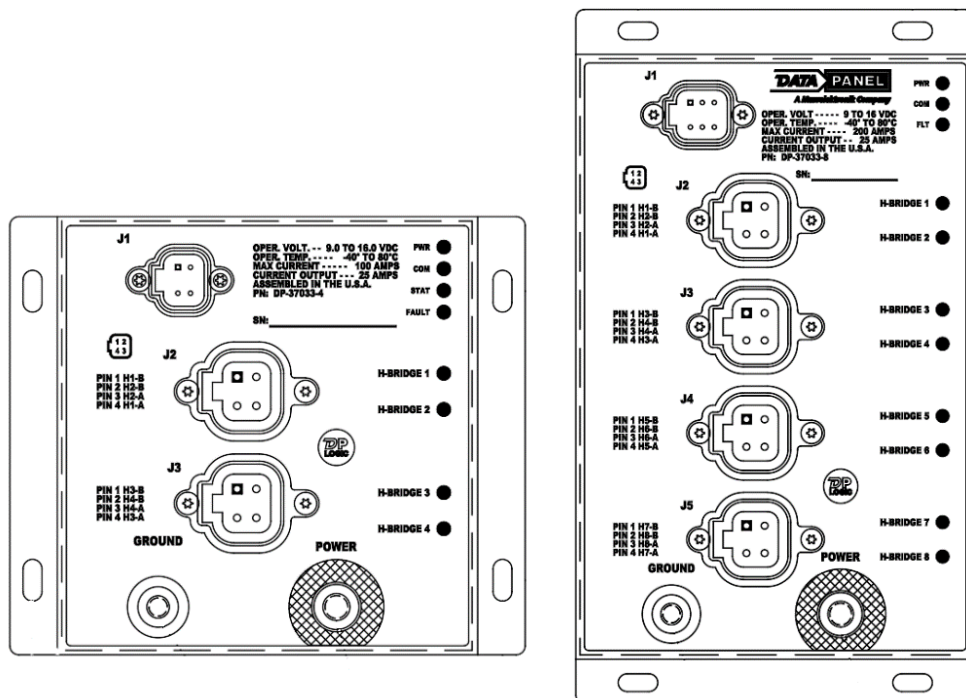


DP-37033-4 / DP-37033-8

QUICKSTART GUIDE

Document Control No. DP-37033-4/-8 REV A

22 June 2023



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DOCUMENT REVISION HISTORY

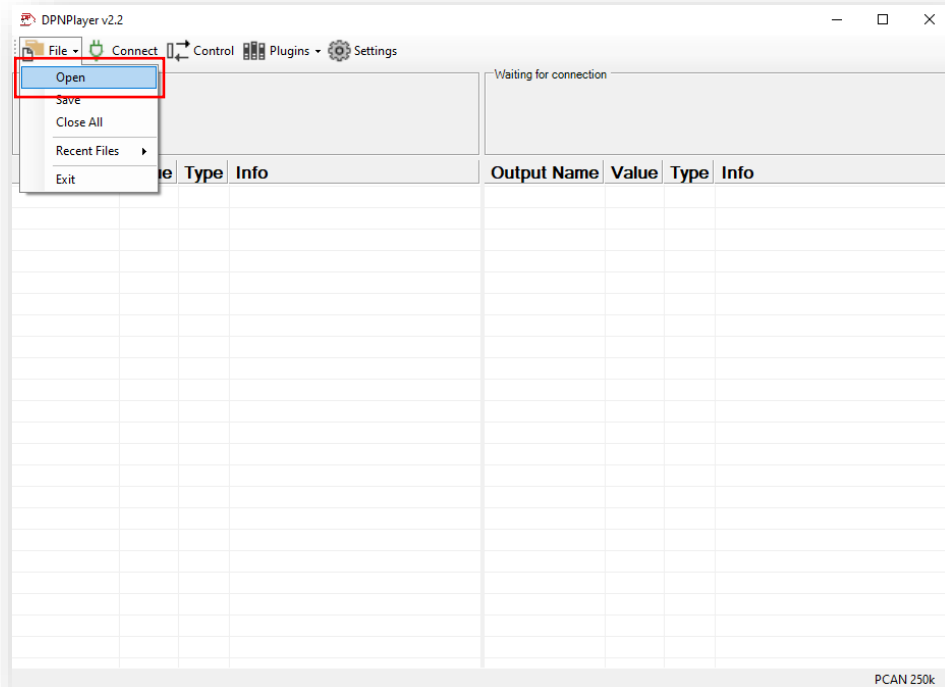
Rev	DCN	Date	Description
A	-	22 June 23	First Draft for Quickstart Guide

Step 1: Prior to connecting via your PC, the module should be connected like so. Voltage from your power supply is recommended to be set at 14.5VDC.

