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FluxTool 4.5

How-to Guide

FluxTool

AcuityBrands.

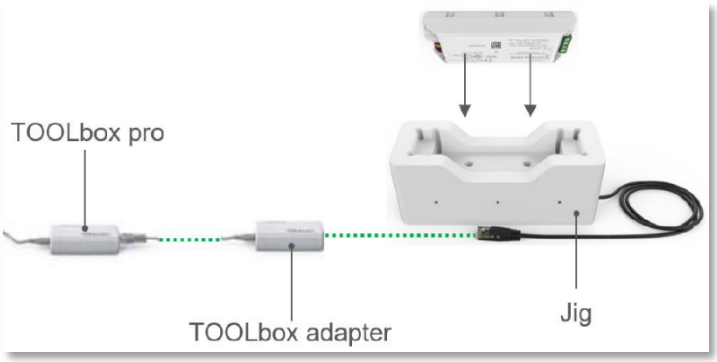
Table of Contents

1. Getting started

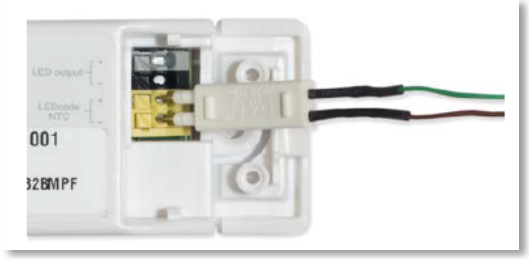
How to connect a TOOLbox pro and TOOLbox adapter

1) **Connect the TOOLbox pro to the PC**
Connect the TOOLbox to the PC using the supplied USB cable.

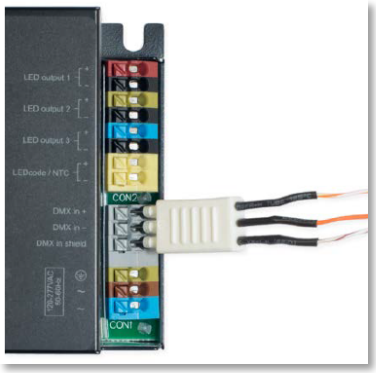
2) **Connect the TOOLbox adapter**
Connect the optional TOOLbox adapter to the TOOLbox using the supplied RJ45 to RJ45 cable. This adapter enables programming drivers without AC power and is required in order to use configuration jigs.



3) **Connect to LEDcode or DMX on the driver**
Depending on driver type, connect either LEDcode or DMX from the pigtail to the driver.



