



Lasse E. Arnes, 2020 June 11th mailto:lasse.eriksen.arnes@gmail.com

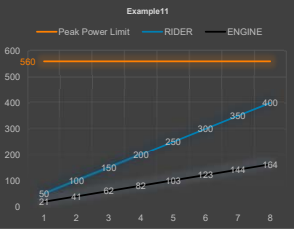
Your Bike(enter):

Max. Mech. Output Power 560 Watt

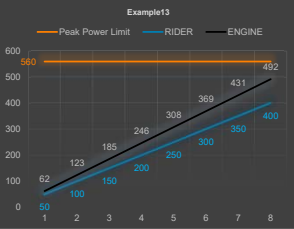
E.bike motor support 4,1 x Rider power (4.1x rider power for 2.1, 2x for SL1.1, 3.8x for 2018 Levo 1.3 and 3.2x for older Levo 1.2)

Note: This is only a visualization of how the "Support" and "Peak Power" slider adjustments in the Mission control app affects the bike.

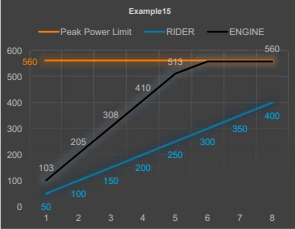
Support 10% →Factor 0.41  
Peak Power (Limit) 100% →560 Watt



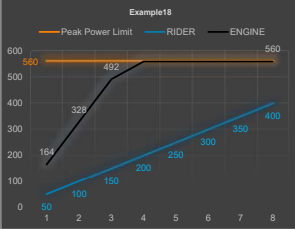
Support 30% →Factor 1.23  
Peak Power (Limit) 100% →560 Watt



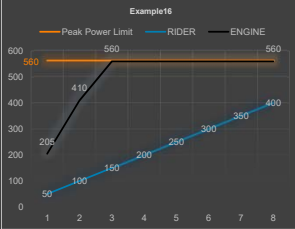
Support 50% →Factor 2.05  
Peak Power (Limit) 100% →560 Watt



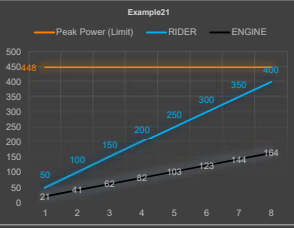
Support 60% →Factor 3.28  
Peak Power (Limit) 100% →560 Watt



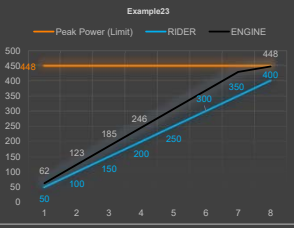
Support 100% →Factor 4.1  
Peak Power (Limit) 100% →560 Watt



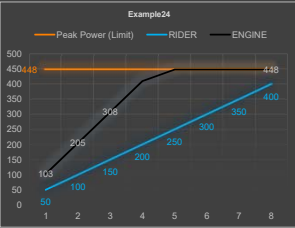
Support 10% →Factor 0.41  
Peak Power (Limit) 80% →448 Watt



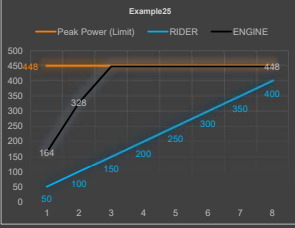
Support 30% →Factor 1.23  
Peak Power (Limit) 80% →448 Watt



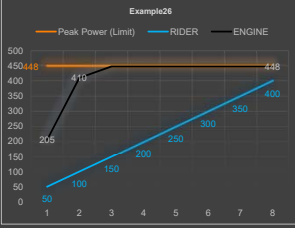
Support 50% →Factor 2.05  
Peak Power (Limit) 80% →448 Watt



