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Did you know Brake controllers are vital to a safe towing experience. Simple to set up in minutes, our electric brake controller can be mounted on any trailer and towed by any vehicle. Buy Elecbrakes If youre planning an adventure, youve no doubt considered all the great aspects of the journey, along with some of the things that could go wrong. You have fitted your roof racks and bike carrier, your LED lighting attached, solar blankets and wheel covers packed into the tool boxes, and your towing mirrors are set up and ready to go.Youve packed your marine fuel for the boat, making sure all your battery accessories are there for your dual battery pack, and you have your power tools, air compressor and pressure washer ready for the off-roading adventure of a lifetime.Now its time to attach your trailer or caravan to your vehicle, which means understanding everything you can about the towing brakes and braking accessories. Including their necessity when it comes to safe travels.The importance of quality towing and brake controllersChances are, you are already aware that it takes more than just the tow vehicles brakes to bring the vehicle itself and its trailer to a complete stop within a suitable time frame. Considering trailer weight and speed, it becomes clear the trailer also needs to pitch in with its braking power.This is accomplished via the trailers brakes, which can be one of two types: surge (mechanic or hydraulic), which relies on inertia to slow down automatically, or electric brakes, which require an electric connection to the tow vehicle to work. The principle behind surge (also known as override or overrun) brakes is simple.The coupling contains a sliding shaft attached to the tow ball. The shaft slides when pushed due to the vehicle slowing down and exerts pressure directly on a mechanical linkage (mechanical brakes) or a link connected to a hydraulic cylinder, which in turn creates hydraulic pressure on the braking system (hydraulic brakes). These are often found on camper trailers or boat trailers.Electric trailer brakes work by activating electromagnetic brake drums to create attrition and slow the trailer down. While surge brakes operate independently, electric trailer brakes must be connected to the tow vehicles power and regulated by a brake control unit or electric brake controller.What is a brake controller?A brake controller is an electronic device that activates and, as the word suggests, controls the electric brakes of a trailer.A brake controller can be roughly split into an interface positioned in the cab within the drivers reach and the central part responsible for activating the trailers brakes. Electronic brake controllers can be classified into non-proportional, time-based, proportional or inertia-based types.How do older brake controllers work?Older non-proportional electric brake controllers are activated when the driver presses on the cars brakes, applying braking force over time based on the chosen setting.The drawback of this kind of brake controller is that even though the pressure applied on the tow vehicles brake pedal can vary (for instance, compare a gentle brake to an abrupt one), the response of the trailer brakes will be the same, the one configured in its settings.How do newer brake controllers work?The newer proportional electric brake controllers measure the changing momentum, or inertia, of the moving car via an accelerometer; they are not directly connected to the cars brakes and work independently of them.Continuously monitoring the vehicles dynamics, these controllers send the precise amount of voltage to the trailer brakes to ensure that the speed of the trailer matches that of the tow vehicle. This generally makes for a smoother braking experience and more efficient braking, ensuring your trailer brakes last longer.For instance, when going downhill, youll want to use lower gears to slow down to decrease brake wear; inertia-based brake controllers sense that the vehicle is slowing down (rather than the vehicles brakes being applied) and adjust trailer braking power accordingly.The drawbacks of in-car installationsConventionally, electric brake controllers have been installed in-car. That is, they had to be hard-wired aftermarket within the vehicle for towing. The interface would be mounted in the least obtrusive position in the cab but within reach of the drivers seat. This would be traditionally accomplished by drilling holes into the dashboard, fixing the provided mounting brackets with screws, and attaching the interface to these brackets.The wiring would then be connected to the vehicles wiring loom and ran to the rear, terminating at the vehicles trailer adapters. This translated into the necessity of having a new brake controller fitted every time one used a different vehicle for towing purposes. For instance, when the trailer is lent, hired, or there is a vehicle upgrade. Advancements in microprocessors and wireless technology have changed how electric towing systems work. Launched in 2017, the latest innovation in electric brake controllers is Australian designed, produced, and called Elecbrakes: a remote mount electric trailer brake controller installed directly on the trailer, rather than within the tow vehicle.An intuitive, smartphone-based solution for any trailer that gets towed by more than one vehicle, Elecbrakes eliminates the need to modify every single car used for towing purposes. Instead, the compact device goes directly on the trailer and contains a high-speed microprocessor