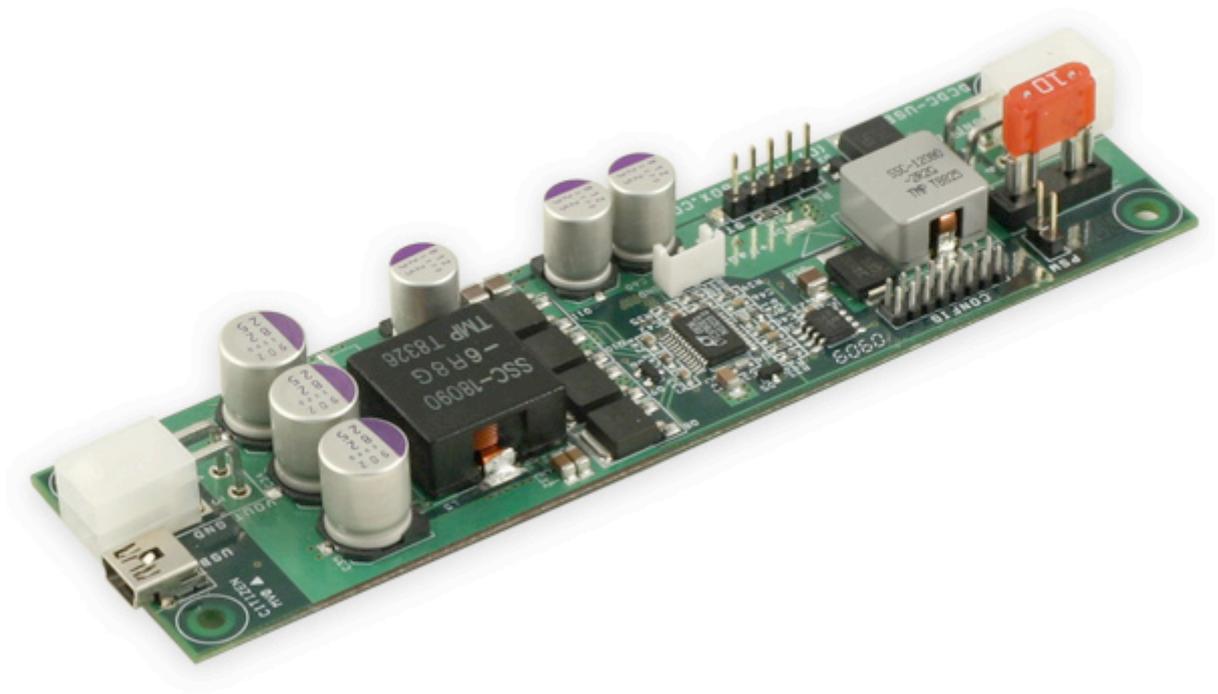


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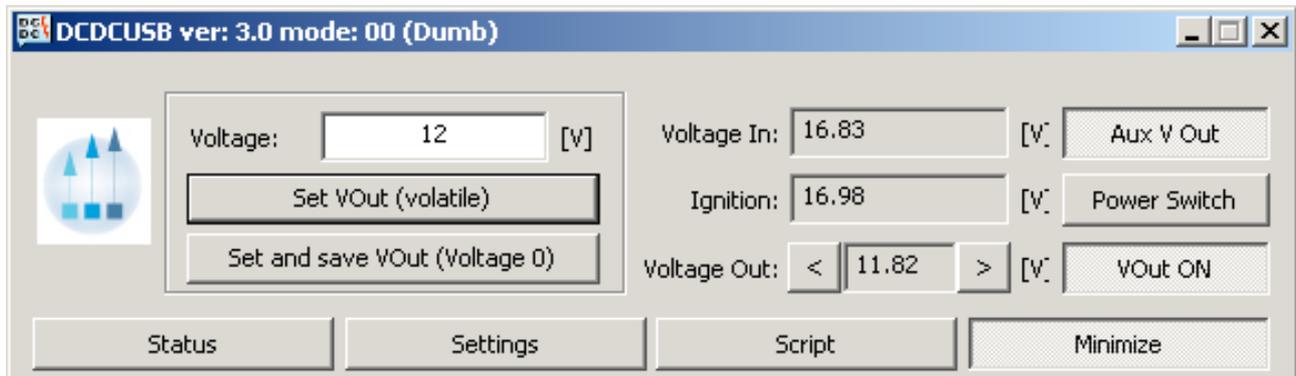


