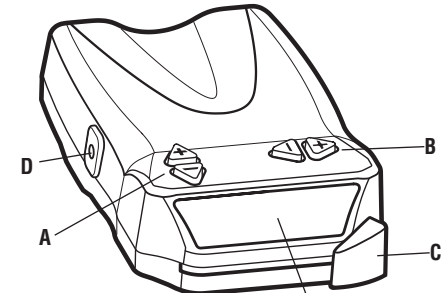


Instructions For The Installation And Operation Of Electronic Brake Control For 2, 4, 6 & 8 brake applications

READ THIS FIRST:
Read and follow all instructions carefully before installing or operating the Brake Control. Keep these instructions with the Brake Control for future reference.

Components of the Brake Control



- A. Output (Gain) Control
- B. Boost Control
- C. Manual Slide Control
- D. Bracket Mounting Holes
- E. LED Display

This Package Includes:

- (1) Brake Control Unit
- (1) Mounting Bracket
- (4) Mounting Screws, #6 x 3/8"
- (1) Warranty Card

Material Required:

- 10 Ga. wire
- 30 Amp auto-reset circuit breaker
- Assorted ring terminal & butt connectors
- 4" cable ties (6-10)

Tools Required:

- Assorted end wrenches
- Drill with 1/8" bit
- Wire connector crimp tool
- Probe type circuit tester
- Wire cutter/stripper
- Screwdriver or 1/4" Nut Driver

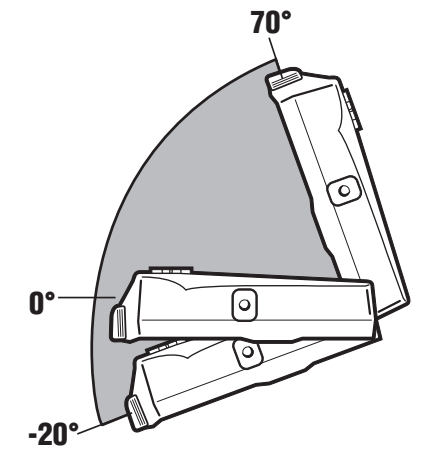
For Technical Assistance and Warranty Information call: 1-888-785-5832 or www.cequentgroup.com

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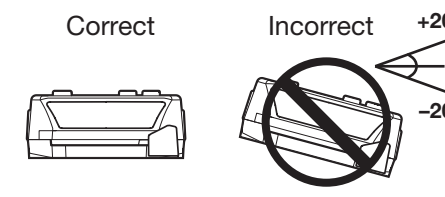
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PAT. INFO CEQPAT.COM

Installation Guide

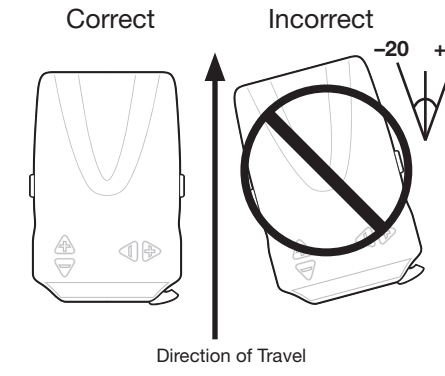
⚠WARNING The Brake Control must be mounted from -20 degrees nose down to 70 degrees nose up. (See Below.) Failure to install brake control within these constraints may cause your control to become inoperable.



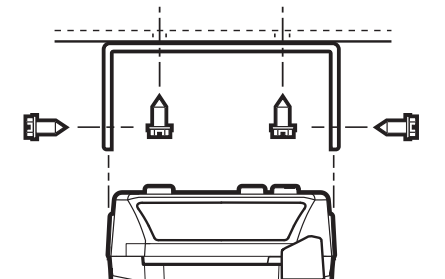
NOTE:
Front of the Brake Control must be horizontal, see below.



NOTE:
The Brake Control must be parallel to direction of travel, see below.