connected to sensors, which continuously sample the operating parameters of the brakes.The main unit communicates wirelessly with the driver interface, a simple-to-use app compatible with both Apple and Android smartphones.In addition to the added flexibility, Elecbrakes also provides best-in-class configuration options (up to 5 favourite settings that you can save in the devices memory) and continuous monitoring of brake response and key performance indicators. The data is conveyed at your fingertips directly on your smartphone via the widespread Bluetooth technology.Elecbrakes are compatible with 12V and 24V voltage systems and designed to operate 1 to 2 braked axles. It is also 100% dust and waterproof thanks to its tough fibre reinforced housing with the electronics fully encased in urethane.We believe an intelligent, trailer-based, wireless electric brake controller such as Elecbrakes makes towing so much simpler and gives you the freedom to be more flexible and spontaneous to tow with a broader range of vehicles.Electric brakes and their controllers are essential for managing heavier loads, as it requires significant power and control to bring the weight of the trailer (and the towing vehicle) to a complete stop. For any owner considering towing their trailer with more than one vehicle, Elecbrakes is the best solution in terms of electronic brake controllers. Imagine what would happen if your trailer only had its electric trailer brakes and did not have a brake controller system. Lets say youre ready to start your first camping trip with your shiny new caravan secured behind your vehicle.You drive down your driveway towards the road, brake to turn and BOOM! Your caravan may push the vehicle into a dangerous situation. Why? Because your trailers electric brakes did not work. Electric trailer brakes do not activate independently; they require a brake controller to do so.Its easy to see why trailer brakes and brake controllers are a legal requirement worldwide, and Australia is no exception. ADR38 provides relevant legislation, specifying trailer brake requirements based on GTM (Gross Trailer Mass) and is legally binding in all states.The manufacturer supplies maximum GTM, and all trailers built since August 1989 must list the trailers ATM, GTM and tare weight on their Vehicle Identification Plate (VIP).ADR identify three different trailer categories based on their GTM While the law does not explicitly state the necessity of having brakes installed on lighter trailers, and unless the trailer is way under 750kg GTM, it is still good practice to aid your tow vehicles brakes. To this end, you may install surge or electric brakes. Learn more about how they work here.2. GTM between 750kg and 2,000kg: brakes are required and must operate on both wheels of at least one axleThere are two options here.Option one:The trailer can be equipped with mechanical or hydraulic override brakes, which do not require electricity to work and are therefore well-suited for boat trailers, which often end up in the water.The drawback of this type of trailer brake is that it is either on or off, with no in-between possible. In this case, a brake controller is not required as they activate automatically.Option two:Equipping the trailer with electric brakes, which run on the electricity supplied by the vehicle. In this case, an electric brake controller is required.The brake controller needs to be designed in such a way as to enable the trailers braking force to be progressively increased and decreased, as opposed to implementing a stable braking force; this requirement entails that the brake controller must be of the proportional or inertia-based type.Additionally, the brake control device must be controllable from the drivers seat. Proportional electric brake controllers enable more accurate and controlled braking and reduce wear of both towing vehicle and trailer brakes.At the same time, they apply the trailer brakes in proportion to the vehicles slowing down; they are also adjustable by the driver.3. GTM over 2,000kg: brakes are required and must operate on all wheels/axlesThe law states that trailer brakes are mandatory and must be operational on all wheels. They must also be designed so that the braking force can be progressively increased and decreased and be adjustable from the drivers seat.The law also requires trailers over 2,000kg GTM have a breakaway system. A breakaway system is a device that ensures the trailer slows down on its own accord in the hazardous and unpredictable event that it becomes disconnected from your vehicle while moving.It has a battery mounted on the trailer and a cable connecting the trailer to the vehicle and is activated if the trailer breaks free, pulling the cable out of its plug.A switch will then trigger the battery and apply the trailer brakes to slow the trailer down. The brakes will remain locked for 15 minutes.You should always check that the battery is charged (it should be able to operate for at least 15 minutes) and that the breakaway system is functioning properly. Take a battery charger with you on your adventures to ensure its always in top working condition.To test, pull the cable: the trailer brakes should lock automatically. Then, replace the cable in the switch to disengage.In addition to the above requirement, NSW Roads and Maritime Services also state (VIB 6, 2007) that the towing vehicle must continuously charge the breakaway system.It also requires a warning device, fitted within the drivers eyesight or earshot, that warns the driver should the deep-cycle batteries