

# Wesley PackMule

## Hand-Held Calibrator Manual

Part # EV-E151M

User Manual – SEM Millipak Version: 914.8



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## Calibrator Security Levels

Access Level	Text Displayed	Password	Description
Service	Ser	-	Default, This level is displayed when no password has been entered.
Dealer	Dlr	-	Not yet in use
Engineering	All	1211	*Warning: Changing items in this mode could void your warranty. Contact a Wesley representative before making any changes in this level.

The password can only be entered just after power up, while the Traction Drive Hours Counter is displayed. The '+' and '-' buttons are used to enter the password. The first digit is entered by pressing the '+' button the appropriate number of times (i.e. once to enter 1).

The second digit is entered by pressing the '-' button. The third digit is entered using the '+' button, and the final digit is entered using the '-' button.

Once all four have been entered, press the '+' key a final time to enter the password. The appropriate text should be displayed.

If the password was incorrect or no password was entered, the system defaults to Service mode. After the Security Level has been displayed, the system enters the normal menu structure shown in the Calibrator Map. To change the password level, the Key switch needs to be recycled.

## Navigation

The Calibrator uses all three buttons for navigating through the menu structure. Use the SELECT button to move through the menu structure. When the SELECT button is pressed the next menu item is displayed. The default direction is from left to right, top to bottom.

If the '+' and '-' buttons are held down together, the ID of the currently displayed menu item is shown. For example, if the Armature Current Limit personality was selected, then the ID would be 0.01 (menu 0, item 1). This allows for the exact Calibrator Map position to be identified.

If the '+' and '-' buttons are held down together for more than 3 seconds, the direction through the menu structure is reversed. As a result, when the SELECT button is pressed the direction is from right to left, bottom to top. In this mode, the LED on the Calibrator will flash. If the '+' and '-' buttons are held down together for more than 3 seconds again, the direction reverts back to the initial direction and the Calibrator LED stops flashing.

The SELECT button is used to navigate through most of the menu structure; however, the Test menu (menu 19) is slightly different. To navigate the Test menu, the '+' and '-' buttons are used. The '+' button moves up the Test menu and the '-' button moves back down. Pressing the SELECT button at any time exits the Test menu and moves to the first item in the menu structure.

## Procedure for Setting Accelerator Voltages

1. Plug in Handset, Turn on key, Type in password.
2. Navigate to menu 19.01
3. With foot off the pedal this # should be 0. *This means that the pedal is being depressed 0%. If this number reads other than 0, the controller thinks the pedal is being depressed and will not move.*
4. Depress pedal, this # should be 100. *If this number is not 100, the controller thinks the pedal is not being depressed fully and therefore will not give 100% power to the motor.*
5. Take foot off pedal
6. Press the + button one time, 0 should change to some value (ex. .56) This is the amount of voltage going through the pedal when it is not being depressed.
7. Record this #. This is your Accelerator Zero Voltage (AZV) reading.
8. Depress pedal and record that #. This is your Accelerator Full Voltage (AFV) reading. This is the amount of voltage going through the pedal when it is fully depressed.
9. These two number must be at least 0.5 Volts apart from each other.
10. Next, navigate to menu 2.03 and insert (AZV)
11. Then go to 2.04 and input (AFV).