DCDC-USB

Advanced USB configuration manual

Introduction:

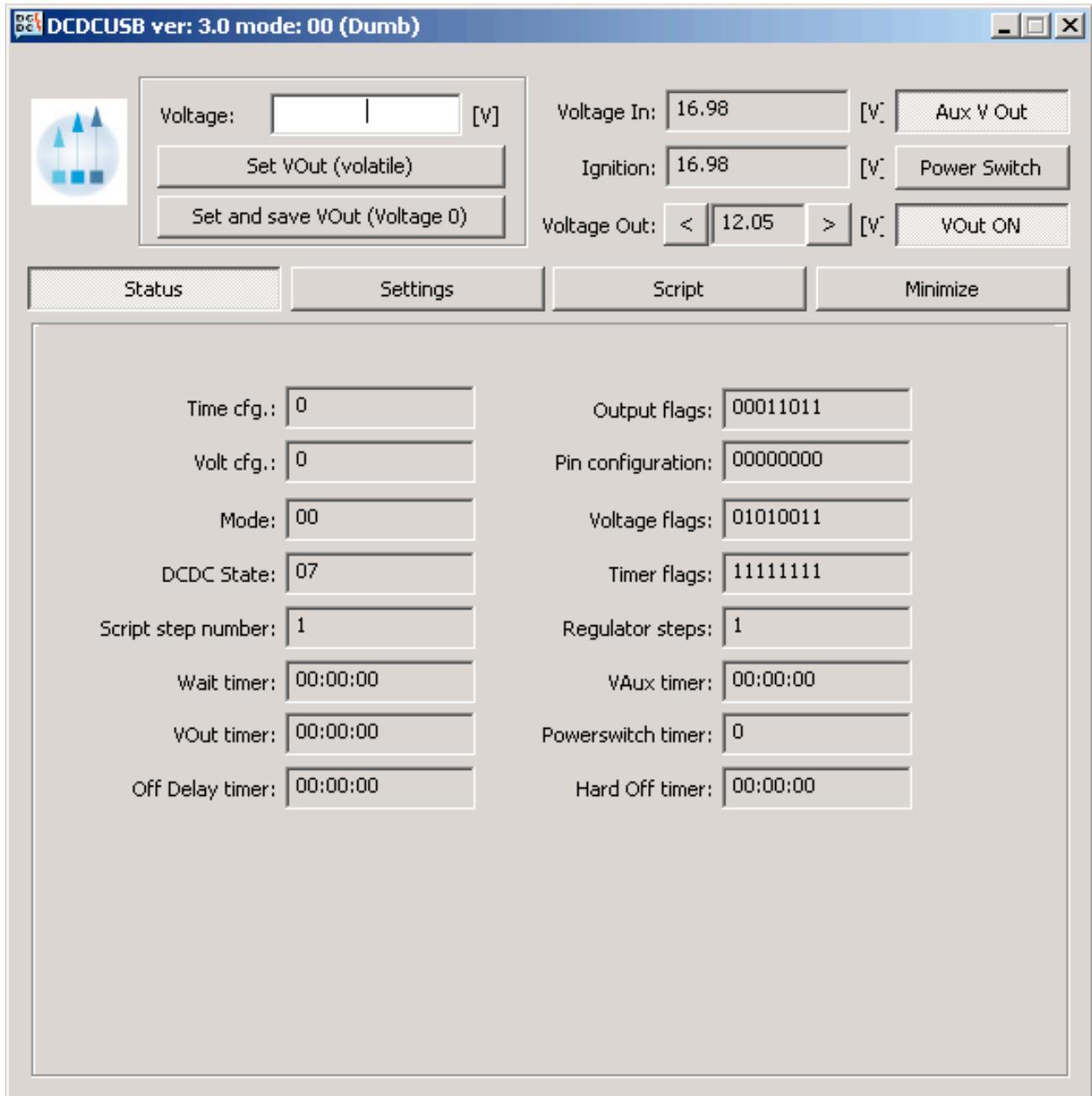
1) A simple view of the DCDC-USB software:



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)

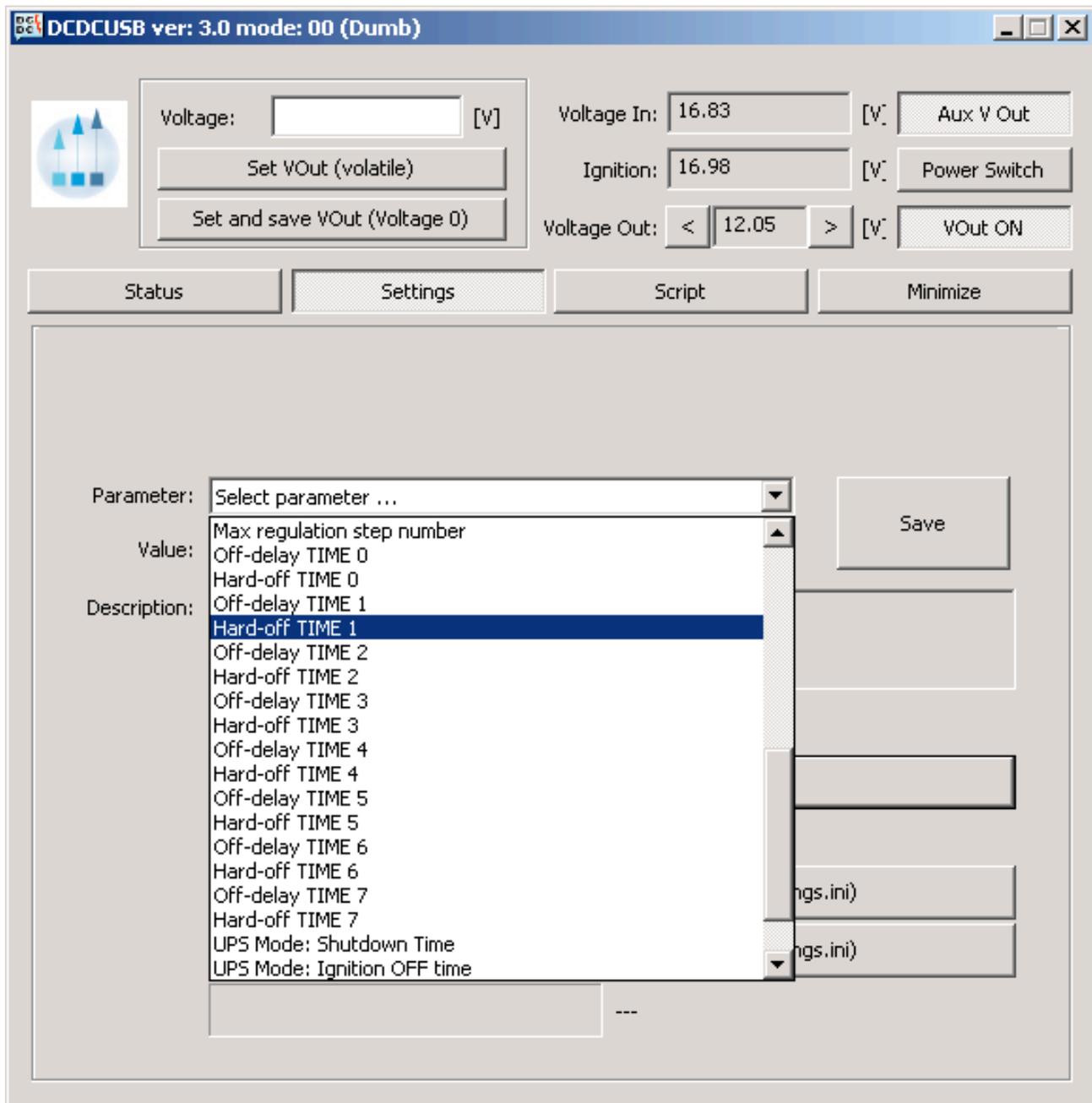
2) DCDC-USB Status



In this page you will find detailed description of several internal