ESS-DUAL+

ESS-DUAL+ Engine Sound Simulator
Quick Guide for vehicle V1.0

Warning
- Please read the instructions about the amplifier carefully, as incorrect settings may cause damage to the speaker.
- As a heating device, the amplifier should be well ventilated.
- The output power of the amplifier goes with voltages. The volume can be adjusted to control the power if necessary, when amplifier are fully loaded. The speaker be damaged by high volume under high voltage. Please refer to detailed instructions on official website.
- Maintaining max throttle for a long time is not recommended, as damage may happen under high power output.

Speaker Description
- ESS-DUAL+ supports up to 6S lithium battery and 30W power output. So adjust the volume to match the power output.
- To avoid the damage to the speaker, volume should be adjusted before sound distortion with 3S lithium battery or above(Advisably under volume level 4).

Statement
The speakers are consumables. Users need to strictly control the volume so that the output power can match the speaker. Speaker damage caused by output power is not categorized as manufacturing defect.

Functions Description
- ESS-DUAL+ uses advanced DNS/DCR algorithm to reproduce the sound of real engines.
- ESS-DUAL+ supports AUX channel that can simulate a variety of sounds such as alarm.
- ESS-DUAL+ supports two sets of engine sounds, which enables fast switching between engine sounds
- ESS-DUAL+ supports RC PLUS to realize functional setting and sound purchasing from sound stores.
- ESS-DUAL+ supports firmware updates and function upgrades.

Product Specifications
- Supply voltage range : 5Volts-26Volts
- Speaker Impedance : 4Ohms
- Speaker Power : 5W
- Output power under 4 Ohms : 20W/3S(12V)
- Number of audio channels : Dual channel 30W max

Warning : Reverse power results in device damage

Packing List
- ESS-DUAL+ X 1
- T type AMP power cable X 1
- S- Link X 1
- ESS holder X 4
- Quick Guide X 1
- Double-sided adhesive X 2
- Y Line X 1

To get the updated functional description and application instructions please refer to the official website ;
Sense Innovations owns the right of final interpretation of this quick guide and the relevant product specification.
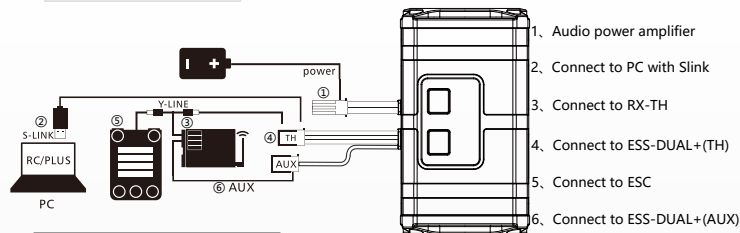
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Connect ESS-DUAL+

1、 Audio power amplifier
2、 Connect to PC with Slink
3、 Connect to RX-TH
4、 Connect to ESS-DUAL+(TH)
5、 Connect to ESC
6、 Connect to ESS-DUAL+(AUX)

Calibrate ESS-DUAL+
- Enter Calibration mode : Press & hold the "+" 1S , after "DI---" sound , release the button, ESS-DUAL+ enters the Setup mode" ;
- Neutral Calibration : make sure the TH at Neutral, Click the "+" , after "DI" sound, the neutral calibration finishes.
- Forward TH calibration : Pull the TH trigger to max throttle position , click the "+" , after " DI " sound, forward TH calibration finishes.
- Backward TH calibration : Push the TH stick to max brake position, click the "+" , after "DI" sound, the brake TH calibration finishes.
- After the steps above, "DI---", calibration is completed. Calibration mode exits automatically.
- With only "DI, DI, DI" sound, the calibration fails. It returns to the neutral calibration to re-calibration.

Volume adjustment
Volume can be setup by clicking +/- , Increase : "+" , Decrease : "-" (8 Level).

Sound Switch
- In the running mode, long press "-" . The ESS DUAL+ changes to set 1 sound after "DI" sound.
- Long press "-" again. The ESS-DUAL+ changes to set 2 sound after "DI, DI" sound.

AUX Channel
ESS-DUAL+ supports the AUX channel function. You can trigger the Alarm sound with the AUX channel on the remote control. Download the Special sound by using RC PLUS.

Start ESS-DUAL+
With power-on, the ESS-DUAL+ is still in off state. The engine starts upon the pull of the throttle. Then ESS-DUAL+ generates engine sound according to the throttle signal. It automatically turns off when the throttle is in neutral position for 5 seconds(default setting). Detailed information about ECO, overloading and braking sound is accessible from functional specification on official website and RC PLUS.

Other functions
The additional features of ESS-DUAL+ include shifting, overloading, braking, turbo sound effects and battery low voltage warning, etc. More specific information about function and usage is accessible from the official website, with functions mentioned above applicable through RC-PLUS.

About RC Plus
RC PLUS integrates configuration, sound stores and video services. It extends the ESS powerful function. You can visit www.sensehobby.com to download the RC PLUS program and get more information.