LEDcode connection

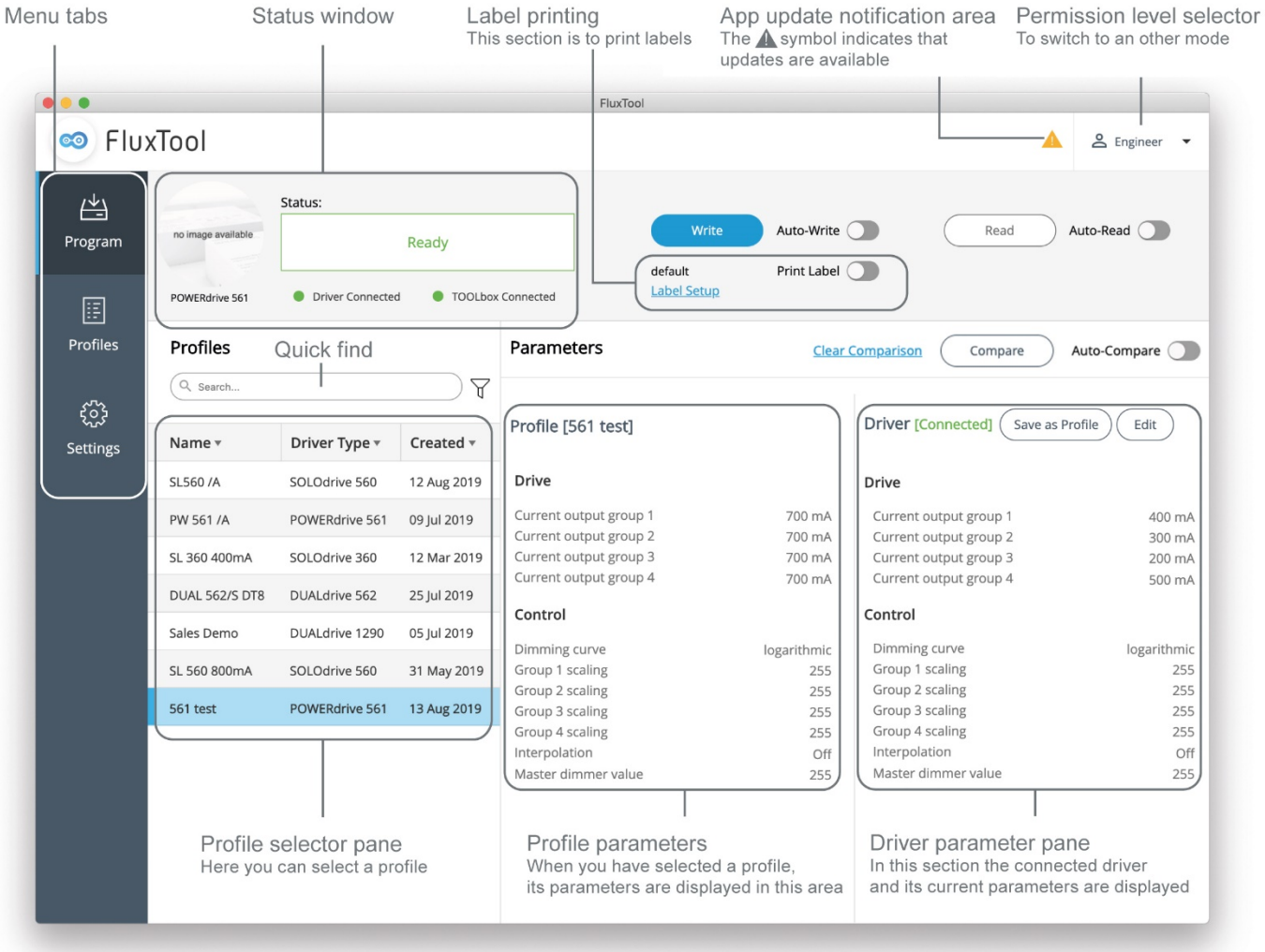


DMX connection

2. FluxTool layout