charge fall below the required level, rendering the trailer brakes incapable of meeting the requirement. If you plan to tow any trailer with GTM above 750kg, electric brakes and an electric brake controller are your best bet to be safe and compliant with legal requirements.We at Elecbrakes have developed the electric brake controller that fits the bill. Elecbrakes is a proportional brake controller mounted onto the trailer rather than the car, eliminating the need for hardwiring the tow vehicle.Once installed on the trailer, Elecbrakes will open up a world of opportunities. Any vehicle big enough to tow your trailer can now do so, with no additional set-up procedures or costs apart from a tow bar. In addition, there is no drilling of the dashboard or hardwiring of the vehicle necessary.Elecbrakes works via wireless Bluetooth technology: the trailer-installed device utilises Bluetooth 4.0 to communicate wirelessly with your smartphone via the intuitive Elecbrakes app, continuously monitoring brakes conditions and performance, helping you keep an eye on the trailers service needs.Our app is also fully customisable: The driver can easily control the brake response with precise settings (you can choose up to 5 favourite programs) through the smartphone app, available both for Apple and Android.Any adjustments made to the programs are stored in the devices memory, meaning the owner can fine-tune the programs for any other user wishing to use the trailer in the future. A driver borrowing or renting a trailer equipped with Elecbrakes will only need to download the free app on their phone. It is the only set-up required once the trailer is attached to the towing vehicle.Elecbrakes are compatible with 12V and 24V voltage systems and designed to operate 1 to 2 braked axles. It is 100% dust and waterproof thanks to its tough fibre reinforced housing with the electronics fully encased in urethane.The trailer-mounted, compact device employs a high-speed microprocessor connected to sensors, which continuously sample the various operating parameters a thousand times per second. Its long-range capabilities guarantee a consistent, trustworthy wireless connection without dropouts under typical operating conditions.Being both proportional and controllable right from the drivers seat, Elecbrakes fully complies with ADR38 and is the new alternative to traditional in-car brake controllers. As a result, no matter how many vehicles will tow your trailer, you will only need to install Elecbrakes once. And youll have the peace of mind of a high-precision, safe, and compliant solution to your towing needs.Unless your trailer weighs less than 750kg when loaded, you will be required to install brakes. We recommend installing a proportional electric brake controller, such as Elecbrakes, to ensure compliance, safety and protection of whats valuable to you, all the while giving you the freedom of using a range of vehicles to tow your trailer. Vehicle-based electric brake controllers require modifications to the tow vehicle (or vehicles), usually to the dash area. Each towing vehicle requires a brake controller set, although some newer models have a removable interface (you will still need to install the bracket and the wires).Most electric brake controllers consist of the main unit, often hidden under the dash, and a user interface unit installed on the dash within the drivers reach. Both units should be mounted inside the vehicle with screws or other secure fitting methods to avoid any movement.Whether the brake controller is of motion-sensing or time-delay type, you may need to position the main unit at a certain angle for the direction of motion.You will then fix the provided mounting brackets with screws by drilling a few holes into the dashboard and attaching the interface to these brackets.Then, you will connect the brake controllers wiring to the vehicles wiring loom and run it to the rear of the vehicle and the trailer plug, whether its a pin flat plug or round plug.Many vehicles suitable for towing, such as SUVs and vans, produced in the mid-1990s and onwards, include a factory-installed quick plug, located under the dash, which allows to plug in a standard brake controllers wiring set, which saves installation time.Elecbrakes installationEase of use and ease of installation is a priority here at Elecbrakes. This is why Elecbrakes can be installed and set up in 5 easy steps that require only a few tools from your tool kit and minimal mechanical knowledge, all easily accomplished in under 2 hours. Traditionally, although devised to control the braking system of a trailer, electric brake controllers have been built to be mounted on the tow vehicle, then wired and connected to the trailer through the vehicles wiring via the tow bar.This is often a lengthy process that requires a degree of mechanical know-how to implement modifications to ones car.Elecbrakes is innovative and different because this electric brake controller is a trailer-mounted solution rather than an in-car one.The distinction may be a bit fuzzy until you think about the practicalities of towing. You must remember:The vehicle needs to be powerful enough to take on the trailers weight.It needs to have a tow bar where you can hook the trailer.It needs an appropriate electric brake controller to tell the trailer brakes when to activate.We at Elecbrakes believe that towing does not need to be that complicated. Its not all about dash cameras and fancy steering wheels. Towing should be about the freedom and flexibility to match different vehicles to different