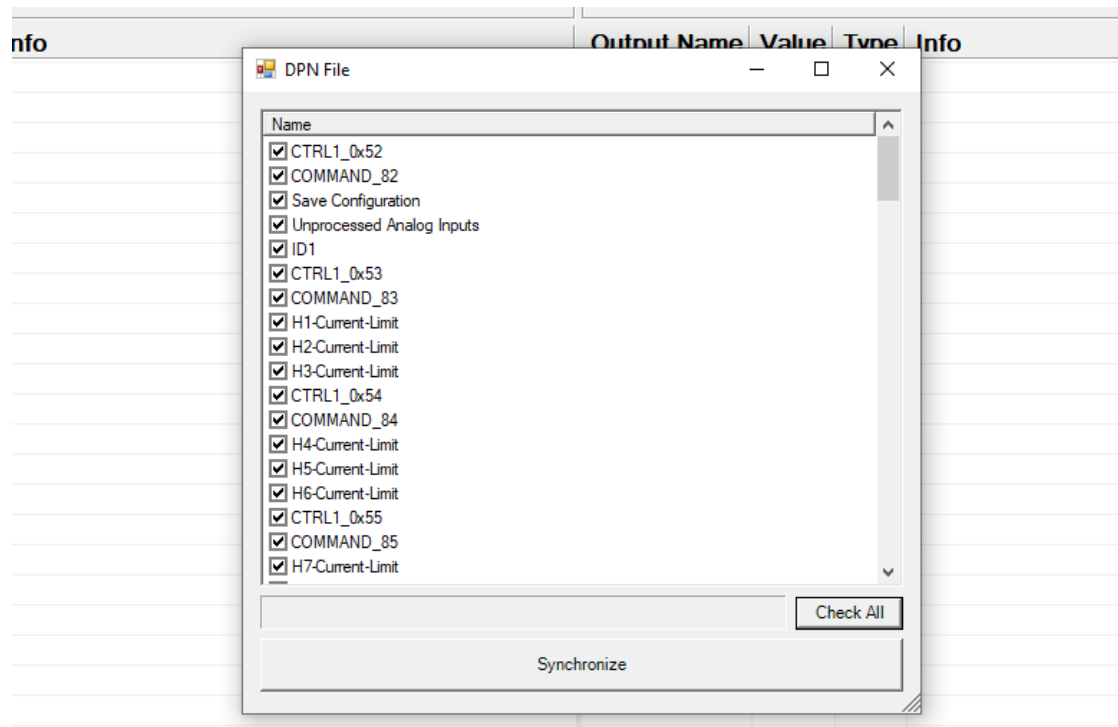


37033-4		37033-8	
J1 		J1 	
Connector	Function	Connector	Function
J1-1	Node Power	J1-1	CAN High
J1-2	CAN High	J1-2	NC
J1-3	NC	J1-3	Node Power
J1-4	CAN Low	J1-4	NC
		J1-5	Shield
		J1-6	CAN Low

