

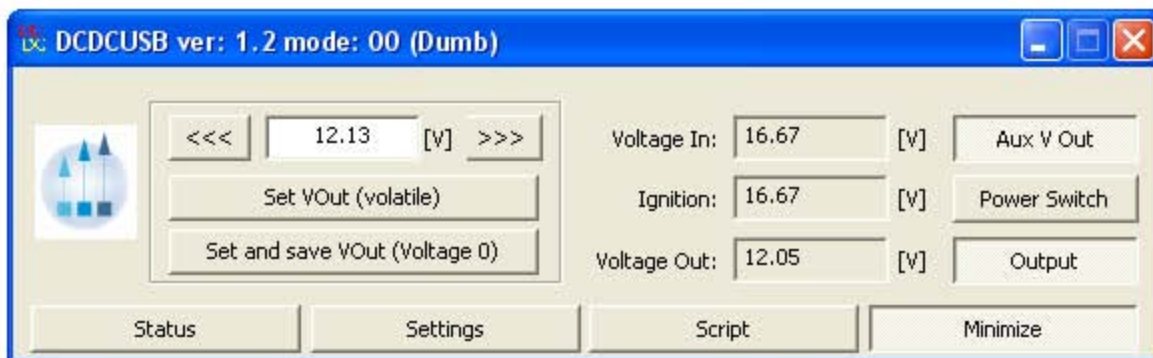
DCDC-USB

Advanced USB configuration manual



Introduction:

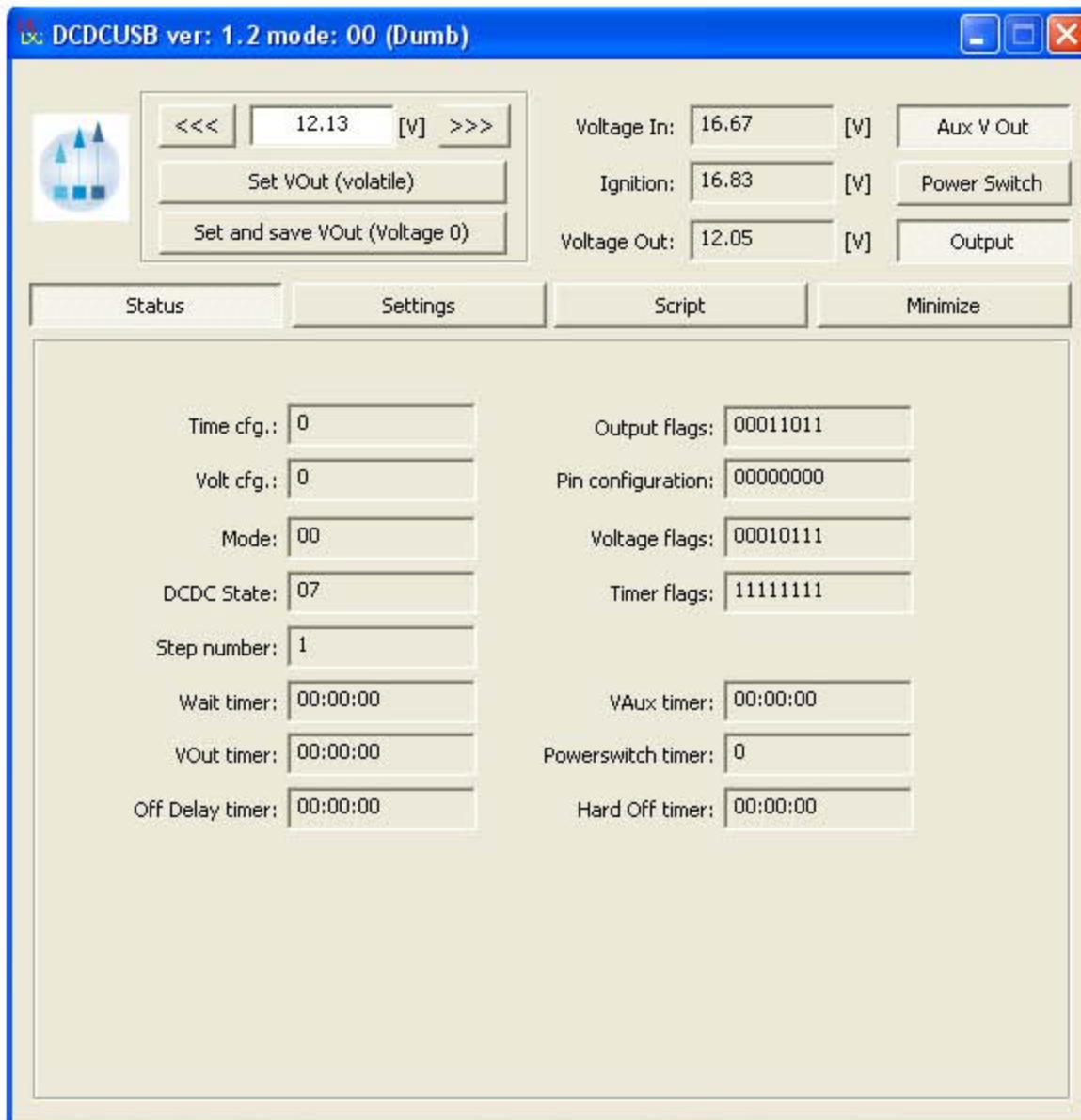
1) A simple view of the DCDC-USB software:



In the picture above you can see:

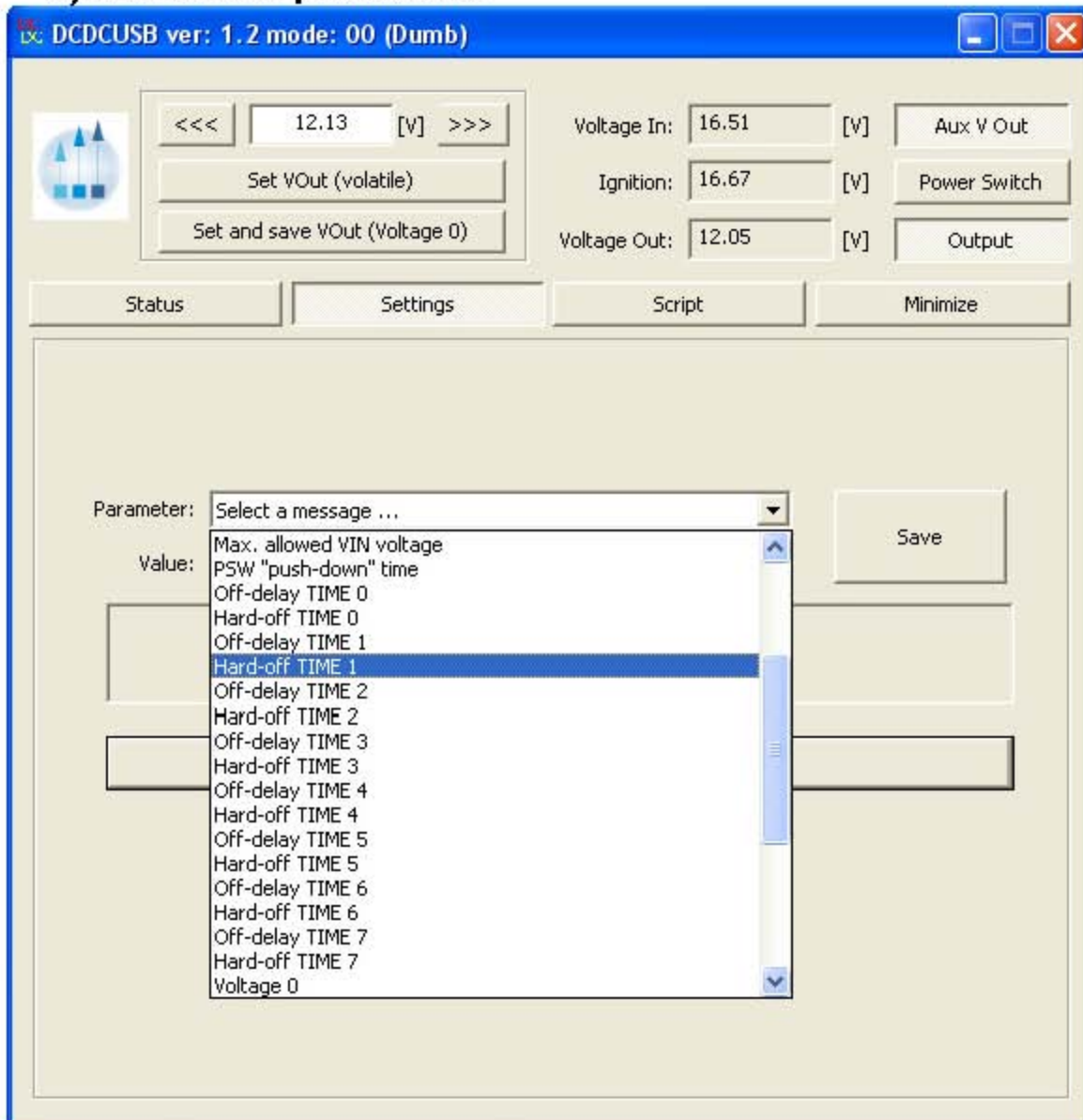
- The desired output voltage: it can be set by writing manually in the edit box the desired value between 5-24V or by decreasing/increasing in fine adjustments with the left/right buttons. The smaller is the output voltage desired the finer adjustments can be made.
- Using the "set VOut" option will modify the output voltage but it will not save it.
- Using the "set and save VOut" will overwrite the "Voltage 0" value, or which one is enabled.
- The measured Input voltage
- The measured Ignition voltage
- The measured Output voltage
- The state of the Auxiliary output voltage (VAux is ON)
- Using the Power Switch button, you can send an ON/OFF pulse to the motherboard from the PSW pin.
- The state of the Power Switch (this can be used to control a motherboard, in this case state is OFF)
- The state of the Output (Output is ON in the picture)