trailers.We have developed a unique solution: An electric brake controller mounted on the trailer rather than the tow vehicle. It makes sense if you think about it: not all cars tow, but all trailers get towed.1. Trailer mountingElecbrakes is the electric brake controller mounted onto the trailer rather than the car, eliminating the need for modifying or in any way adapting the tow vehicle, apart from fitting it with a tow bar (if you dont already have one).No drilling the dashboard or hardwiring the vehicle of any sort.2. Bluetooth technologyThis is possible because Elecbrakes works via wireless Bluetooth technology.The trailer-installed component communicates wirelessly with the intuitive Elecbrakes app directly on your smartphone, which you will need to keep secured on its dashboard holder and within reach while you drive.3. AppAnybody can download and quickly set up the Elecbrakes app, which is available for both Apple and Android, entirely for free, so your only investment in a brake controller is the Elecbrakes device to be mounted on your trailer.4. Customisable optionsThe Elecbrakes app allows you to save up to 5 different settings (road conditions, trailer load, etc.) so that set-up is relatively straightforward.These settings will then be stored on the trailers Elecbrakes device, so new drivers will have easy access to them when driving it. Any vehicle big enough to tow your caravan is free to do so, with minimum time and effort.5. Monitors usage and performanceAnd thats not all. In addition to granting you the flexibility of using a variety of vehicles to tow your trailer, Elecbrakes also continuously monitors brakes usage and performance.This helps you keep an eye on the trailers service needs and reminds you when its time to change your trailer brakes.6. Motion sensorsElecbrakes are also motion-sensing. The trailer-mounted, compact device employs a high-speed microprocessor connected to sensors, which continuously sample vehicle dynamics and other operating parameters a thousand times per second.Its long-range capabilities guarantee a consistent, trustworthy wireless connection without dropouts under typical operating conditions.7. ComplianceBeing both proportional and controllable right from the drivers seat, Elecbrakes fully complies with ADR38 and is the new alternative to traditional in-car brake controllers.No matter how many vehicles will tow your trailer, you will only need to install Elecbrakes once and have the peace of mind of a high-precision, safe, and compliant solution to your towing needs.Why Elecbrakes?Elecbrakes is the best solution for a high-quality, practical, time and cost-effective electric brake controller. We like to make towing simple, with a brake controller directly on the trailer and connecting with the drivers smartphone.So, what are you waiting for? First, grab your engine oil, solar panels, wiring kit and any other extras (you might want to include some extra fuel filters, switch inserts, driving light replacements, cable ties, and anything you need for tyre care or other repair tools).Then check out the electronic brake controllers available with Elecbrakes (our regular price is highly affordable) and get ready for the adventure of a lifetime. Simple to set up in minutes, our electric brake controller can be mounted on any trailer and towed by any vehicle. Buy Elecbrakes Although there are several different styles, we can divide brake controllers into two distinct groups -- proportional brake controllers and time delayed brake controllers. Proportional brake controllers use a motion-sensing device to detect how fast the tow vehicle is stopping. The moment the driver applies the brakes, the brake controller applies the same amount of braking power to the trailer's brakes -- if the truck is stopping quickly, the trailer will stop quickly; if the truck stops slowly, the trailer will stop slowly. In a situation that requires heavy braking, for instance, a proportional brake controller will cause the trailer to stop at exactly the same time as the truck does. This type of brake controller provides the smoothest braking, and because both systems are doing the same amount of work, it reduces the amount of wear on each vehicle's braking system. Proportional brake controllers are also known as pendulum brake controllers because of the way they sense motion. These devices use the position of a pendulum as a motion-sensing device, and drivers typically need to calibrate them before using them. When the vehicle is on a level plane and the pendulum is pointing straight down to the ground, the brake controller doesn't sense any motion and won't send any signals to the trailer's brakes. When the vehicle moves, however, the pendulum points toward the rear of the vehicle. As soon as the vehicle brakes, the pendulum swings forward. Depending on how far the pendulum swings, the brake controller sends a degree of power to the trailer's brakes. Time delayed brake controllers, on the other hand, provide a pre-determined amount of power to the trailer's brakes when the truck stops. The power is set beforehand by the driver and depends on how much trailer weight he's towing. A delay will always occur when the brakes are pressed; however, a sync switch allows the driver to adjust the length of the delay. Time delayed brake controllers put more wear on braking systems, but they're less expensive and easier to install than proportional brake controllers. ,the free encyclopedia that anyone can edit.117,937 active editors 7,001,233 articles in EnglishThe English-language Wikipedia