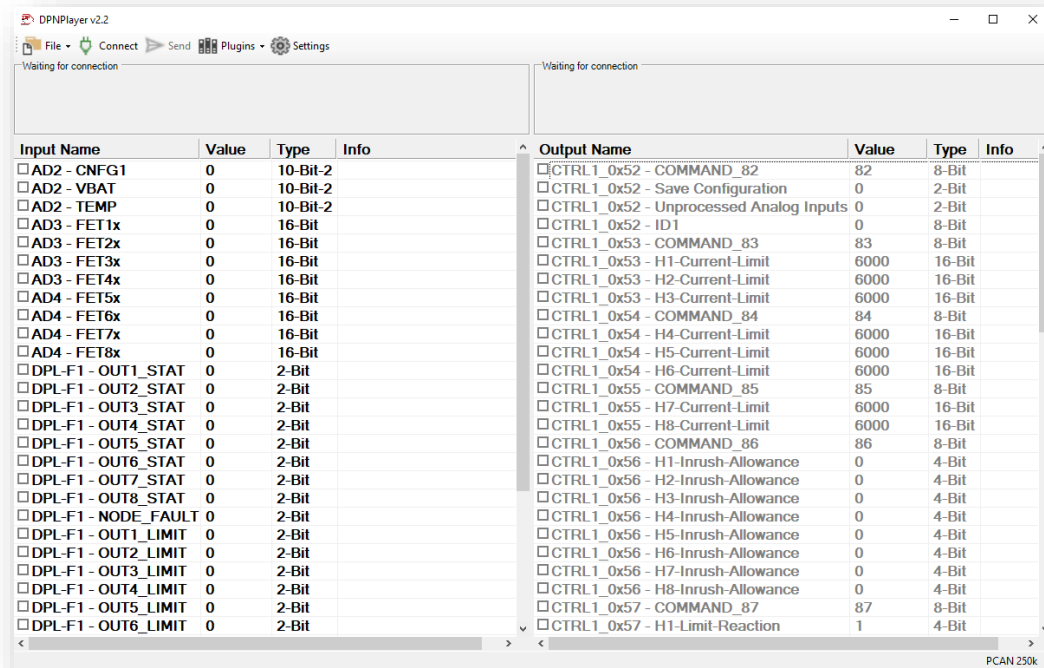
Step 2: Open DPNPlayer and click File > Open and select the “35012-2H-CNFG.dpn” file.



Step 3: Once the file is opened, this window will pop up. Click ‘Check All’ and then ‘Synchronize’.



Step 3: Once the correct DPN file has been opened, this is how the window should look.

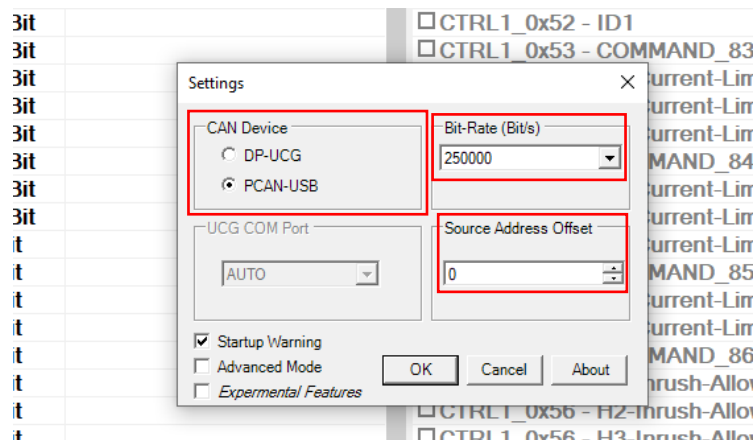


Step 4: Click on Setting and select the CAN device you are connected you are using to connect to the module. If you are using a Data Panel UCG, select **DP-UCG**. If you are using a Peak Tool, select **PCAN-USB**.

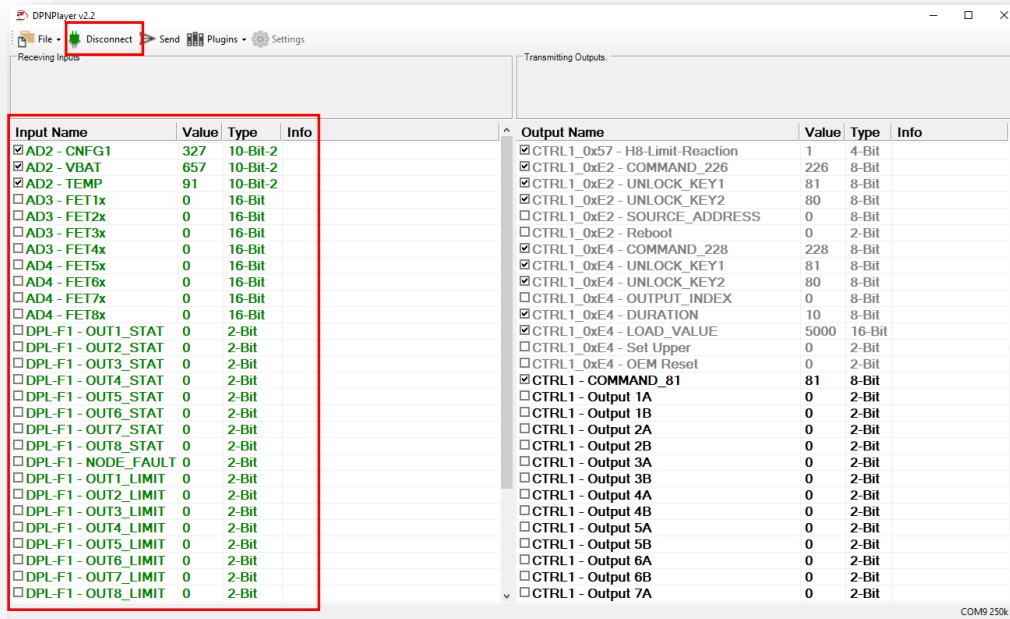
You can also select the **BAUD rate** you are using and the **Source Address Offset** for your connected device.