2) DCDC-USB Status



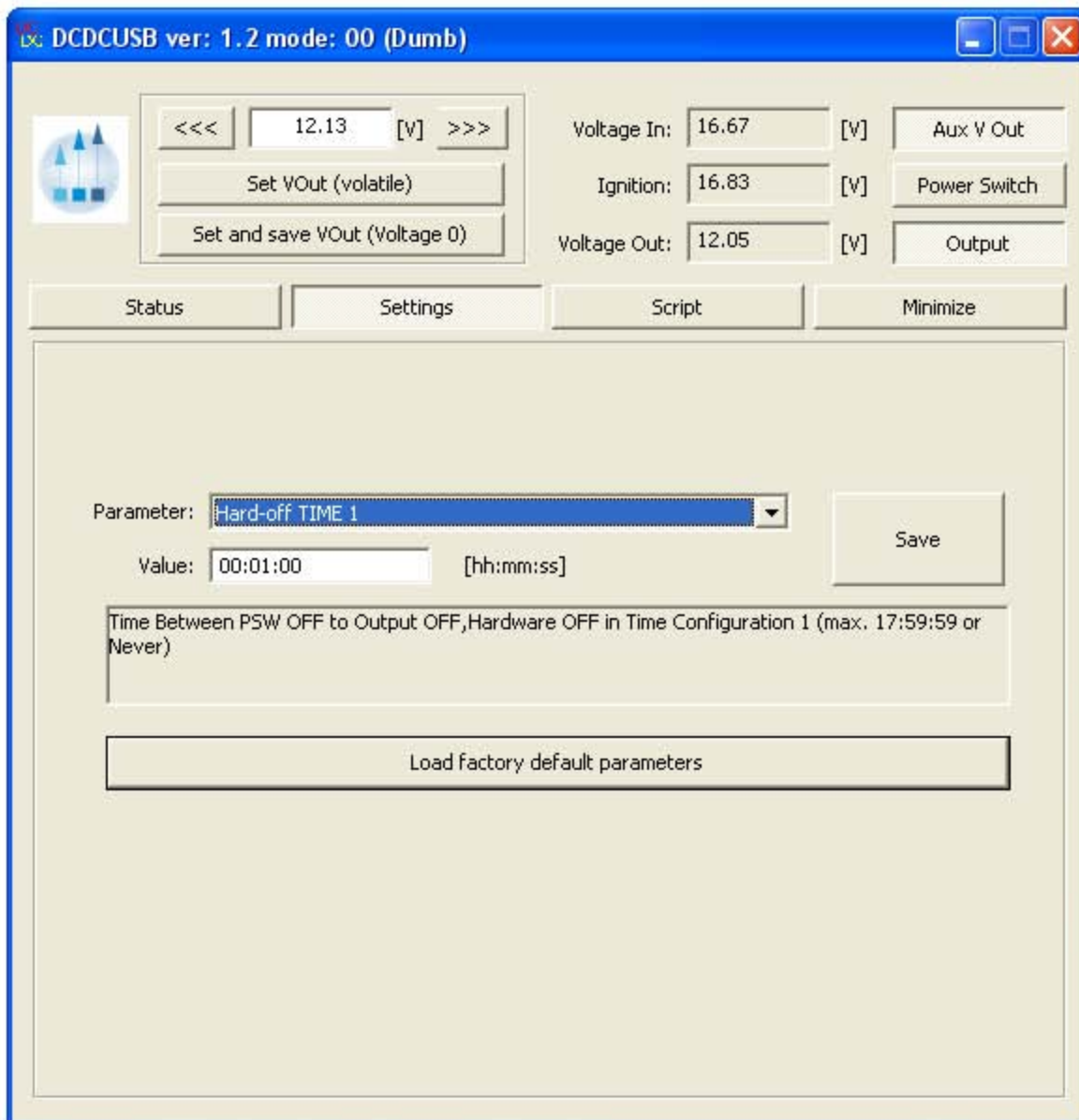
In this page you will find detailed description of several internal states and timers used in different modes: DUMB, AUTOMOTIVE, SCRIPT.
Ex: this is useful when using the SCRIPT mode and testing the script programmed.