thanks its contributors for creating more than seven million articles! Learn how you can take part in the encyclopedia's continued improvement.GL Mk.II transmitter vanRadar, Gun Laying, MarkI, or GL Mk.I for short, was an early World WarII radar system developed by the British Army to provide information for anti-aircraft artillery. There were two upgrades, GL/EF (elevation finder) and GL Mk.II (pictured), both improving the ability to determine a target's bearing and elevation. GL refers to the radar's ability to direct the guns onto a target, known as gun laying. The first GL sets were developed in 1936 using separate transmitters and receivers mounted on gun carriages. Several were captured in 1940, leading the Germans to believe falsely that British radar was much less advanced than theirs. The GL/EF attachment provided bearing and elevation measurements accurate to about a degree: this caused the number of rounds needed to destroy an aircraft to fall to 4,100, a tenfold improvement over early-war results. The Mk.II, which was able to directly guide the guns, lowered the rounds-per-kill to 2,750. About 410 Mk.Is and 1,679 Mk.IIs were produced. (Fullarticle...)Recently featured: Andrea NavageroNosy KombaMcDonnell Douglas Phantom in UK serviceArchiveBy emailMore featured articlesAboutLieke Klaver ahead in the women's 400 metres final... that a 400-metre race in 2025 (pictured) was won by Lieke Klaver, who pretended that an absent competitor was running in front of her?... that the land snail Drymaeus poecilus is notable for the striking variety of colors and patterns on its shell?... that a forensic investigation of Signalgate has determined how a journalist was included in a group chat about Operation Rough Rider?... that two of the players involved in the 2005 Vietnamese football match-fixing scandal did not accept payment because they felt ashamed?... that a rebellion against a peace treaty with the Yuan dynasty operated out of the Historic Site of Anti-Mongolian Struggle on Jeju Island?... that Nathan Frink fled the United States with enslaved children to settle in Canada, where he was elected as a Member of the Legislative Assembly and caught in a smuggling conspiracy?... that Seattle's women's ice hockey team has an expected rival, despite not even having played their first game?... that Cave Johnson Couts was separately acquitted for shooting his foreman, firing on funeral mourners, and whipping a native laborer to death?... that characters' scars in an episode of The Last of Us were made with a paste-based appliance and a food mixer?ArchiveStart a new articleNominate an articleNgg wa Thiong'oKenyan writer and activist Ngg wa Thiong'o (pictured) dies at the age of 87.In sumo, nosato Daiki is promoted to yokozuna.In association football, Liverpool win the Premier League title.In motor racing, lex Palou wins the Indianapolis 500.Ongoing: Gaza warM23 campaignRussian invasion of UkrainetimelineSudanese civil wartimelineRecent deaths: Phil RobertsonMary K. GaillardPeter DavidAlan YentobGerry ConnollySebastio SalgadoNominate an articleMay 30: Statehood Day in Croatia (1990)Johann Sebastian Bach1431 Hundred Years' War: After being convicted of heresy, Joan of Arc was burned at the stake in Rouen, France.1723 Johann Sebastian Bach (pictured) assumed the office of Thomaskantor in Leipzig, presenting the cantata Die Elenden sollen essen in St.Nicholas Church.1922 The Lincoln Memorial in Washington, D.C., featuring a sculpture of the sixteenth U.S. president Abraham Lincoln by Daniel Chester French, opened.1963 Buddhist crisis: A protest against pro-Catholic discrimination was held outside the National Assembly of South Vietnam in Saigon, the first open demonstration against President Ng nh Dim.2008 The Convention on Cluster Munitions, prohibiting the use, transfer, and stockpiling of cluster bombs, was adopted.Ma Xifan (d.947)Colin Blythe (b.1879)Norris Bradbury (b.1909)Wynonna Judd (b.1964)More anniversaries: May 29May 30May 31ArchiveBy emailList of days of the yearAboutSeventeen performing "Oh My!" in 2018South Korean boy band Seventeen made their debut on May 26, 2015, when they performed a showcase for their debut EP 17 Carat in front of a crowd of 1,000 people. Since then, the group have held 9 concert tours, 13 fan meetings, and have performed at a number of music festivals and awards shows. Their concert tours include the Right Here World Tour, which sold over one million tickets, and the Follow Tour, which was noted by Billboard as being the top grossing K-pop tour of 2023. In 2024, Seventeen made their first appearances at festivals in Europe, when they were the first South Korean act to perform at Glastonbury Festival's Pyramid Stage and as headliners for Lollapalooza Berlin. Seventeen's live performances are well regarded by fans and critics alike, and garnered them the award for Top K-pop Touring Artist at the 2024 Billboard Music Awards. (Fulllist...)Recently featured: Accolades received by Top Gun: MaverickNational preserve76th Primetime Emmy AwardsArchiveMore featured listsIgnace Tonen (1840 or 1841 15 March 1916), also known as Nias or by his Ojibwe name Maiagizis ('right/correct sun'), was a Teme-Augama Anishnabai chief, fur trader, and gold prospector in Upper Canada. He was a prominent employee of the Hudson's Bay Company. Tonen was the elected deputy chief before being the lead chief and later the life chief of his community. In his role as deputy, he negotiated with the Canadian federal government and the Ontario provincial government, advocating for his community to receive