Click "OK" when finished.

In this example, we are using a Peak tool to connect. Our module is set at a BAUD rate of 250k and at a Source Address Offset of 0.

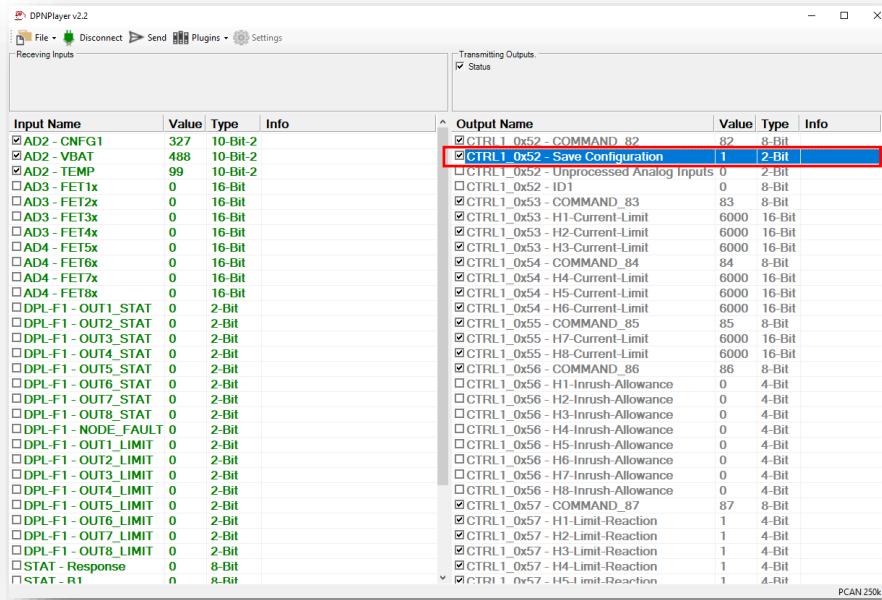


Step 5: Once the module is hooked up, click 'Connect' on DPNPlayer tool bar, and the left column should turn green, as seen in the image below.



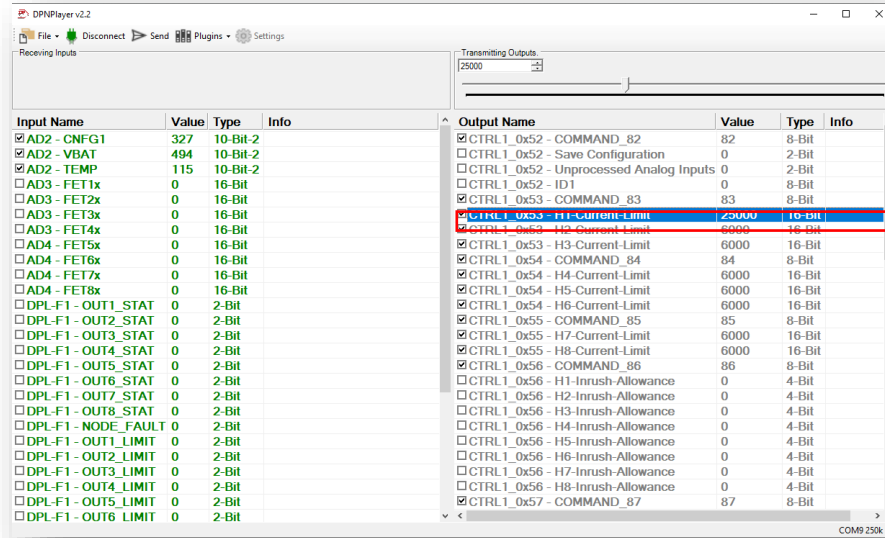
NOTE: ANY OUTPUT VALUES IN GRAY TAKE EFFECT ONLY WHEN 'SEND' IS CLICKED.