3) DCDC-USB parameters



In this page you can see how several parameters can be configured by selecting it from the combo-box. After changing the value press the "Send" button to send it to the device. The parameter changed will have effect on the next power cycle.

4) DCDC-USB parameters explained



Every parameter is explained in the text box below the value.

The values from the Output voltage chart can all be changed. This can be done by modifying the **Voltage 0 to 7** parameters.

Output voltage

	0	1	2	3	4	5	6	7	
12V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 0
5V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 1
6V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 2
9V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 3
12V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 4
13.5V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 5
18V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 6
24V	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 7

In the same way, the OFFDELAY and HARDOFF timers can be modified using the DCDC-USB software.

Default timing schemes

OffDelay	HardOFF	0	1	2	3	4	5	6	7	Off-delay/Hard-off
0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 0
5s	60s	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 1
5s	Never	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 2
1min	1min	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 3
15 min	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 4
15 min	Never	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 5
30 min	1 min	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 6
2 hour	Never	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TIME 7

In case you want to return to the factory default parameters press the “Load factory default parameters” button. It will have effect on the next power cycle.

5) DCDC-USB Script Settings

The screenshot shows the DCDCUSB software interface with the following settings:

- DCDCUSB ver: 1.2 mode: 00 (Dumb)
- Voltage In: 16.67 [V]
- Ignition: 16.67 [V]
- Voltage Out: 12.05 [V]
- Step number: 1
- V OUT (Voltage): 5 [V]
- V OUT settings:
 - T1 State: ON, T1 Time: 00:00:20 [hh:mm:ss]
 - T2 State: OFF, T2 Time: 00:00:30 [hh:mm:ss]
- V AUX (Auxiliary Out) settings:
 - T1 State: ON, T1 Time: 00:00:05 [hh:mm:ss]
 - T2 State: OFF, T2 Time: 00:00:10 [hh:mm:ss]
- PWS (Powerswitch) settings:
 - T1 State: ON, T1 Time: 500 [ms]
 - T2 State: OFF, T2 Time: Never [ms]
- Global wait time (GWT): 00:01:30 [hh:mm:ss]
- Options:
 - Skip this step
 - ON=Play next step /OFF=Stop script
 - Repeat from first step (if next step=ON)

The timing diagram on the right shows the sequence of events for two steps:

- STEP 1:** VOUT ON, VAUX OFF, PWS OFF.
- STEP 2:** VOUT OFF, VAUX ON, PWS ON.

The diagram also shows the timing for T1 and T2 states for each output, and the Global Wait Time (GWT) between steps.

In this page you can set the behavior of the script.

Note: It is advised to turn of the running script when programming new values and saving changes.

For every step number (1-60) you can set the behavior of the 3 outputs (VOUT, VAUX, PWS) separately.

In each step you can have 2 states of each output.

After GWT expires the script will advance to next step number.

When programming the script you have the possibility

- to skip a step
- to play next step or stop the script
- to repeat from first step (step nr. 1) by checking the checkboxes

To stop/start script manually by pressing the different buttons.

With the "Sleep" button the device will enter in low power consumption mode turning off the outputs, disconnecting the USB, for the specified time.

A pop up window will appear asking the specified time in DD:HH:MM format.

Note: this timing is RC based, not precise and it should be experimented!

After the specified time elapsed the device will restart the script and reconnect on USB.

Our USB software is designed in such way so it will also reconnect with the device.