annual financial support from both. His attempts to secure land reserves for his community were thwarted by the Ontario premier Oliver Mowat. Tonen's prospecting triggered a 1906 gold rush and the creation of Kerr Addison Mines Ltd., although one of his claims was stolen from him by white Canadian prospectors. This photograph shows Tonen in 1909.Photograph credit: William John Winter; restored by Adam CuerdenRecently featured: Australian white ibisHell Gate BridgeAnemonoides blandaArchiveMore featured picturesCommunity portal The central hub for editors, with resources, links, tasks, and announcements.Village pump Forum for discussions about Wikipedia itself, including policies and technical issues.Site news Sources of news about Wikipedia and the broader Wikimedia movement.Teahouse Ask basic questions about using or editing Wikipedia.Help desk Ask questions about using or editing Wikipedia.Reference desk Ask research questions about encyclopedic topics.Content portals A unique way to navigate the encyclopedia.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles DeutschEspaolFranaisItalianoNederlandsPolskiPortugusSvenskaTing Vit 250,000+ articles Bahasa IndonesiaBahasa MelayuBn-lm-gCataletinaDanskEestiEsperantoEuskaraMagyarNorsk bokmlRomnSimple EnglishSloveninaSrpskiSrpskohrvatskiSuomiTrkeOzbekcha 50,000+ articles AsturianuAzrbaycancaBosanskiFryskGaeilgeGalegoHrvatskiKurdLatvieuLietuviNorsk nynorskShqipSlovenina Retrieved from " 2EP by Seventeen17 CaratEP by SeventeenReleasedMay29,2015(2015-05-29)GenreK-popdance-pophip hopLength16:48LanguageKoreanLabelPledis EntertainmentLOEN EntertainmentSeventeen chronology17 Carat(2015)Boys Be(2015)Singles from 17 Carat "Adore U"Released: May 29, 201517 Carat is the debut extended play (EP) by South Korean boy group Seventeen. It was released on May 29, 2015, by Pledis Entertainment and distributed by LOEN Entertainment. "Adore U" serves as the lead single for the EP.17 Carat features five tracks written, co-written, and co-produced by Seventeen's group members. "Adore U" was chosen as the lead single for the EP and was performed on multiple music shows by the group. "Shining Diamond" was used as a pre-single on the group's reality debut show. The group stated that the tracklist was chosen to reflect Seventeen's core concept of "boys' passion".[1] The album has two physical versions: one with a "black" themed photo card set, and the other with a "white" themed photo card set. All copies include a CD containing the songs and a fold-up poster/lyric sheet."Adore U" is the lead single of the extended play. It was written by Woozi, S.Coups, and Yeon Dong-geon.[2] The Korea Herald states "'Adore U' is a funky pop song about a teenage boy trying to navigate through puppy love."[3] It marks the beginning of the group's trilogy composed of the singles Adore U, Mansae, and Pretty U about a boy meeting, falling in love and asking out a girl. The track was composed and arranged by Woozi, Bumzu, and Yeon Dong-geon. The music video for the single was released on May 29, 2015, and was directed by Dee Shin. The dance choreography accompaniment to the song was choreographed by Hoshi and focuses on "storytelling, and on highlighting each member's strengths onstage".[4] The single has sold more than 38,000 digital copies and peaked at number 13 on the Billboard US World Chart.The EP has sold over 82,972 copies in South Korea.[5] It peaked at number 4 on the Korean Gaon Album Chart[6] and number 8 on the US World Billboard Chart.[7]Year-end listsCritic/publicationListRankRef.BillboardThe 10 Best K-pop Album of 2015Placed[8]Hoshi participated in the choreography of "Adore U" and "Shining Diamond", Dino choreographed "Jam Jam".[9]Official track list[10]No.TitleLyricsMusicArrangementsLength1."Shining Diamond"WooziVernonS.CoupsKim Min-jeongWooziMasterKeyRishiMasterKeyRishi3:242.""Adore U"" (; Akkinda)WooziVernonS.CoupsBumzuWooziBumzuYeon Dong-geonWooziBumzuYeon Dong-geon3:073."Ah Yeah" (Hip-Hop unit)S. CoupsVernonWonwooMingyuCream DoughnutRishiCream DoughnutRishi3:294."Jam Jam" (Performance unit + Vernon)WooziHoshiDinoVernonWooziCream DoughnutCream Doughnut3:255."20" (Vocal unit)WooziWooziWon Yeong-heonWon Yeong-heonDong Ne-hyeong3:23Weekly chart performance for 17 CaratChart (2015-2023)PeakpositionJapanese Albums (Oricon)[11]46South Korean Albums (Gaon)[12]4US World Albums (Billboard)[13]8Year-end chart performance for 17 CaratChart (2015)PeakpositionSouth Korean Albums (Gaon)[14]47^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ "Seventeen hopes to shine like diamonds with '17 Carat'". The Korea Herald. 26 May 2015. Retrieved 30 November 2016.^ Cumulative sales of 17 Carat:"2015 Album Chart"."2016 12 Album Chart"."2017 11 Album Chart".^ "2015 Albums". Gaon Music Chart. 