Step 6: To have configuration settings saved after a power cycle, ensure 'Save Configuration' is checked.



Step 7: To monitor individual output currents and have a configurable response when a current limit has been exceeded, you can set the User Current Limit using 'Hx-Current-Limit'. (Note: 1000 = 1 Amp)

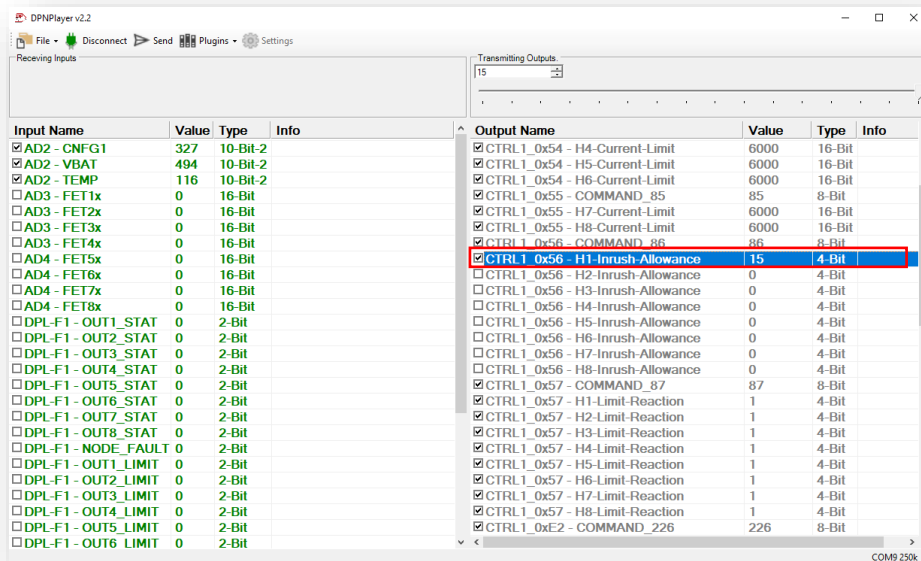
In this example, the configurable response will be triggered when HB1 exceeds 25 Amps.



NOTE: IF NOTHING IS SET, MODULE WILL USE HARDWARE LIMIT (29 AMPS).

Step 8: To set a time limit for an inrush that exceeds the set current limit, you can adjust the Inrush Allowance using 'Hx-Inrush-Allowance'. (Note: Value is in 100ms Increments)

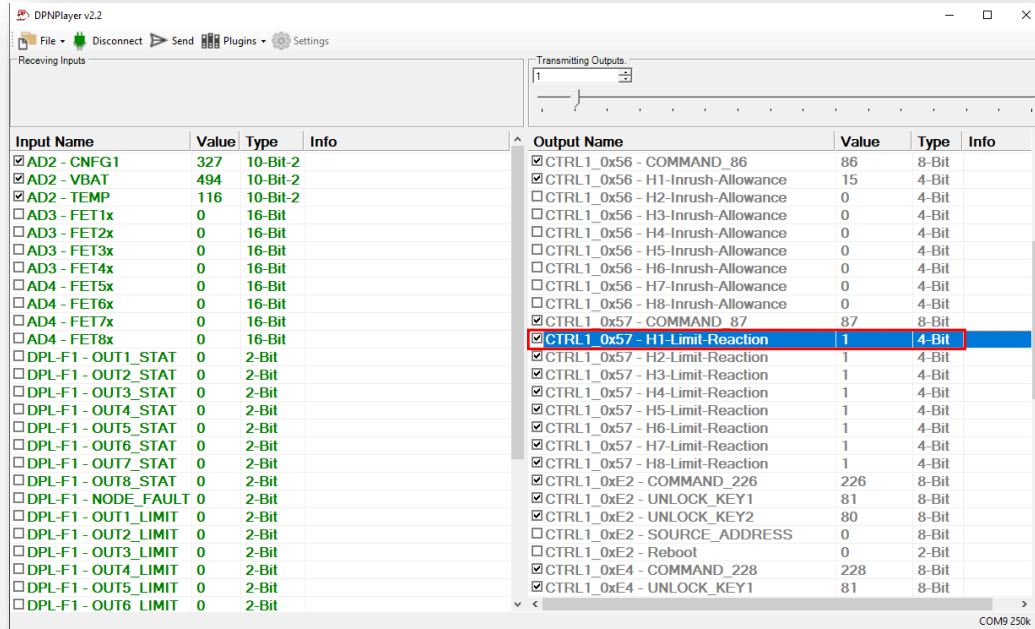
In this example, we set it for 1.5 seconds before the limit reaction is triggered.