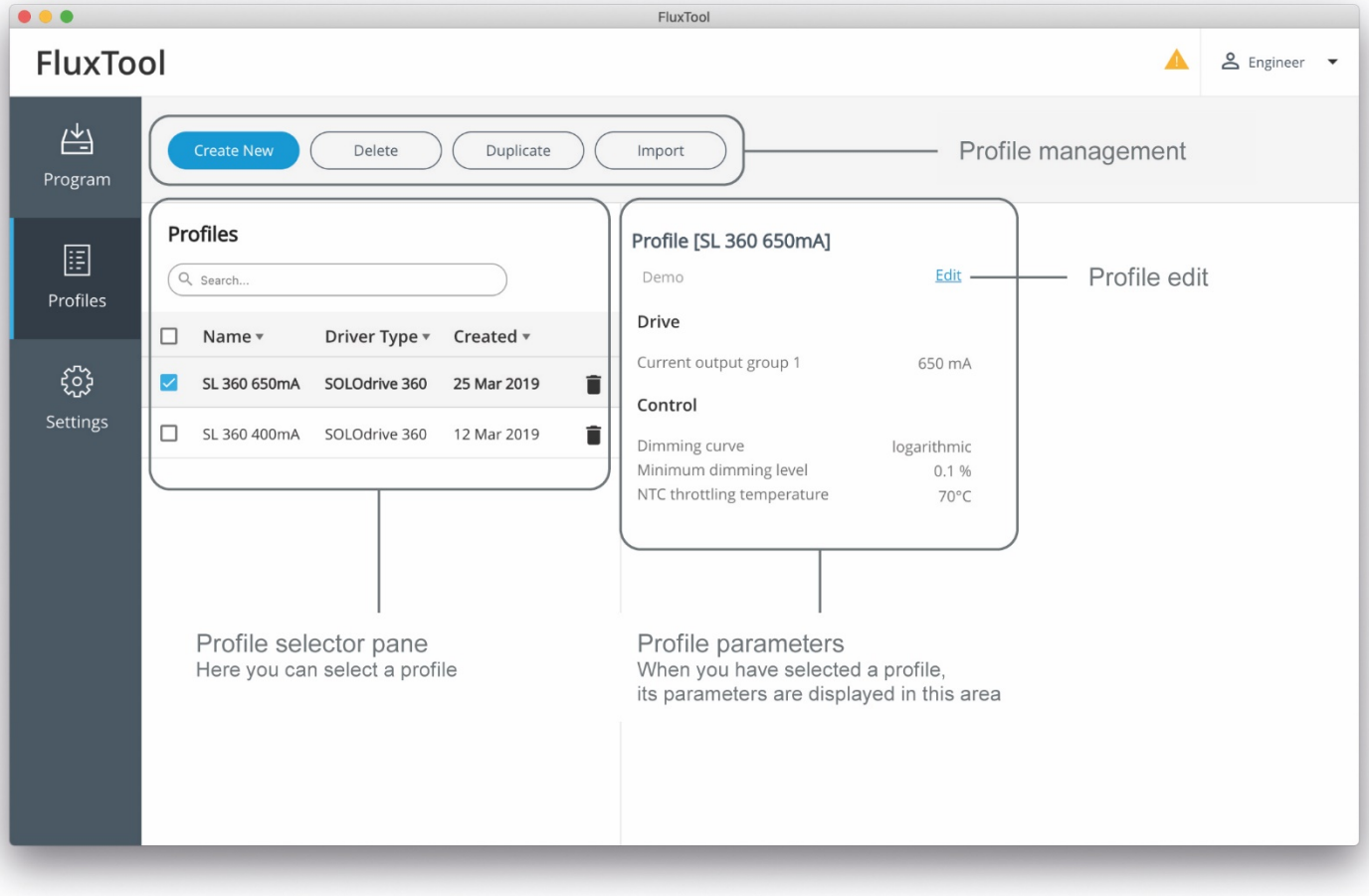
2.1. Program tab

This is how the **Program tab** looks:



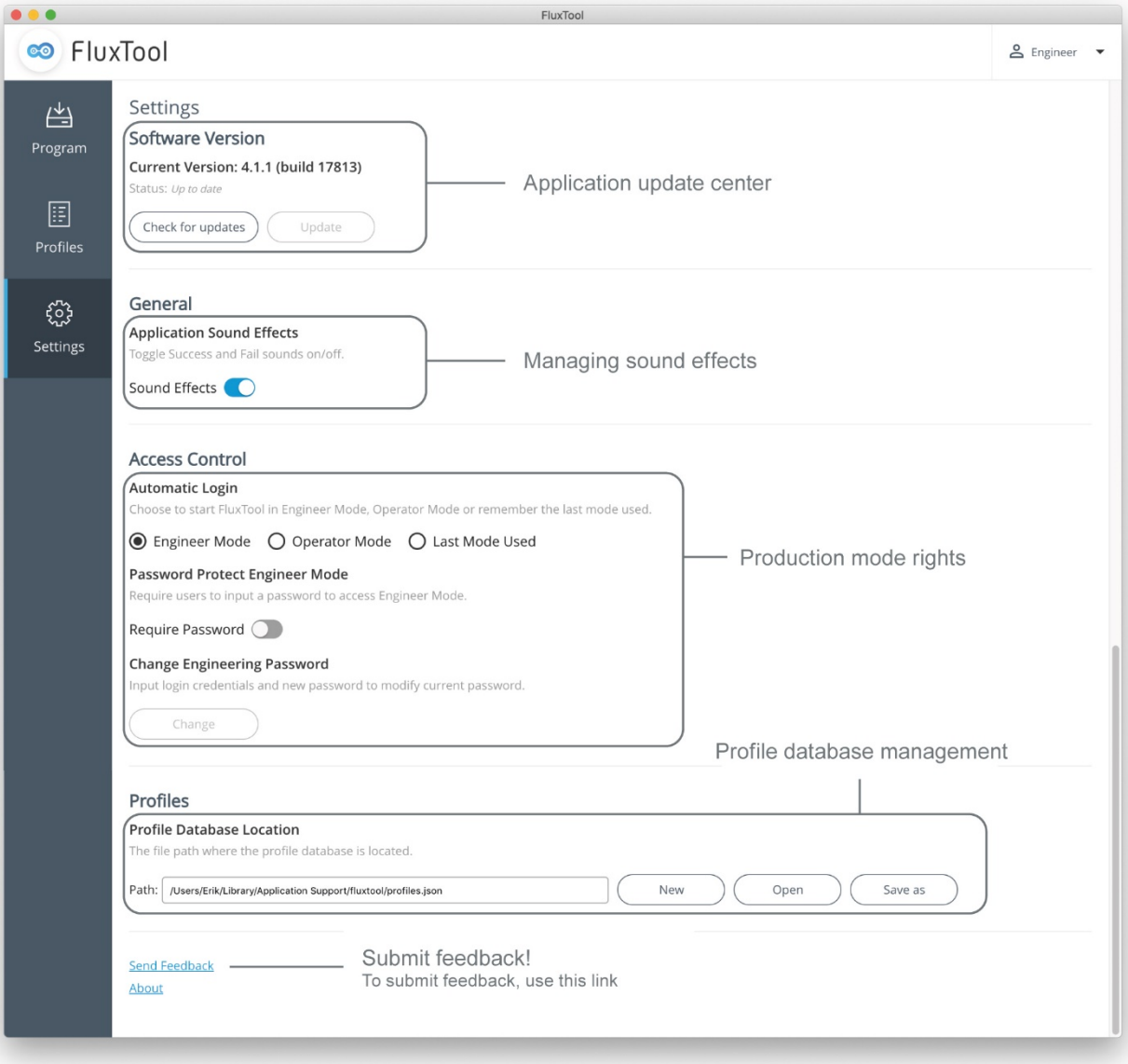
2.2. Profiles tab

This is how the **Profiles tab** looks:



2.3. Settings tab

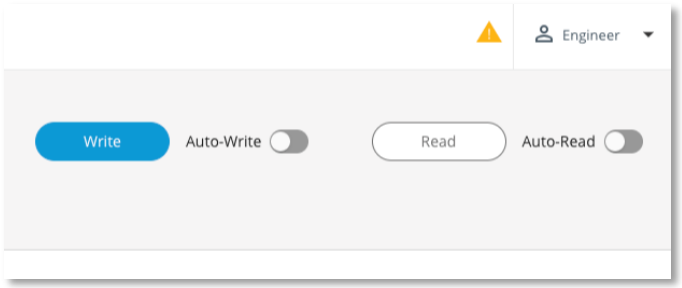
This is how the **Settings tab** looks:



3. Program tab

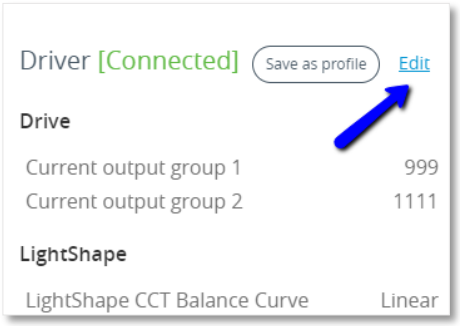
3.1. How to program a driver (without a profile)

1) **Read a driver's parameters**
With a driver connected, click **Read** on the Program tab.



