

## Universal Douglas Driver Application Note: DALI Tuning Commands



**PURPOSE:**

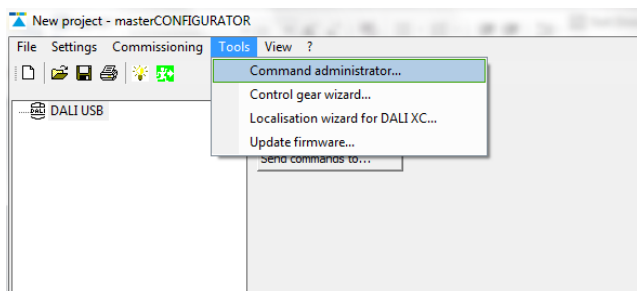
Universal Douglas ULT DALI Drivers have the ability for scaling output current by a constant factor. To "tune" the output, a value between 40 and 100 (representing 40% and 100% of rated output respectively) must be written to memory location #3 of DALI memory bank #2. This scale factor is only adjustable in increments of 1%, so for example, setting a scale factor of 47% requires writing the value "47" to location #3 of memory bank #2. The procedure to do this is shown below:

Equipment Required: DALI Controller (memory bank manipulation capable) and DALI power supply.

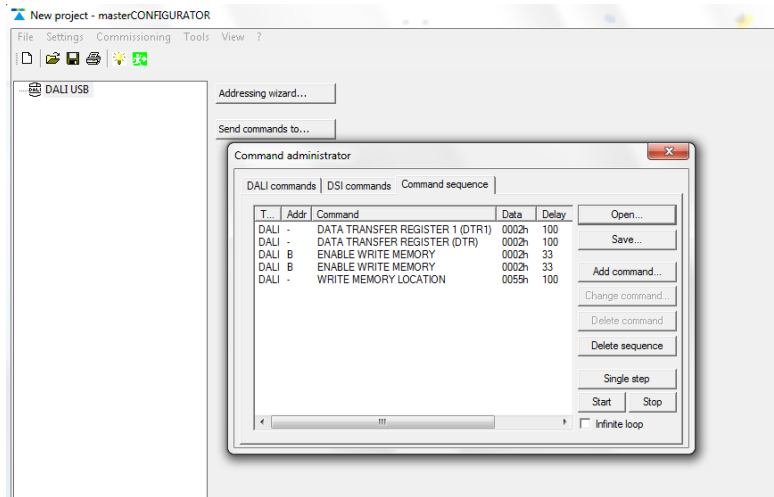
These procedures were tested using the Tridonic DALI USB "PC interface module for DALI Systems" and the DALI PS1 "DALI power supply for separate installation"



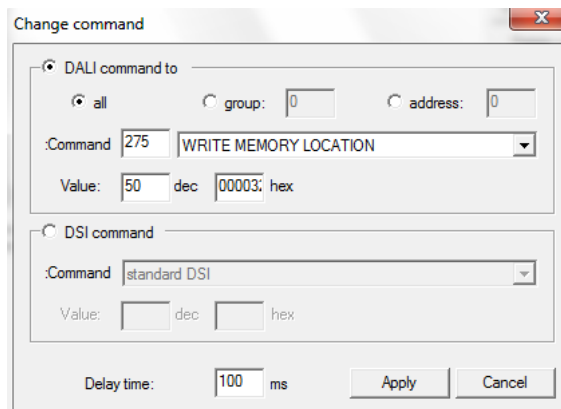
- 1) Connect the DALI LED driver to the DALI controller and the DALI power supply
- 2) Connect the DALI LED driver to line voltage
- 3) Open the controller software



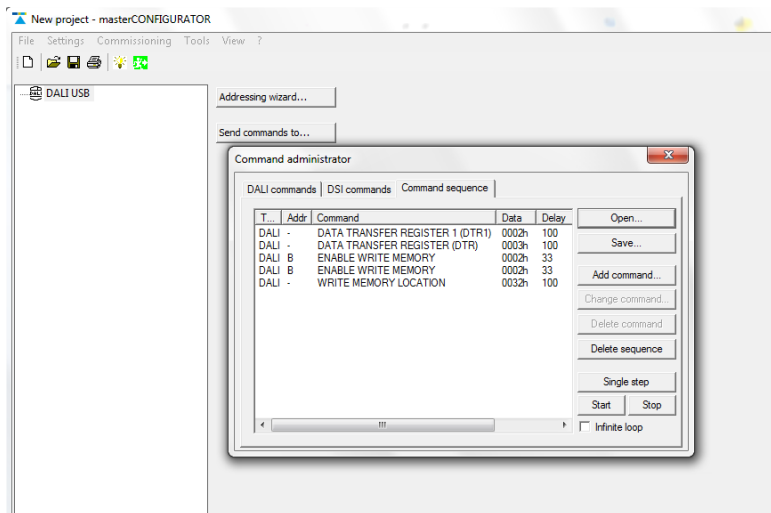
- a) Select the address of the device you would like to tune (i.e. node 5)
- b) Unlock Memory Bank #2



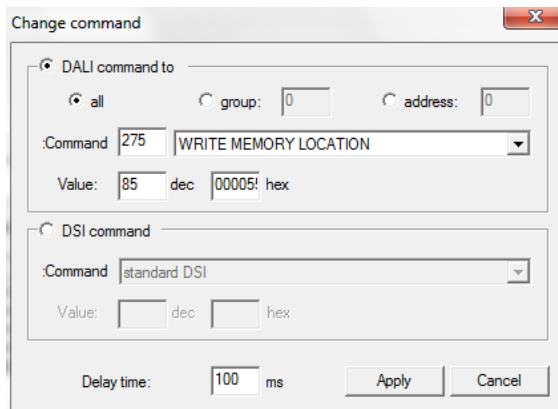
- i) Send a “DATA TRANSFER REGISTER 1” command with value 2
- ii) Send a “DATA TRANSFER REGISTER ” command with value 2
- iii) Send a “ENABLE WRITE MEMORY” command sequence (must be sent 2 times – second command must be sent within 100 mSec of the first command)
- iv) Send a “WRITE MEMORY LOCATION” command with the value 0x55 (85 decimal)



c) Write the desired tuning value to the correct memory location



- i) Send a “DATA TRANSFER REGISTER 1” command with value 2
- ii) Send a “DATA TRANSFER REGISTER ” command with value 3
- iii) Send a “ENABLE WRITE MEMORY” command sequence (must be sent 2 times – second command must be sent within 100 mSec of the first command)
- iv) Send a “WRITE MEMORY LOCATION” command with the tune value (i.e. 70% = 70)



NOTE: The tuning value has acceptable values ranging between 40% and 100% in increments of 1%. Although the driver only maintains tolerance at a tune level down to 40% of rated output, the DALI drivers can be tuned down to 10%. Writing values outside of this range (10% - 100%) will cause the driver to clamp the received value to the acceptable ranges (i.e. trying 5% will write 10% to the memory bank, and 106% will write 100% to the memory bank).