NOTE: THE MAXIMUM TIME INRUSH ALLOWANCE THAT CAN BE SET IS 1.5 SEC.

Step 9: To configure the module’s response when exceeding the set current limit and inrush time allowance, adjust the value for ‘**HX-Limit-Reaction**’. (0-2)

In this example, the Limit reaction is set to ‘Output Stall Current’. (Refer to next page.)



ID	Current Limit Response Description
0	Disable User Current Limit
1	Output Stall
2	Output Over Current

When configured as ‘**Output Stall**’ (“1”):

- When the User Current Limit is exceeded, the output shall shut off within 3ms.
- The output indicator will flash, and the event will be indicated on the CANbus.
- The Output Stall will be cleared when the output is commanded off.
- Output Stall shall be the default behavior.

When configured as ‘**Output Overcurrent**’ (“2”):

- When the User Current Limit is exceeded, the output shall shut off within 3ms.
- The output indicator will flash, and an output overcurrent code will be set, and the event will be indicated on the CANbus.
- A power cycle shall be required to reset over current faults and restore operation.

Step 10: To change the module’s source address, adjust the ‘**Source_Address**’ value.

In this example, the Source Address is set as 237 (0xED).

The screenshot shows the DPNPlayer v2.2 interface. The 'Receiving Inputs' table lists various inputs with their values and types. The 'Transmitting Outputs' table lists various outputs, with 'CTRL1_0xE2 - SOURCE_ADDRESS' highlighted in red, showing a value of 237 and a type of 8-Bit. The 'Send' button is visible in the top toolbar.

Input Name	Value	Type	Info
<input checked="" type="checkbox"/> AD2 - CNFG1	327	10-Bit-2	
<input checked="" type="checkbox"/> AD2 - VBAT	494	10-Bit-2	
<input checked="" type="checkbox"/> AD2 - TEMP	117	10-Bit-2	
<input type="checkbox"/> AD3 - FET1x	0	16-Bit	
<input type="checkbox"/> AD3 - FET2x	0	16-Bit	
<input type="checkbox"/> AD3 - FET3x	0	16-Bit	
<input type="checkbox"/> AD3 - FET4x	0	16-Bit	
<input type="checkbox"/> AD4 - FET5x	0	16-Bit	
<input type="checkbox"/> AD4 - FET6x	0	16-Bit	
<input type="checkbox"/> AD4 - FET7x	0	16-Bit	
<input type="checkbox"/> AD4 - FET8x	0	16-Bit	
<input type="checkbox"/> DPL-F1 - OUT1_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT2_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT3_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT4_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT5_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT6_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT7_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT8_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - NODE_FAULT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT1_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT2_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT3_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT4_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT5_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT6_LIMIT	0	2-Bit	

Output Name	Value	Type	Info
<input type="checkbox"/> CTRL1_0x56 - H6-Inrush-Allowance	0	4-Bit	
<input type="checkbox"/> CTRL1_0x56 - H7-Inrush-Allowance	0	4-Bit	
<input type="checkbox"/> CTRL1_0x56 - H8-Inrush-Allowance	0	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - COMMAND_87	87	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H1-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H2-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H3-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H4-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H5-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H6-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H7-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0x57 - H8-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - COMMAND_226	226	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - UNLOCK_KEY1	81	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - UNLOCK_KEY2	80	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - SOURCE_ADDRESS	237	8-Bit	
<input type="checkbox"/> CTRL1_0xE2 - Reboot	0	2-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - COMMAND_228	228	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - UNLOCK_KEY1	81	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - UNLOCK_KEY2	80	8-Bit	
<input type="checkbox"/> CTRL1_0xE4 - OUTPUT_INDEX	0	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - DURATION	10	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - LOAD_VALUE	5000	16-Bit	
<input type="checkbox"/> CTRL1_0xE4 - Set Upper	0	2-Bit	
<input type="checkbox"/> CTRL1_0xE4 - OEM Reset	0	2-Bit	