Traditional Bracket Mount



Important:

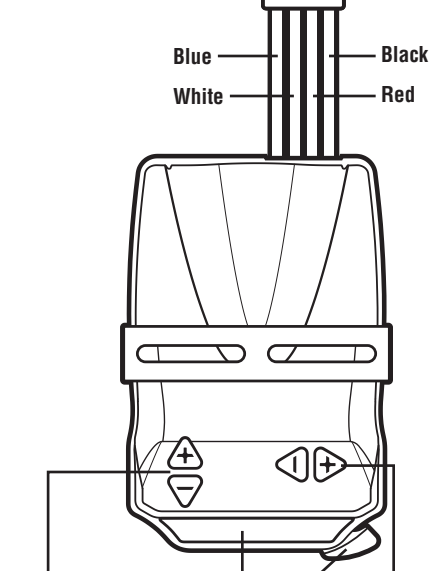
Make sure area behind panel is clear before drilling. Use bracket as template to mark hole locations.

1. Determine a suitable mounting location.
 - A) The unit must be mounted securely to a solid surface.
 - B) The unit must be easily reached by the driver.
 - C) The area behind the mounting location must be clear so nothing will be damaged when drilling.
2. Hold the mounting bracket in the position selected and mark hole locations through the slots in the bracket.
3. Using a 1/8" dia. bit, drill holes in the marked locations.
4. With a screwdriver or a 1/4" nut driver, secure the bracket in place using (2) self tapping screws (provided). Be careful not to strip the holes by over-tightening.
5. Mount the brake control unit in the bracket using the other (2) self tapping screws as shown in the illustration.

Wiring & Controls

Note: see enclosed Generic Wiring Diagram

- Black: Vehicle Power
- Red: Stop Light
- White: Vehicle Ground
- Blue: Trailer Brakes



Output (Gain) Control
More Output (+)
Less Output (-)

Boost Control
Increasing Boost Level (+)
Decreasing Boost Level (-)

Manual Control
Slide To Apply Brakes

Output (Gain) Control

The Output (Gain) Control establishes the maximum amount of power available to the trailer brakes.

As the Gain is increased more power will be available to the brakes when the brake pedal is pressed or the manual control is used.

The Output (Gain) Control would be adjusted during initial setup, when trailer load changes, when different trailers are used or to adjust for a change in road conditions.

To view Gain setting press + or -.

The Gain setting is shown as 0 through 10 with 0 being the minimum and 10 the maximum. This represents a % of full power.

Automatic Leveling of the Sensor

The Brake Control will automatically acquire the proper level setting. It will also automatically adjust as you travel up or down hills.

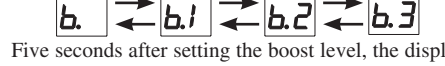
Adjusting the Power to the Trailer Brakes (Prior to setting Boost)

Once the Brake Control has been securely mounted in the direction of travel, it is necessary to set the power needed to stop the trailer during a braking event.

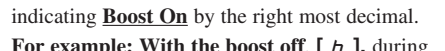
1. Connect trailer to tow vehicle.
2. With engine running hold manual full left and set Output/Gain to indicate approximately 5.0.
3. Drive tow vehicle and trailer on a dry level paved surface at 25 mph and fully apply manual control.
 - ✓ If trailer brakes lock up:
 - ✓ Turn power down using Output/Gain Buttons.
 - ✓ If braking was not sufficient:
 - Turn power up using Output/Gain Buttons.
4. Repeat Step (3) until power has been set to a point just below wheel lock up or at a sufficient force as to achieve maximum braking power.
5. Using the brake pedal, make a few low speed stops to check the power setting. Trailer braking is initiated and terminated via the stoplight switch. When the brake pedal is released, trailer braking will cease.

Boost Setting

The boost button was designed to allow a more aggressive setting for your trailer brakes and is available in three levels - [b.1], [b.2], [b.3]. Each incremental boost setting increases the sensitivity of the Brake Control's inertial sensor, enhancing the participation of the trailer brakes during a braking event. The first press on the boost button displays the current setting. Boost is advanced to the next level by pressing + Boost button or decrease by pressing - Boost button.



Five seconds after setting the boost level, the display will show



indicating **Boost On** by the right most decimal.

For example: With the boost off [b.], during a braking event, the power to the brakes starts out at zero and increases with deceleration. With the boost on level 1. [b.1], during a braking event, the

(Boost Setting continued)

power automatically starts out at approximately 14% of the power setting and increases with deceleration. **With the boost on level 2. [b.2], or with the boost on level 3. [b.3],** during a braking event, the power automatically starts out at approximately 28% of the power setting and increases with deceleration. Some cases where you might want to use the boost button:

- You like the trailer braking to 'LEAD' the tow vehicle's braking
- Towing a full vs. empty trailer
- Degraded brake performance (most electric brakes require manual adjustment - see Appendix A or a dealer for adjustment or repair)

NOTE: Boost is not intended to be used to take the place of trailer brake adjustment or repair.