states and timers used in different modes: DUMB, AUTOMOTIVE, SCRIPT.

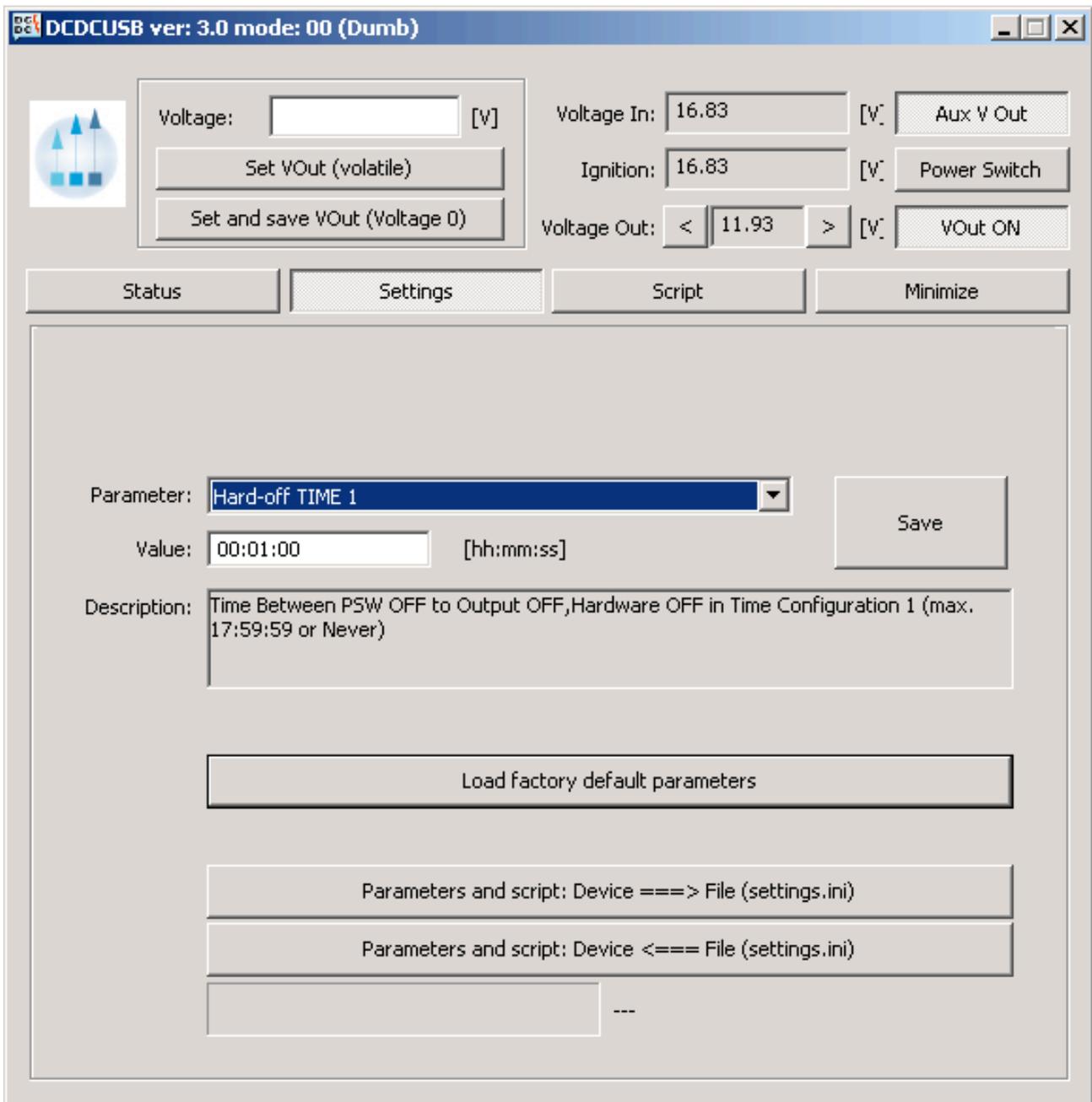
Ex: this is useful when using the SCRIPT mode and testing the script programmed.