2) **Enter profile-less programming mode**
After reading the driver's parameters, click **Edit.**

Please note: You must be logged into *Engineer* mode to directly edit the driver parameters.

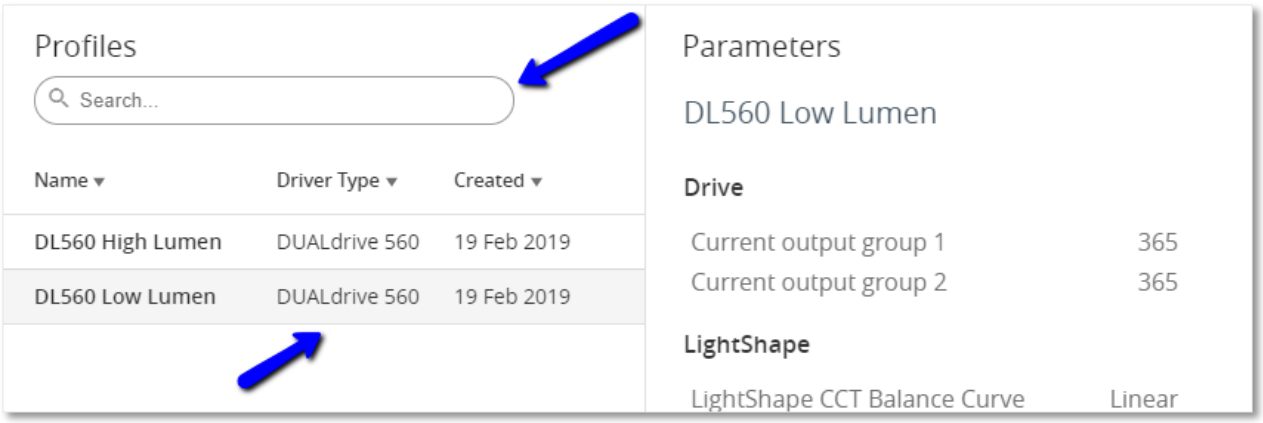


3) **Edit parameters and write to the driver**
Change the desired parameters and click **Write** when finished to program the driver.

3.2. How to write a profile to a driver

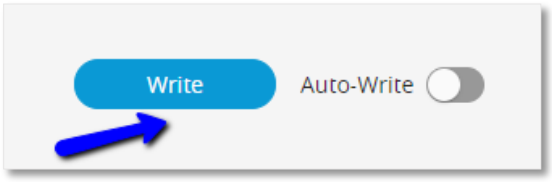
1) Select the desired profile

On the **Program** tab, use the Search bar or sort the list of profiles to find the correct one.
Click the profile to load its details.

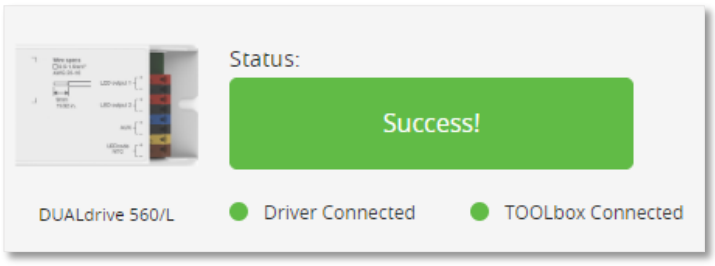


2) Write the profile to the driver

With a driver connected, click **Write** (also press spacebar) to program the driver with the selected profile.
Alternatively, you can enable Auto-Write so that the driver is automatically programmed once detected.