See the chart below for recommended "Boost" settings (indicated with **X**) for typical Trailer to Vehicle weight relationships.

Select your boost setting based on your towing situation, driving preference and condition of your trailer brakes.

Typical Boost Settings For Optimal Performance (with properly adjusted trailer brakes*)

TRAILER WEIGHT compared to VEHICLE WEIGHT	b.	b.1	b.2	b.3
	BOOST "OFF"	INCREASING BOOST LEVEL		
Trailer weighs LESS than Vehicle	X	X		
Trailer weighs APPROXIMATELY SAME as Vehicle	X	X	X	
Trailer weighs UP TO 25% MORE than Vehicle		X	X	X
Trailer weighs UP TO 40% MORE than Vehicle			X	X
Trailer weighs OVER 40% MORE than Vehicle	⚠WARNING Do not exceed Gross Combined Weight Rating (GCWR)			X

* Increased Boost setting may be needed if trailer brakes are worn, see Appendix A or a dealer for brake adjustment or repair.

NOTE:

1. Always warm the trailer's brakes before setting the power. Warm trailer brakes tend to be more responsive than cold brakes. To warm trailer brakes, drive a short distance (1/4 mile) at 45 MPH with manual lever engaged enough to cause trailer braking at a low level.
2. **⚠WARNING** The power should never be set high enough to cause trailer brakes to lock up. Skidding trailer wheels can cause loss of directional stability of trailer and tow vehicle.
3. The power may need to be adjusted for different load weights and road conditions.
4. Not all trailer brakes will lock up due to various conditions. However, inability to lock up the brakes generally indicates the need for an inspection to determine the cause.
5. When the power is set correctly you should feel unified braking between the trailer and tow vehicle.

Troubleshooting Chart

Display	Situation	Probable Cause
0.9	Flashes 2 times a second or a steady display.	Trailer is connected and Brake Control loses connection to battery ground.
0.L	Flashes 2 times per second.	Brake Control "sees" an overload condition during operation.
S.H	Flashes 2 times per second.	1. Brake wire sees short during idle condition. 2. Use of some test lights or non-Cequent testers can cause this problem.
n.c.	Flashes for 15 seconds	1. Trailer not connected to tow vehicle. 2. Trailer connected with open circuit on brake line. 3. Trailer connector disconnected or corroded. 4. Loss of trailer brake magnet ground.
[Blank Display]	No display with manual or pedal activation.	1. Loss of power to Brake Control. 2. Loss of ground to Brake Control.
	No display until activation	Brake Control is in power-saving mode due to no motion for 15 minutes.
0.0	No braking. Flashes 2 times per second.	Power control set to 0.
P.L.	Power interruption while brake pedal is depressed.	Intermittent Power Connection.
E.r	Error	Brake Control is inoperative. Call technical service for return 1-888-785-5832.

Appendix A: Trailer Brake Adjustment**

Brakes should be adjusted after the first 200 miles of operation when the brake shoes and drums have "seated" and at 3000 mile intervals, or as use and performance requires. The brakes should be adjusted in the following manner:

1. Jack up trailer and secure on adequate capacity jack stands. Follow trailer manufacturers recommendations for lifting and supporting the unit. Check that the wheel and drum rotate freely.
2. Remove the adjusting hole cover from the adjusting slot on the bottom of the brake backing plate.
3. With a screwdriver or standard adjusting tool, rotate the starwheel of the adjuster assembly to expand the brake shoes. Adjust the brake shoes out until the pressure of the linings against the drum makes the wheel very difficult to turn.

Note: With drop spindle axles, a modified adjusting tool with about an 80 degree angle should be used.

4. Then rotate the starwheel in the opposite direction until the wheel turns freely with a slight lining drag.
5. Replace the adjusting hole cover and lower the wheel to the ground.
6. Repeat the above procedure on all brakes.

⚠WARNING Never crawl under your trailer unless it is resting on properly placed jack stands.