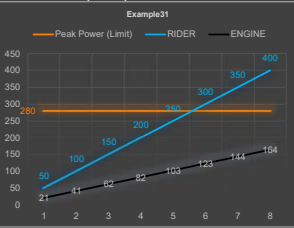
Support 60% →Factor 3.28  
Peak Power (Limit) 80% →448 Watt



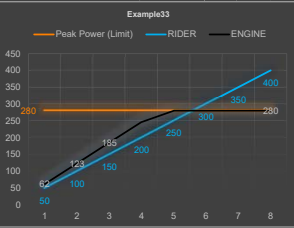
Support 100% →Factor 4.1  
Peak Power (Limit) 80% →448 Watt



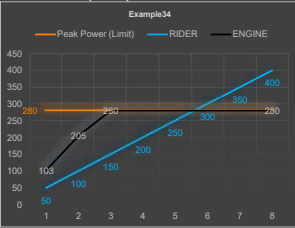
Support 10% →Factor 0.41  
Peak Power (Limit) 50% →280 Watt



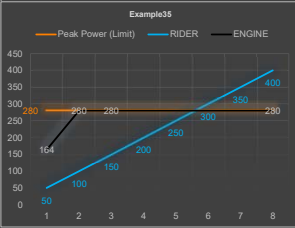
Support 30% →Factor 1.23  
Peak Power (Limit) 50% →280 Watt



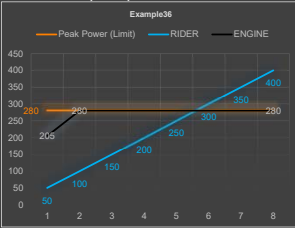
Support 50% →Factor 2.05  
Peak Power (Limit) 50% →280 Watt



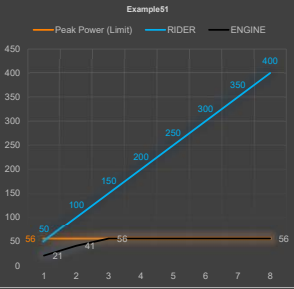
Support 60% →Factor 3.28  
Peak Power (Limit) 50% →280 Watt



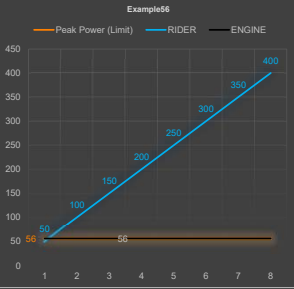
Support 100% →Factor 4.1  
Peak Power (Limit) 50% →280 Watt



Support 10% →Factor 0.41  
Peak Power (Limit) 10% →56 Watt



Support 100% →Factor 4.1  
Peak Power (Limit) 10% →56 Watt



Sources:  
[https://media.specialized.com/MissionControl\\_UserGuide\\_final.pdf](https://media.specialized.com/MissionControl_UserGuide_final.pdf)  
<https://www.cmbforums.com/community/threads/understanding-support-vs-peak-power-in-mission-control-app-v2-0-4038/>

**SPECIALIZED MISSION CONTROL APP**

**TUNE**

- 1) Mission Control Dashboard Tap here to reset all settings to the default values.
- 2) Select Mode The selected mode is highlighted. The Support and Peak Power settings always show for the selected mode. Tap on any mode to see and change its settings.
- 3) Support Change slider to customize the proportion of assist for rider input.
- 4) Peak Power Change slider to select the maximum amount of power the motor will deliver in each mode.
- 5) Assistance Response Change the default setting to make the motor respond quicker or slower to rider input. We recommend leaving it on a lower level for enhanced control and smoother shifting.
- 6) Shifts Activate Shifts Made by setting the slider to a value greater than 0%. The higher the setting, the more support you get after pedaling with less torque and higher cadence. A higher setting results in more battery consumption.
- 7) Wheel circumference See the default value here. Adapting wheel circumference to tire changes can only be done by authorized Specialized retailers.
- 8) Anti-Clamp Activate an optional ANT+ channel to connect any ANT+ device to the bike in order to use additional information (see next page for details).
- 9) Screen Wake When turned on, the LEDs of the display used in certain models turn dark shortly after a button press. Does not apply to all bikes.
- 10) Battery Display Turn the battery or display jumper on or off. A reset of bike is needed to save the setting.