You'll see a brief notification once programming is complete.

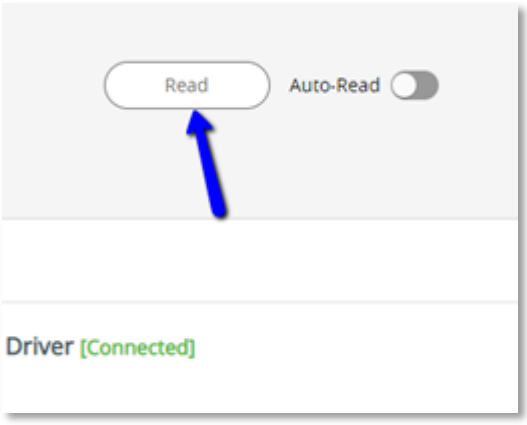


3.3. How to clone a driver (Save as Profile)

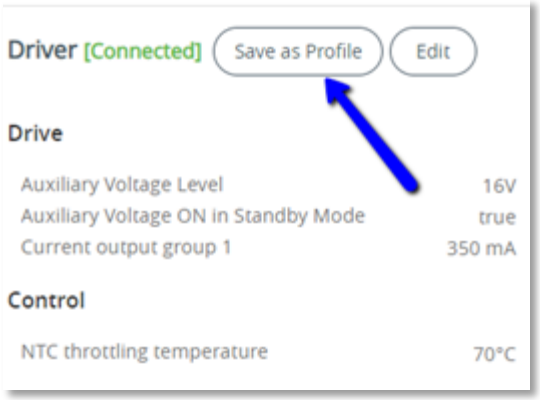
Save as Profile is intended to allow a user to easily copy the parameter settings from one driver to another. For instance, if you are servicing a luminaire and want to replace the driver but do not know how it was previously programmed, you can connect the driver, save its settings as a profile, and program a replacement driver with this profile.

It's important to note that only those parameters that are available through a FluxTool profile are saved to the newly created profile. Also, if you create a profile based on a LightShape enabled driver, you cannot change the LightShape parameters of the newly created profile by design. The newly created profile contains a copy of the LightShape curves, which means the curve data will be saved and can be programmed into another driver. To get started, follow the steps below.

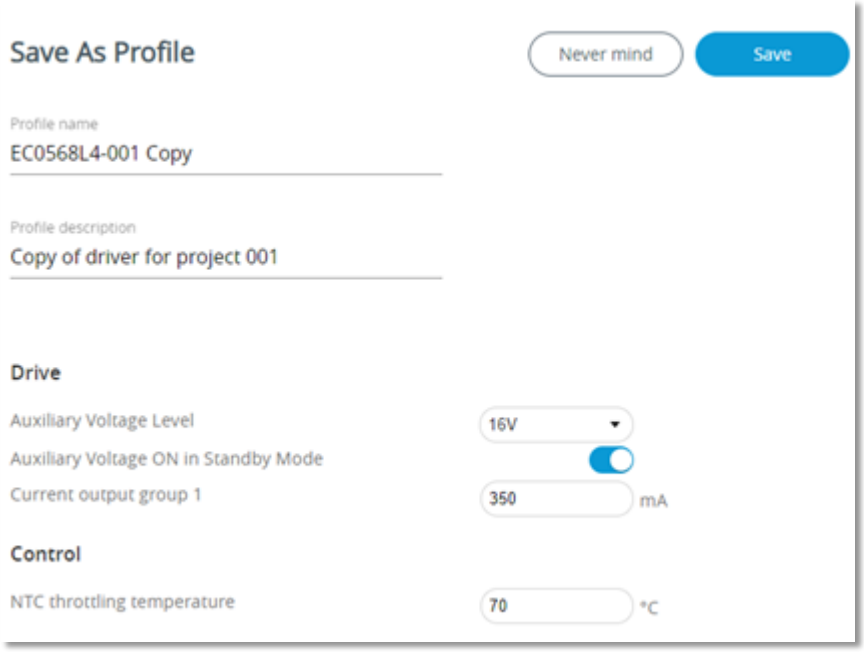
1) **Connect a driver and read its parameters**
With a driver connected, click **Read** to enable the **Save as Profile** button.