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Retrieved February 17, 2024.Retrieved from " 3The following pages link to 17 Carat External tools(link counttransclusion countsorted list) See help page for transcluding these entriesShowing 50 items.View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Main Page (links | edit)Pledis Entertainment discography (links | edit)List of 2015 albums (links | edit)2015 in South Korean music (links | edit)Seventeen (South Korean band) (links | edit)S.Coups (links | edit)Vernon (rapper) (links | edit)Wonwoo (links | edit)List of awards and nominations received by Seventeen (links | edit)Seventeen discography (links | edit)Love & Letter (links | edit)Joshua (singer) (links | edit)Seventeen TV (links | edit)17 carat (redirect page) (links | edit)Going Seventeen (links | edit)List of Seventeen live performances (links | edit)Teen, Age (links | edit)Al1 (links | edit)Bumzu (links | edit)Boys Be (EP) (links | edit)You Make My Day (links | edit)You Made My Dawn (links | edit)Jun (Chinese entertainer) (links | edit)List of Stray Kids live performances (links | edit)The8 (links | edit)An Ode (links | edit)Seungkwan (links | edit)Fallin' Flower (links | edit)Heng:gar (links | edit)Semicolon (EP) (links | edit)Your Choice (links | edit)Going Seventeen (web series) (links | edit)Not Alone (Seventeen song) (links | edit)Attacca (EP) (links | edit)Rock with You (Seventeen song) (links | edit)Woozi (links | edit)Hoshi (South Korean singer) (links | edit)Don't Wanna Cry (Seventeen song) (links | edit)Darl+ing (links | edit)Face the Sun (links | edit)Left & Right (Seventeen song) (links | edit)24H (EP) (links | edit)We Make You (links | edit)Hot (Seventeen song) (links | edit)Dream (Seventeen EP) (links | edit)BSS (band) (links | edit)FML (EP) (links | edit)Super (Seventeen song) (links | edit)Always Yours (album) (links | edit)Seventeenth Heaven (links | edit)View (previous 50 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/17_Carat"Brake Controller User Guide & How to Make Adjustments Using a brake controller while towing a trailer involves setting up the controller, adjusting trailer brake gain, adjusting braking sensitivity, manually activating the trailer brakes and possibly choosing a few personal settings. In this guide we will walk through how a trailer brake controller works and the steps involved inhow to use a brake controllerwhile towing with trailer brakes. If you need to adjust your trailer brakes, check out our guide!Shop Brake Controllers NowA brake controller is an electronic device that regulates the electric trailer brakes. It allows the driver to activate and monitor trailer brake activity from the cab of the vehicle. A brake controller mounts in the cab of the vehicle and generally has a few different controls, such as an interface to view braking information and buttons to control the output and manual activation. Trailer brake controllers come in many different styles and capacities. Need help installing your brake controller?Time Delay vs Proportional There are two basic types of brake controllers: time-delay and proportional or inertia-based. Each type is classified by the method of activation the brake controller uses. A time-delay brake controller operates on very simple electrical principles. As soon as the driver presses the brake pedal, the time-based brake controller activates the trailer brakes, applying an increasing amount of power, fixed over time. This is called gain. The gain setting of a time-delay brake controller can be adjusted by the driver to accommodate each specific trailer. However, the time-delay approach is not as precise as the proportional method.A proportional or inertia-based brake controller uses an electrical circuit called an accelerometer to sense changes in momentum. When the driver presses the brake pedal, the brake controller applies power to the trailer brakes in proportion to the vehicle's momentum. Proportional brake controllers provide smooth stops and efficient braking. This is especially apparent when braking on a hill. If traveling up a hill, the controller applies less power, and if traveling down, it applies more power.With your trailer coupled to your vehicle, the first step when towing with a brake controller is to make sure the trailer wiring harness is plugged into your vehicle. A brake controller requires power from the vehicle and a connection to the trailer brakes for proper towing. During setup, make sure your vehicle and trailer are parked on a level surface. Also, make sure you are in a safe, open area with plenty of stopping distance and no other traffic around.With the trailer plugged in, the brake controller may need to be calibrated. Most brake controllers are self-calibrating. Others do not require calibration at all. Typically, self-calibrating brake controllers will flash a light or signal to indicate when the unit is calibrating and when calibration is complete.Some brake controllers come with personal settings that can be adjusted to your preference, such as the angle of the interface, the brightness of the screen and even the location of the brake controller itself. Be sure to adjust all of these settings before driving.Maximum output is the maximum amount of power the brake controller will apply to the trailer brakes. You will need to set this level and adjust it depending on the load size. To adjust your brake controller output, press and hold the vehicle brake pedal. Set the output to the starting value specified in the instructions. Then, in an open area, test the trailer brakes by driving forward at about 25 mph and applying the brakes. If the vehicle stops too slowly, increase the maximum output. If it stops too abruptly or locks up, reduce the output.Sensitivity is how aggressively your brake controller will apply the brakes. You can set sensitivity by testing the trailer brakes again. Drive forward at about 25 mph and press the brake pedal. If the vehicle stops too slowly, increase the sensitivity setting. If it stops too abruptly, lower the sensitivity. As operation becomes more comfortable, you can test braking at various speeds to ensure smooth stops in any conditions.Most trailer brake controllers come with a manual activation button. This allows you to activate the trailer brakes whenever desired, without applying the vehicle brakes. Manual trailer brake activation