\*The app is free of charge. Based on the version 2.0.

Example: Max engine power is 240Watts.

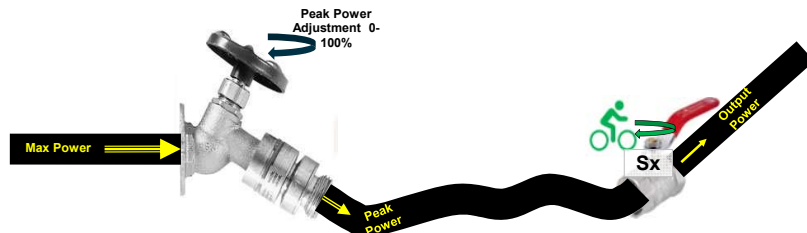
If Peak power is set to 50%, the engine can maximum support you with 120watt (50%\*240) if you pedal hard enough to earn that assist with set support level.

Note: At the far right, the table lists what is required from the rider in order to gain full power support for that mode. For only 10% support it is "impossible" to gain full engine support.

As I see it right now is that any support setting below 30% is only a battery saver mode, or "ride next to push-bike" mode. It all boils down to what the aim of your adjustments are.

MODES	MODE SETTINGS				RIDER INPUT ("R") AND ENGINE RESPONSE FOR GIVEN SETTINGS [Watt]																REQUIRED RIDER POWER TO REACH SET MAX PEAK POWER		
	Support	Factor "F"	Peak Power		RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	ENGINE	RIDER	---	SET PEAK POWER
	% of Max factor	4.1x is max Support	%	Watts																			
MODE 11	10	0,41 x	100	560	50	21	100	41	150	62	200	82	250	103	300	123	350	144	400	164	1366 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 12	20	0,82 x	100	560	50	41	100	82	150	123	200	164	250	205	300	246	350	287	400	328	683 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 13	30	1,23 x	100	560	50	62	100	123	150	185	200	246	250	308	300	369	350	431	400	492	455 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 14	40	1,64 x	100	560	50	82	100	164	150	246	200	328	250	410	300	492	350	560	400	560	341 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 15	50	2,05 x	100	560	50	103	100	205	150	308	200	410	250	513	300	560	350	560	400	560	273 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 16	60	2,46 x	100	560	50	123	100	246	150	369	200	492	250	560	300	560	350	560	400	560	228 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 17	70	2,87 x	100	560	50	144	100	287	150	431	200	560	250	560	300	560	350	560	400	560	195 Watts		Max 560 Watts
MODE 18	80	3,28 x	100	560	50	164	100	328	150	492	200	560	250	560	300	560	350	560	400	560	171 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 18	80	3,28 x	100	560	50	164	100	328	150	492	200	560	250	560	300	560	350	560	400	560	171 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 19	100	4,1 x	100	560	50	205	100	410	150	560	200	560	250	560	300	560	350	560	400	560	137 Watts	Required by Rider for Engine support	Max 560 Watts
MODE 21	10	0,41 x	80	448	50	21	100	41	150	62	200	82	250	103	300	123	350	144	400	164	1093 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 22	20	0,82 x	80	448	50	41	100	82	150	123	200	164	250	205	300	246	350	287	400	328	546 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 23	30	1,23 x	80	448	50	62	100	123	150	185	200	246	250	308	300	369	350	431	400	448	364 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 24	50	2,05 x	80	448	50	103	100	205	150	308	200	410	250	448	300	448	350	448	400	448	219 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 25	80	3,28 x	80	448	50	164	100	328	150	448	200	448	250	448	300	448	350	448	400	448	137 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 26	100	4,1 x	80	448	50	205	100	410	150	448	200	448	250	448	300	448	350	448	400	448	109 Watts	Required by Rider for Engine support	Max 448 Watts