2) **Click the Save as Profile button:**



3) **Give the new profile a name and click Save to save the profile in the database:**



Once the profile is saved, return to the Program screen and select it to program another driver with the settings from the first driver.

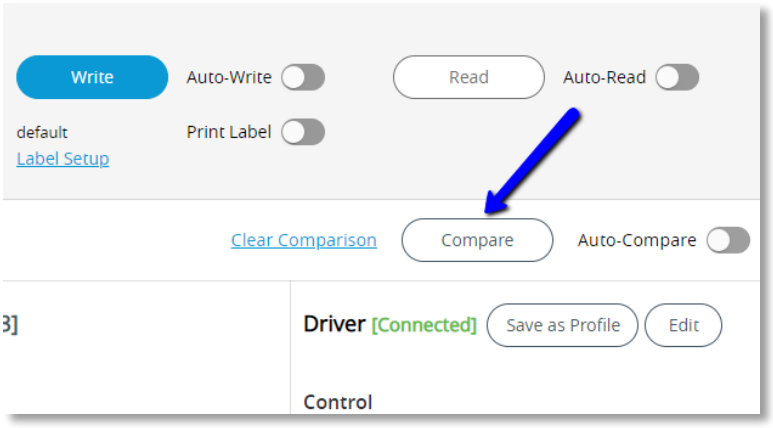
3.4. How to verify driver parameters (Compare)

Compare allows a user to check if the parameters of a connected driver match those of a selected profile. Compare is a useful tool for auditing previously programmed drivers to verify they were programmed correctly. Turn on Auto-Compare to make it even quicker to perform this audit. Compare is also useful to check if a driver was re-programmed by a 3rd party after leaving the factory.

In order to use Compare, a driver must be connected and a compatible profile must be selected.

