

NEW SOFTWARE



NEW LRP FLOW SPECIAL REVERSE SOFTWARE v1.5

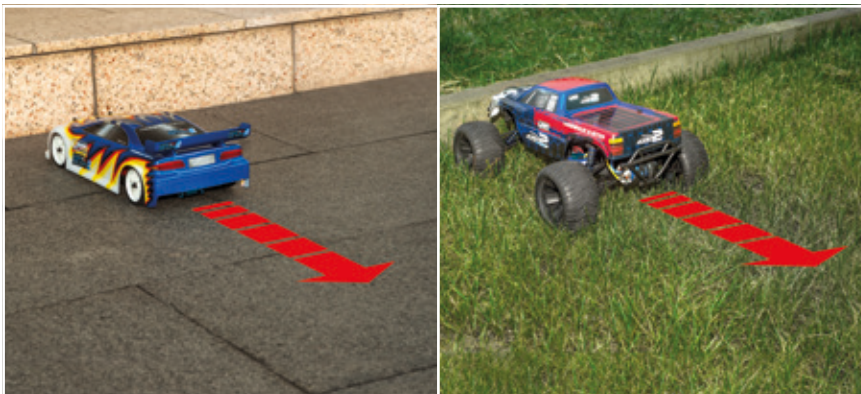
We are excited to introduce the all new v1.5 firmware for the LRP Flow. For the first time ever, your Flow will have REVERSE functionality.

In order to integrate the reverse functionality seamlessly into the established v1.4 firmware, our engineers developed the all new Intelligent Brake/Reverse v1.0 algorithm. This dedicated part of the firmware ensures an intuitive driving experience when switching between braking and driving backwards.

Of course, we have not stopped there. Additionally, we added the fully automatic protection system and improved the mode settings, using the experience gained during the development of our class-specific firmwares.

This results in an exciting upgrade for all Flow users, those with racing ambitions and those who wish to use their Flow in a more convenient way away from the racing track.

The new v1.5 firmware provides maximum fun on or off the track, no matter which class. However, if you truly want to compete in your preferred class, we recommend our class-specific firmwares. Feel free to download them on www.lrp.cc.



Firmware: v1.5
Product: Flow Competition
 Flow Works Team
Description: Special Reverse
 Software
Part No.: 80960
 80970

KEY IMPROVEMENTS

- REVERSE FUNCTION
- OPTIMISED MODE VALUES
- OPTIMISED FACTORY SETTINGS
- AUTOMATIC PROTECTION SYSTEM

ADDITIONAL EXPLANATION OF FUNCTIONS SPECIAL REVERSE SOFTWARE v1.5

MODE 1	MODE 2	MODE 3	MODE 4
<p>Autobrake (or „Drag brake“):</p> <p>Defines percentage of applied braking power when the throttle position on the radio is in neutral.</p>	<p>Initial Drive (v1.5 -> new value, new factory setting):</p> <p>Defines percentage of initial throttle power.</p> <p>This allows to adjust smooth throttle or aggressive acceleration.</p> <p>Suggested settings: Modified classes: 1-3 Other classes: 3-5</p> <p>Attention: Higher Initial Drive settings increase the motor temperature significantly. When you are running high Initial Drive settings, motor temperature protection should always be active! Always monitor motor temperatures in order to adjust correct Initial Drive values!</p>	<p>Reverse (v1.5 -> new feature):</p> <p>Enable this feature if you want to run reverse.</p> <p>This is a great feature when driving away from the track but could be useful in training sessions.</p> <p>Please note: Reverse is not allowed at most racing events.</p>	<p>Torque Timing:</p> <p>This function is designed especially for X12/X20/X20SS/K7 motors.</p> <p>Using Torque Timing will increase efficiency and improve the lower powerband, resulting in smoother operation and cooler running motors.</p> <p>Suggested settings: 2-4</p> <p>For motors of other brands we recommend to use 0° Torque Timing.</p> <p>Note: For Boost Zero Classes Torque Timing 0 must be selected.</p>
MODE 5	MODE 6	MODE 7	MODE 8
<p>Boost Timing (v1.5 -> new values):</p> <p>Defines the maximum Boost Timing setting.</p> <p>Suggested settings: Modified classes: 1-5 Other classes: 5-8</p> <p>Attention: When using Boost Timing make sure that mechanical timing at motor + electrical timing at speed controller does not exceed 90°!</p> <p>Note: For Boost Zero Classes „Boost 0“ must be selected. If „Boost 0“ is selected, modes 6 and 7 will not be shown.</p> <p>Higher Boost Timing settings increase the motor temperature significantly. When you are running high Boost Timing settings, motor temperature protection should always be active! Always monitor motor temperatures in order to adjust correct Boost Timing values.</p>	<p>Boost ramp (v1.5 -> new values, new factory setting):</p> <p>Defines how quickly you will reach your selected Boost Timing.</p> <p>The higher the setting the faster you reach the Boost Timing. This results in greater power and faster acceleration.</p> <p>Suggested settings: Modified classes: 1-5 Other classes: 5-10</p> <p>Higher Boost Ramp settings increase the motor temperature significantly. When you are running high Boost Ramp settings, motor temperature protection should always be active! Always monitor motor temperatures in order to adjust correct Boost Ramp values!</p>	<p>Boost Turbo:</p> <p>Defines the additional timing after Boost Timing to reach maximum available power.</p> <p>This setting is reached only when full throttle is applied.</p> <p>Note: If you select a too high Boost Timing setting in combination with a too low Boost Angle, Turbo might activate too late.</p>	<p>Protection (v1.5 -> new feature):</p> <p>Defines the level of protection for your speedo and motor. Battery protection is always active.</p> <p>Note: In case motor temperature shutdown comes close before the end of the race, you might consider switching off the motor temperature protection.</p> <p>Be aware that the motor might overheat, resulting in a loss of warranty of the motor. Therefore motor protection use is highly recommended!</p>