MODE 31	10	0,41 x	50	280	50	21	100	41	150	62	200	82	250	103	300	123	350	144	400	164	683 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 32	20	0,82 x	50	280	50	41	100	82	150	123	200	164	250	205	300	246	350	280	400	280	341 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 33	30	1,23 x	50	280	50	62	100	123	150	185	200	246	250	280	300	280	350	280	400	280	228 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 34	50	2,05 x	50	280	50	103	100	205	150	280	200	280	250	280	300	280	350	280	400	280	137 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 35	80	3,28 x	50	280	50	164	100	280	150	280	200	280	250	280	300	280	350	280	400	280	85 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 36	100	4,1 x	50	280	50	205	100	280	150	280	200	280	250	280	300	280	350	280	400	280	68 Watts	Required by Rider for Engine support	Max 280 Watts
MODE 41	10	0,41 x	40	224	50	21	100	41	150	62	200	82	250	103	300	123	350	144	400	164	546 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 42	20	0,82 x	40	224	50	41	100	82	150	123	200	164	250	205	300	224	350	224	400	224	273 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 43	30	1,23 x	40	224	50	62	100	123	150	185	200	224	250	224	300	224	350	224	400	224	182 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 44	50	2,05 x	40	224	50	103	100	205	150	224	200	224	250	224	300	224	350	224	400	224	109 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 45	80	3,28 x	40	224	50	164	100	224	150	224	200	224	250	224	300	224	350	224	400	224	68 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 46	100	4,1 x	40	224	50	205	100	224	150	224	200	224	250	224	300	224	350	224	400	224	55 Watts	Required by Rider for Engine support	Max 224 Watts
MODE 51	10	0,41 x	10	56	50	21	100	41	150	56	200	56	250	56	300	56	350	56	400	56	137 Watts	Required by Rider for Engine support	Max 56 Watts
MODE 52	20	0,82 x	10	56	50	41	100	56	150	56	200	56	250	56	300	56	350	56	400	56	68 Watts	Required by Rider for Engine support	Max 56 Watts
MODE 53	30	1,23 x	10	56	50	56	100	56	150	56	200	56	250	56	300	56	350	56	400	56	46 Watts	Required by Rider for Engine support	Max 56 Watts
MODE 54	50	2,05 x	10	56	50	56	100	56	150	56	200	56	250	56	300	56	350	56	400	56	27 Watts	Required by Rider for Engine support	Max 56 Watts
MODE 55	80	3,28 x	10	56	50	56	100	56	150	56	200	56	250	56	300	56	350	56	400	56	17 Watts	Required by Rider for Engine support	Max 56 Watts
MODE 56	100	4,1 x	10	56	50	56	100	56	150	56	200	56	250	56	300	56	350	56	400	56	14 Watts	Required by Rider for Engine support	Max 56 Watts

#### ANALOGY EXAMPLE - UNDERSTANDING MISSION CONTROL "SUPPORT" AND "PEAK POWER"



#### PEAK POWER

Maximum Power enters Engine, but is regulated by the Mission Control Peak Power adjustment 0-100% of max engine power.

#### SUPPORT (x)

Mission control support setting defines the multiplier factor the engine use as a response to Rider Effort input. (100% = 4.1 for 2.1 engine)

(4.1x rider power for 2.1, 2x for SL1.1, 3.8x for 2018 Levo 1.3 and 3.2x for older Levo)

#### OUTPUT POWER

The Engine output power is increasing gradually with higher rider effort, since it multiplies your effort with a constant defined by The Mission Control Support. If support is set to low, you may not be able to ever get maximum engine output without switching to another mode.

IMPORTANT, Max engine output is limited by the Peak Power available and rider effort