NOTE: THE RANGE FOR SOURCE ADDRESSES ARE 128-247 (0x80-0xF7). DEFAULT IS 237 (0xED). KEEP UNCHECKED TO LEAVE SOURCE ADDRESS AS DEFAULT.

Step 11: For all above changes to take into effect, click 'Send'.

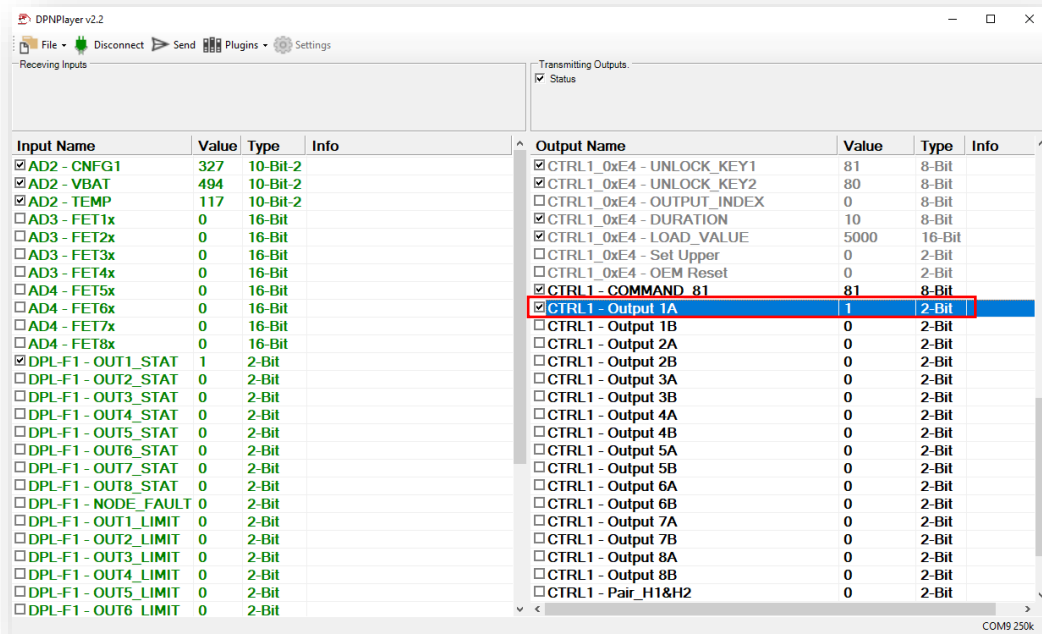
The screenshot shows the DPNPlayer v2.2 interface with the 'Send' button highlighted in a red box. The 'Receiving Inputs' table lists various inputs with their values and types. The 'Transmitting Outputs' table lists various outputs, with 'CTRL1 - COMMAND_81' highlighted in blue, showing a value of 81 and a type of 8-Bit. The 'Send' button is visible in the top toolbar.

Input Name	Value	Type	Info
<input checked="" type="checkbox"/> AD2 - CNFG1	327	10-Bit-2	
<input checked="" type="checkbox"/> AD2 - VBAT	657	10-Bit-2	
<input checked="" type="checkbox"/> AD2 - TEMP	91	10-Bit-2	
<input type="checkbox"/> AD3 - FET1x	0	16-Bit	
<input type="checkbox"/> AD3 - FET2x	0	16-Bit	
<input type="checkbox"/> AD3 - FET3x	0	16-Bit	
<input type="checkbox"/> AD3 - FET4x	0	16-Bit	
<input type="checkbox"/> AD4 - FET5x	0	16-Bit	
<input type="checkbox"/> AD4 - FET6x	0	16-Bit	
<input type="checkbox"/> AD4 - FET7x	0	16-Bit	
<input type="checkbox"/> AD4 - FET8x	0	16-Bit	
<input type="checkbox"/> DPL-F1 - OUT1_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT2_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT3_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT4_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT5_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT6_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT7_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT8_STAT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - NODE_FAULT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT1_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT2_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT3_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT4_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT5_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT6_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT7_LIMIT	0	2-Bit	
<input type="checkbox"/> DPL-F1 - OUT8_LIMIT	0	2-Bit	