## Setting the Top Speeds

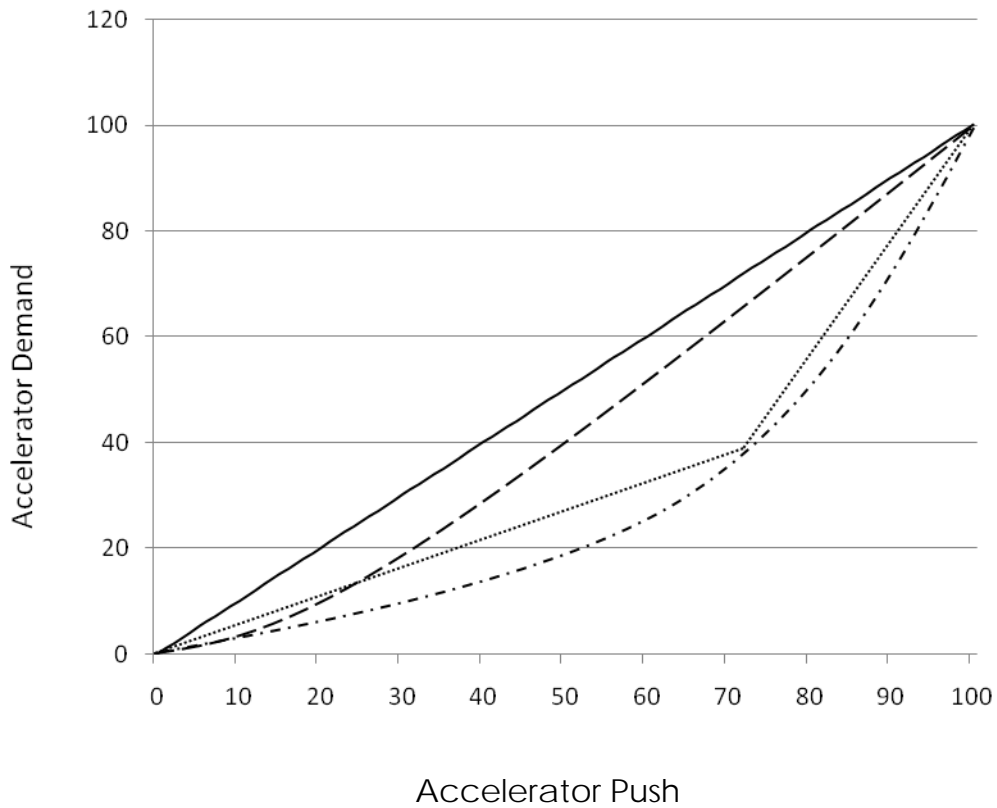
Once you have verified your Accelerator voltage settings are correct, you can adjust the maximum speeds

Maximum Speed			Location
			5.01
Min	Max.	Step Size	Typical value
0%	100%	1%	50-100%

Maximum Reverse Speed			Location
			5.02
Min	Max.	Step Size	Typical value
0%	100%	1%	25-50%

## Accelerator Characteristics

This function is used to vary how much speed is demanded depending on the accelerator position. Setting either Curved, Dual Slope or Crawl gives a smaller change in speed for large changes in accelerator position and is useful for low speed maneuvering.



Linear
  Curved
  Crawl
  Dual Slope

Accelerator Characteristics				Location
				12.14
Options				Default
Lin	Cur	2SI	CrL	Lin



## Braking

Braking can be initiated in one of 3 ways:

- (i) Direction Braking. Initiated when the direction switch inputs are reversed during drive. i.e., Reverse is selected when driving in Forward, or Forward is selected when driving in Reverse.

Direction braking level			Location
			1.01
Min	Max.	Step Size	Typical Value
5%	100%	1%	30%

- (ii) Neutral braking. Initiated when the vehicle is put into neutral during drive and neutral braking level is greater than 0%.

- For a neutral braking level setting of 0%, the braking strength is determined by the Deceleration Delay personality setting (fixed time).
- For neutral braking level settings other than 0%, the braking strength is determined by the Neutral Braking Level personality (fixed torque).

Neutral braking level			Location
			1.02
Min	Max.	Step Size	Typical Value
0%	100%	1%	35%

- (iii) Reduction braking. Initiated when the operator reduces accelerator demand; but does not select neutral. See the Deceleration Delay section for more information

## Deceleration Delay

This is an adjustable delay to ramp down the pulsing from 100% on to 0% on, and can be used to provide a smooth reduction of power to the motor. On this type of system, ramping down the pulsing can also initiate braking. This is known as Reduction Braking. The faster the ramp down rate, the more braking is produced.

Deceleration Delay			Location
			2.02
Min	Max.	Step Size	Typical Value
0.1s	10.0s	0.1s	0.5s

## Back-up/Proximity Alarm

If the vehicle is equipped with a back-up alarm, it can be used as a proximity alarm, sounding whenever the vehicle is in motion. To do this, change the parameters at location 12.17 from "roL" (reverse only) to "ALL" (active all the time).

Alarm			Location
			12.17
			Typical Value
roL	All		roL

# Calibrator Map