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MODE	1	2	3	4	5	6	7	8
Red LED								
Blue LED								
Yellow LED			Fast					
Value	Auto Brake	Initial Drive	Reverse	Torque Timing	Boost Timing	Boost Ramp	Boost Turbo	Protection
Green LED	[%]	[%]	[-]	[°]	[°]	[°/10k]	[°]	[-]
0	0	1	Disabled	0	0		0	Motor & Speedo
1	3	3	Enabled	5	4	2	5	Speedo only
2	6	5		10	8	4	7	
3	9	7		15	12	6	10	
4	12	9		20	16	8	12	
5	15	12		25	20	10	15	
6	20				25	15		
7	25				30	20		
8	30				35	25		
9	35				40	30		
10	40				45	35		

White Factory settings

Grey If mode 5 is set to value 0, modes 6 and 7 will not be shown.

HOW TO GET INTO „MODE PROGRAMMING“

Press MODE button for at least 3sec.

- How to check the stored settings → Count the number of flashes of the green SET-LED.
- How to change the settings → Press SET button to increase setting by one step.
- How to get to the next Mode → Press MODE button once.
- How to leave the programming mode → If last Mode is reached press the MODE button one more time. This will also store your settings.

RESET SPEED CONTROL TO FACTORY SETTINGS AFTER SOFTWARE UPDATE. MUST BE EXECUTED AFTER EACH SOFTWARE UPDATE!

Switch on the transmitter, then press and hold SET button while switching on the speed control. This will set speed control to factory default settings.

CALIBRATE SPEED CONTROL TO TRANSMITTER. MUST BE EXECUTED AFTER EACH SOFTWARE UPDATE!

Connect the speed control to the battery and switch it on. Hold SET button pressed for at least 3sec.

- Blue Led flashing. Leave transmitter in neutral position and press the SET button → Neutral saved.
- Yellow Led flashing. Hold full throttle on transmitter and press SET button → full throttle saved.
- Red Led flashing. Hold full brake on transmitter and press SET button → full brake saved.

HOW TO READ OUT THE MAXIMUM TEMPERATURE:

Press and hold MODE button while switching on the speed control. Then release button.

For speedo temperature read-out count the slow flashes of green LED to indicate "Speedo temperature till shutdown"

Slow green LED	1	2	3	4	5	6	7	8	9	10
Temp. °C	> -54°C	-48°C	-42°C	-36°C	-30°C	-24°C	-18°C	-12°C	-6°C	Shutdown
Temp. °F	> -97°F	-86°F	-76°F	-65°F	-54°F	-43°F	-32°F	-22°F	-11°F	Shutdown

For motor temperature read-out press MODE button again and count green flashes to indicate "Motor temperature till shutdown"

Fast green LED	1	2	3	4	5	6	7	8	9	10
Temp. °C	> -45°C	-40°C	-35°C	-30°C	-25°C	-20°C	-15°C	-10°C	-5°C	Shutdown
Temp. °F	> -81°F	-72°F	-63°F	-54°F	-45°F	-36°F	-27°F	-18°F	-9°F	Shutdown