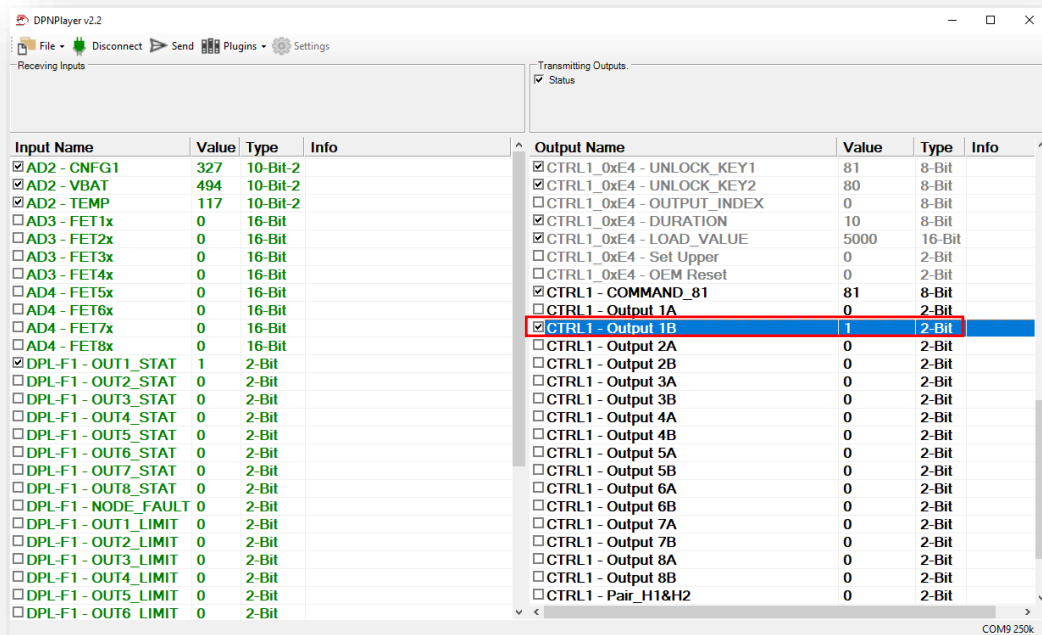
Output Name	Value	Type	Info
<input checked="" type="checkbox"/> CTRL1_0x57 - H8-Limit-Reaction	1	4-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - COMMAND_226	226	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - UNLOCK_KEY1	81	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE2 - UNLOCK_KEY2	80	8-Bit	
<input type="checkbox"/> CTRL1_0xE2 - SOURCE_ADDRESS	0	8-Bit	
<input type="checkbox"/> CTRL1_0xE2 - Reboot	0	2-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - COMMAND_228	228	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - UNLOCK_KEY1	81	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - UNLOCK_KEY2	80	8-Bit	
<input type="checkbox"/> CTRL1_0xE4 - OUTPUT_INDEX	0	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - DURATION	10	8-Bit	
<input checked="" type="checkbox"/> CTRL1_0xE4 - LOAD_VALUE	5000	16-Bit	
<input type="checkbox"/> CTRL1_0xE4 - Set Upper	0	2-Bit	
<input type="checkbox"/> CTRL1_0xE4 - OEM Reset	0	2-Bit	
<input checked="" type="checkbox"/> CTRL1 - COMMAND_81	81	8-Bit	
<input type="checkbox"/> CTRL1 - Output 1A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 1B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 2A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 2B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 3A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 3B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 4A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 4B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 5A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 5B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 6A	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 6B	0	2-Bit	
<input type="checkbox"/> CTRL1 - Output 7A	0	2-Bit	

Step 11: To turn on individual H-Bridge outputs, check the box for 'CTRL1 – Output XY'. (Note: A is channel is forward, B channel is reverse.)

In this example, the forward direction output for H-Bridge 1 is turned on. (A Channel)



In this example, the reverse direction output for H-Bridge 1 is turned on. (B Channel)



For more information, scan the below QR codes for Datasheets:

37033-4



37033-8