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"/>	<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"/>	<input type="checkbox"/>	Voltage 1
6V	<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"/>	<input type="checkbox"/>	Voltage 2
9V	<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"/>	<input type="checkbox"/>	Voltage 3
13.5V	<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"/>	<input type="checkbox"/>	Voltage 4
16V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage 5
19V	<input type="checkbox"/>	<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"/>	Voltage 6
24V	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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		0	1	2	3	4	5	6	7	Off-delay/Hard-off
OffDelay	HardOFF	<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
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 1
5s	60s	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TIME 2				
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 3
1min	1min	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TIME 4				
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 5
15 min	Never	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TIME 6				
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 7
2 hour	Never	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					

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 displays the DCDCUSB software interface. At the top, the title bar reads "DCDCUSB ver: 3.0 mode: 00 (Dumb)". The main window is divided into several sections:

- Top Left:** A logo with three blue towers and a "Voltage:" input field with a "[V]" label. Below it are buttons for "Set VOut (volatile)" and "Set and save VOut (Voltage 0)".
- Top Right:** "Voltage In:" (16.98 [V]), "Aux V Out" button, "Ignition:" (16.98 [V]), "Power Switch" button, and "Voltage Out:" (12.05 [V]) with left and right arrow buttons. A "VOut ON" button is also present.
- Navigation:** A row of buttons: "Status", "Settings", "Script" (selected), and "Minimize".
- Script Configuration (Main Area):**
 - "Step number:" dropdown set to "1".
 - "V OUT (Voltage):" input field set to "12.01 [V]".
 - V OUT Section:** 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) Section:** T1 State (ON), T1 Time (00:00:05 [hh:mm:ss]), T2 State (OFF), T2 Time (00:00:10 [hh:mm:ss]).
 - PWS (Powerswitch) Section:** T1 State (ON), T1 Time (500 [ms]), T2 State (OFF), T2 Time (Never [ms]).
 - "Global wait time (GWT):" input field set to "00:01:30 [hh:mm:ss]".
 - Checkboxes: "Skip this step" (unchecked), "ON=Play next step /OFF=Stop script" (checked), "Repeat from first step (if next step=ON)" (checked).
- Control Panel (Right Side):** Buttons for "Start script", "Stop script", "Sleep", and "Save changes".
- Timing Diagram (Bottom Right):** A waveform diagram showing the sequence of events for VOUT, VAUX, and PWS across two steps (STEP1 and STEP2).
 - VOUT:** T1 ON (green), T2 OFF (red), T1 OFF (red), T2 OFF (red).
 - VAUX:** T1 OFF (red), T2 ON (green), T1 OFF (red), T2 OFF (red).
 - PWS:** T1 OFF (red), T2 ON (green), T1 OFF (red), T2 OFF (red).
 - Green arrows indicate the duration of T1 ON and T2 ON pulses. Red arrows indicate the duration of T1 OFF and T2 OFF pulses.
 - Horizontal lines separate the signals for VOUT, VAUX, and PWS. A "GWT" (Global Wait Time) is shown at the bottom, indicating the delay between the end of one step and the start of the next.

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.

Support and warranty:

Standard Hardware Warranty 1Year / US, 2 Year EU

Installation support: 30 days via email customer-support@mini-box.com

DCDC-USB product webpage: <http://www.mini-box.com/DCDC-USB>