum level of the brake controller.

The output control establishes the max amount of power available to the trailer brakes when braking. The output should be adjusted during initial setup, when trailer load changes, when different trailers are used or when adjustment is needed for changing road or driving conditions. To edit, tap the maximum output button and increase or decrease using the '+' or '-' buttons.

4. Sensitivity Level

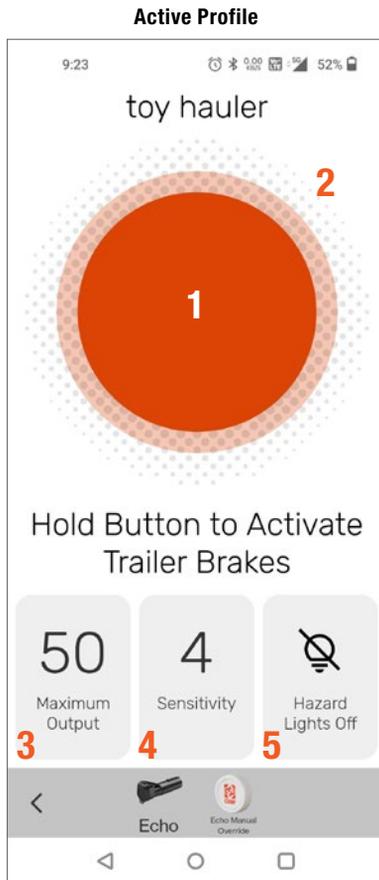
The sensitivity of the braking power.

The sensitivity level adjusts trailer aggressiveness when activated during braking. Sensitivity adjustment has no effect on the manual brake control. The sensitivity can be adjusted for individual driver preference, trailer load changes or changing road conditions. To edit, tap the sensitivity button and increase or decrease using the '+' or '-' buttons.

5. Vehicle Hazard Lights

Turn on any time the vehicle's hazard lights are active.

When the vehicle's hazard lights are activated, the trailer brakes may pulse on and off as the lights flash. To prevent pulsing brake output, toggle the switch ON any time the vehicle's hazard lights are active.



TEST DRIVE & ADJUSTMENT

Both the output and sensitivity can be adjusted to achieve smooth, firm stops. Output and sensitivity adjustments should only be made while stopped, with the transmission in park or neutral, parking brake applied, foot off the brake pedal, and no manual control actuation.

⚠ WARNING Perform tests and adjustments in a safe environment (parking lot or in minimal traffic area).

Starting with the output adjustment, drive forward on a dry and level paved or concrete surface. At approximately 25 mph, apply the vehicle's brakes. If trailer braking is insufficient, increase the max output setting in the OneControl® app. If the trailer brakes lock up, decrease the max output. Repeat this process until stops are firm, just short of lock up.

Once the output is set, adjust the sensitivity by driving forward at approximately 25 mph and press the brake pedal. The vehicle and trailer should make a smooth stop. If the stop seems slow and more aggressive braking is desired, increase the sensitivity level through the OneControl® app. If the stop seems too aggressive, decrease the sensitivity level in the app.

Make several stops at various speeds and adjust the sensitivity until stops are smooth and firm. Slight adjustment to the output control may also be required to achieve desired results at all test speeds. **Note:** If any problems occur during setup, refer to the 'Troubleshooting Guide' on the last page of this manual.

⚠ WARNING This process must be repeated if there are any changes to weather / road conditions or significant changes in trailer weight or towing setup.

LED STATUS INDICATOR

A single LED on top of the Echo® shows the status of the brake controller unit. Refer to the icons and descriptions below.



Device not paired,
no trailer connected
(flashing blue)



Device paired,
no trailer connected
(solid blue)



Calibrating
Echo®
(flashing yellow)



Device not paired,
trailer connected
(flashing green)



Device paired,
trailer connected
(solid green)



Wiring error
(flashing red)



Hardware fault
(solid red)



No power
(no light on)

Indicator	Status
Flashing blue	Device not paired, no trailer connected
Solid blue	Device paired, no trailer connected
Flashing yellow	Calibrating Echo
Flashing green	Device not paired, trailer connected
Solid green	Device paired, trailer connected
Flashing red	Wiring error
Solid red	Hardware fault

TROUBLESHOOTING GUIDE

Condition	Problem Cause	Possible Solution
LED does not light	No power to brake controller, no ground on vehicle 7-way	Check vehicle power and ground wiring Trailer mode not activated for vehicle Some vehicle's require a trailer to activate 7-way power. If a trailer is not available, the CURT 7-way tester #58272 may be used to complete setup / troubleshoot
Unable to connect to mobile devices	No power to brake controller, no ground on vehicle 7-way Invalid Bluetooth PIN Reset Bluetooth connection	Check Echo LED status for power Input PIN from label or quick reference card. Enable Bluetooth or grant permissions. Check smartphone compatibility Select trailer profile, tap the Echo device name, then tap the trash can icon to remove. In OS Settings, go to Bluetooth connections and 'forget the device'
Solid red LED for more than 10 seconds	Hardware fault	Contact CURT Product Support
Flashing red LED	Contamination in trailer plug socket	Check for clean and dry trailer plug
	Short in trailer brake wiring	Locate and correct short
	Accelerometer error	Unplug the brake controller and plug it back in
	Short or overload in trailer brakes	Troubleshoot trailer brake circuit per brake manufacturer's instructions
No trailer brakes, pedal or manual	Mis-wired 7-way connector Improper or corroded trailer wiring Weak or missing ground	Confirm vehicle and trailer 7-way connections
⚠ DANGER No trailer brakes (pedal or manual) and app signals 'disconnect'	Loss of trailer connection, unplugged or bad wiring	Confirm vehicle and trailer 7-way connections
No response on manual override or brake output	Mis-wired 7-way connector Improper or corroded trailer wiring No or intermittent power to controller Weak or missing ground Wireless connectivity error	Confirm vehicle and trailer 7-way connections Check Bluetooth and application settings
Reduced braking power on manual override or brake output	Weak or missing ground Improper max power or sensitivity settings Improper or corroded trailer wiring	Confirm vehicle and trailer 7-way connections Check Bluetooth and application settings Increase max power or sensitivity settings
Trailer brakes on all the time (LED is red)	Mis-wired 7-way trailer connector	Confirm vehicle and trailer 7-way connections
App signals 'low voltage'	Low battery voltage	Check vehicle battery and replace if needed Confirm vehicle 7-way connections and wiring
⚠ WARNING App signals 'overload'	Trailer brakes are overloaded	Reconnect the trailer connector Confirm vehicle 7-way connections and wiring Check trailer brake wiring for short circuits
NOTICE Screen	If a communication error occurs between the app and the brake controller, condition notifications from controller will not be sent	The brake controller will continue to function properly at the most recently programmed settings and braking operation will not be affected

PRODUCT REGISTRATION

CURT stands behind our products with industry-leading warranties.

Provide feedback and help us to improve our products by registering your purchase at curtmfg.com/registration.

LET US KNOW WHAT YOU THINK!

Share the love and your experience with Echo by leaving a review on curtmfg.com/51190.