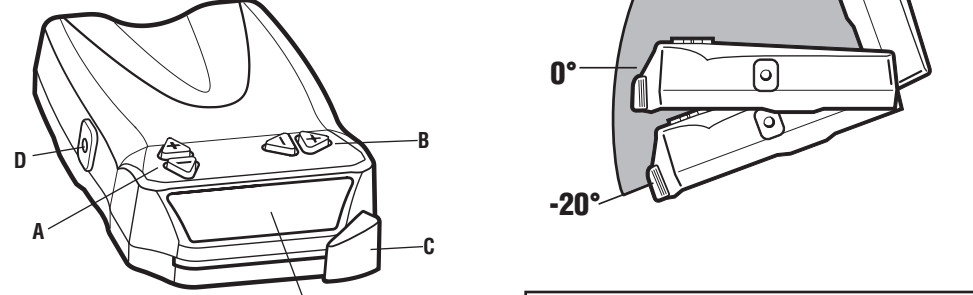
Follow the trailer manufacturers recommendations for lifting and supporting the unit. Do not lift or place supports on any part of the suspension system.

**Note: Trailer Brake Adjustment procedures courtesy Dexter Axle.

Instructions d'installation et d'utilisation de la commande de freins électronique Pour applications à 2, 4, 6 et 8 freins

LISEZ CECI EN PREMIER :
Il importe de lire ou de suivre attentivement toutes les consignes avant de poser ou d'utiliser la commande de freins. Ces consignes doivent être conservées avec la commande de freins pour consultation future.

Composants de la commande de freins



- A. Commande de gain de sortie
- B. Commande de surpuissance
- C. Commande à glissière manuelle
- D. Trous de montage du support
- E. Afficheur DEL

L'emballage contient :

- (1) Unité de commande de freins
- (1) Support de montage
- (4) Vis de montage, #6 x 3/8"
- (1) Fiche de garantie

Matériel requis :

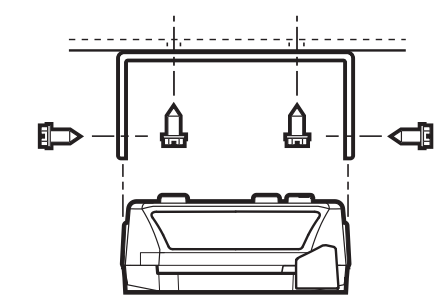
- Fil calibre 10
- Disjoncteur à réenclenchement automatique de 30 ampères
- Cosse à anneau et connecteur d'about apparis
- Attaches de câble 4 po (6-10)

Outils requis :

- Clés ouvertes appropriées
- Perceuse avec foret 1/8 po
- Outil de sertissage pour connexion de fils
- Multimètre à pointe de touche
- Outil à couper et démêler les fils
- Tournevis ou tournevis à douille 1/4 po

Pour de l'assistance technique ou des informations concernant la garantie, prière de composer le : 1-888-785-5832 ou visiter le www.cequentgroup.com

Montage traditionnel du support



Important :

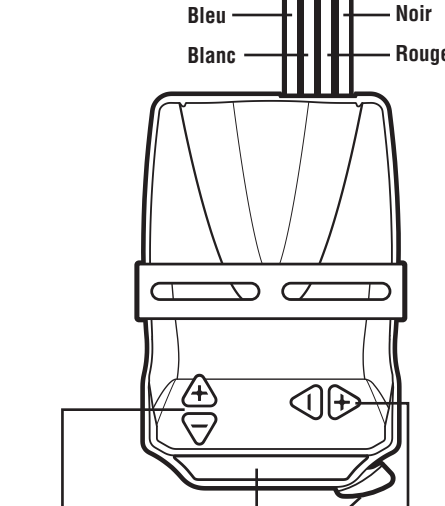
S'assurer que la zone derrière le panneau est libre avant de percer. Utiliser le support comme guide pour marquer l'emplacement des trous.

1. Choisir un emplacement de montage approprié.
 - A) L'appareil doit être monté d'une façon sécuritaire sur une surface solide.
 - B) Le conducteur doit être en mesure d'atteindre l'appareil facilement.
 - C) La zone derrière la surface de montage doit être exempte d'objets à risque d'endommagement.
2. Tenir le support de montage dans la position choisie et marquer les emplacements des trous à travers les fentes du support.
3. À l'aide d'un foret de 1/8 po, percer les trous aux emplacements marqués.
4. À l'aide d'un tournevis ou d'un tournevis à douille 1/4 po, fixer le support en place à l'aide de deux (2) vis autotaraudeuses (fournies). Veiller à ne pas fausser les.
5. Monter la commande de freins sur le support à l'aide des deux (2) autres vis autotaraudeuses, comme illustré.