can be useful for correcting minor trailer sway and gradually slowing down on a steep hill or before stops. Want to use your smartphone as a brake controller? Check out EchoIf you're asking yourself: Do electric trailer brakes work without a controller? The answer is, no. Electric trailer brakes do not work without a brake controller. If your trailer is equipped with electric brakes, you will need a brake controller to tow. However, some trailers are equipped with surge brakes. These are a hydraulic braking system that uses the trailer's own weight and momentum to actuate the brakes. Unlike electric trailer brakes, they do not require a brake controller or even an electrical connection to the vehicle. Need help adjusting your trailer brakes?Towing Tip! If you have a trailer shop adjust your brakes, have them lubricate your wheel bearings, check your wheel nuts and inspect your tires and valve stems at the same time.How does a trailer brake controller work? A trailer brake controller uses electricity from the tow vehicle to apply a specific amount of power to the trailer brakes. It uses electrical circuits and trailer gain settings to regulate the amount of braking power. Some brake controllers have circuits that respond to the vehicle's momentum while towing. Others apply power on a fixed increasing scale and level off at a maximum output, based on parameters set by the driver. How to Adjust Trailer Brake Controller With your trailer coupled to your vehicle, the first step when towing with a brake controller is to make sure the trailer wiring harness is plugged into your vehicle. Note: During setup, make sure your vehicle and trailer are parked on a level surface. Also, make sure you are in a safe, open area with plenty of stopping distance and no other traffic around. The next step is allowing the brake controller to calibrate. With the trailer plugged in, the brake controller may need to be calibrated. Most brake controllers are self-calibrating. Others do not require calibration at all. Next, you should select and adjust personal settings, such as angle of the interface, brightness of the screen, etc. before driving. The next thing you should do is set the maximum output. To do so, press and hold the vehicle brake pedal. Set the output to the starting value specified in the instructions. Then, in an open area, test the trailer brakes by driving forward at about 25 mph and applying the brakes. If the vehicle stops too slowly, increase the maximum output. If it stops too abruptly or locks up, reduce the output. The following step is to adjust the sensitivity level. You can do so by driving forward at about 25 mph and pressing the brake pedal. If the vehicle stops too slowly, increase the sensitivity setting. If it stops too abruptly, lower the sensitivity. The final step for adjusting the brake controller is to manually activate the brakes as needed. Most trailer brake controllers come with a manual activation button. This allows you to activate the trailer brakes whenever desired, without applying the vehicle brakes. How do you calibrate a trailer brake controller? To calibrate a brake controller, make sure the vehicle is parked on a level surface. Then, plug your trailer into your tow vehicle. The brake controller will then calibrate. Most brake controllers are self-calibrating. After calibration, some adjustment may be required to best fit the vehicle, trailer and load size. What is the best setting for trailer brake controller? The best setting for a brake controller is one that will match the trailer and load size. Begin by selecting the gain level and sensitivity recommended by the manufacturer. Then, test the brake controller and brakes. If more gain or sensitivity is needed, adjust accordingly. What is trailer gain? Trailer gain is the amount of power a brake controller applies to the trailer brakes. It is equal to the maximum amount of stopping force for the trailer. As the vehicle brake pedal is applied, the gain tells the brake controller how much electrical power to apply to the trailer brake electromagnets. What should my trailer gain be set at? Trailer gain should be set based on the trailer and load size. For larger trailers, use a higher gain setting. For smaller trailers, a lower gain setting should be used to avoid brake lockup. How to set trailer brake gain To set trailer brake gain, start with the values specified by the manufacturer. Test your trailer brakes at 25mph. If the vehicle stops slowly, increase the trailer brake gain. If the brakes lock up, decrease the gain.Discover more great tips and how-tos on theLippert blog-- your destination for all things RVing, towing, boating and beyond! As a vehicle owner, youre likely no stranger to the importance of brakes. But when it comes to towing a trailer, the stakes are higher, and the need for reliable braking is more critical than ever. Thats where a brake controller comes in a device designed to regulate the flow of power to your trailers brakes, ensuring a safe and controlled stop. But do you really need a brake controller? In this article, well delve into the world of brake controllers, exploring their purpose, benefits, and whether or not theyre a necessity for your towing setup. What is a Brake Controller, and How Does it Work?A brake controller is an electronic device installed in your vehicle that regulates the flow of power to your trailers brakes. Its primary function is to synchronize the braking of your vehicle and trailer, ensuring a smooth and controlled stop. When you press the brake pedal in your vehicle, the br