Câblage et commandes

Remarque : voir schéma de câblage générique clos

- Noir: Alimentation du véhicule
- Rouge: Feu d'arrêt
- Blanc: Mise à la masse du véhicule
- Blue: Freins de remorque



Commande de gain de sortie
Plus de gain de sortie (+)
Moins de gain de sortie (-)

Commande de surpuissance
Augmentant le niveau de surpuissance (+)
Diminuant le niveau de surpuissance (-)

Affichage Sortie / Surpuissance

Commande manuelle
Glisser pour appliquer les freins

Commande de gain de sortie

La commande de gain de sortie détermine le niveau maximum de puissance disponible pour les freins de remorque.

À mesure que le gain augmente, davantage de puissance sera disponible pour le freinage lorsque la pédale de frein sera pressée ou la commande manuelle utilisée.

La commande de gain de sortie devra être ajustée lors du réglage initial, et lors de changements routiers à la charge, la remorque ou aux conditions routières. Pour voir le réglage du gain, presser + ou -.

Le réglage du gain s'affiche de 0 à 10, 0 étant le minimum et 10 le maximum. Cela représente un % de la pleine puissance.

Mise à niveau automatique du capteur

La mise à niveau de la commande de frein s'effectuera automatiquement de la manière appropriée. La mise à niveau s'ajustera aussi automatiquement lorsque vous circulerez sur un terrain accidenté.

Réglage de la puissance aux freins de la remorque (Avant le réglage de la suralimentation)

Une fois la commande de freins montée sûrement dans la direction du déplacement, il est nécessaire de régler la puissance nécessaire pour arrêter la remorque lors d'un événement de freinage.

1. Raccorder la remorque au véhicule de remorque.
2. Moteur en marche, maintenir la commande manuelle totalement à gauche et régler la commande Output/Gain (Sortie/Gain) environ à 5.0.
3. Conduire le véhicule avec la remorque sur une surface pavée sèche de niveau à une vitesse de 25 m/h (40 km/h) et appliquer totalement la commande manuelle.
 - ✓ Si les freins de la remorque se verrouillent :
 - Abaisser la puissance à l'aide des boutons Output/Gain (Sortie/Gain).
 - ✓ Si le freinage est insuffisant :
 - Augmenter la puissance à l'aide des boutons Output/Gain (Sortie/Gain).
4. Répéter l'étape (3) jusqu'à ce que la puissance ait été réglée à un point tout juste sous le verrouillage des roues ou à une force suffisante de manière à obtenir une puissance de freinage maximale..
5. En utilisant la pédale de frein, faire quelques arrêts à basse vitesse pour vérifier les réglages de puissance. Le freinage de la remorque s'amorce et se termine par le biais de l'interrupteur de feu d'arrêt. Lorsque la pédale de frein est relâchée, le freinage de la remorque cesse.

Manual Control

The Manual Control is located on the front of the Brake Control Unit at the right side.

The Manual Control only applies the trailer brakes and would be used during initial setup and in situations where it is desirable to reduce speed slowly. When the Manual Control is moved to the left, the control begins to apply the trailer brakes. The further to the left it is moved the harder the brakes are applied until the maximum setting by the Output (Gain) Control is reached.

The Gain setting will be shown on the display and can be adjusted when using the Manual Control. The Manual Control activates all trailer stoplights.

NOTE: Some tow vehicles' stoplights may also activate.

Digital Display

The Digital display shows the Gain setting when the control is activated. It is used to setup and monitor the Brake Control and can be used when trouble shooting.

Display Examples

• Single Decimal Control Activated
No Trailer Connected, Boost Off

.c Dot C Control Activated
Trailer Connected, Boost Off

.c. Dot C Dot Control Activated
Trailer Connected, Boost On

2.0 Output (Gain) Display Control Activated
Trailer Connected, Boost Off

b.1 Boost Display Boost Button Pushed
Trailer Connected, Boost On