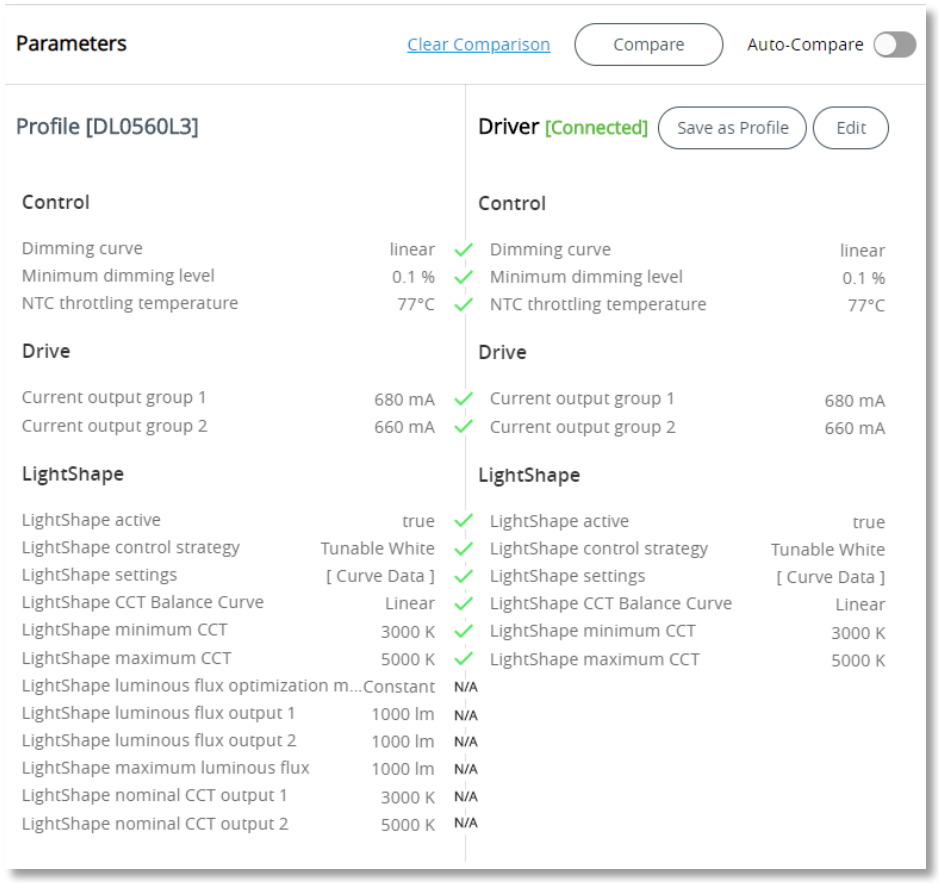
1) Connect a driver

Connect the driver to verify and click **Compare** to begin the verification process.

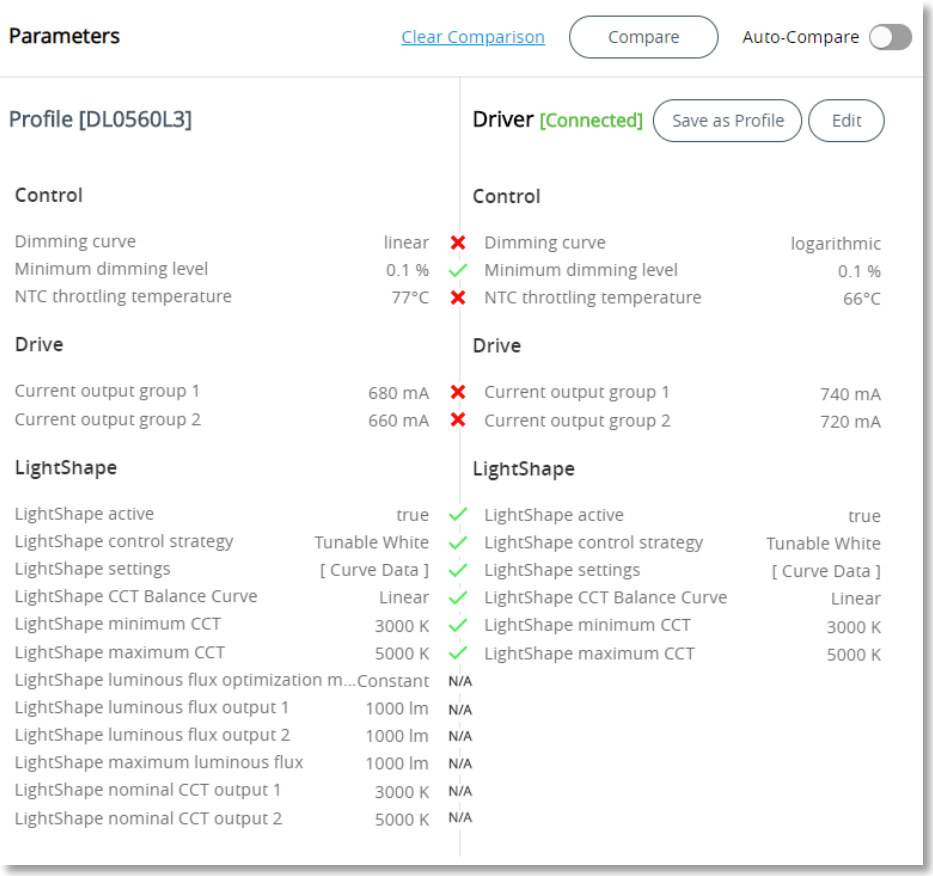


2) Observe the results

As the verification process begins, you'll be given immediate feedback on any parameter mismatches. Once complete, a success/fail message will be displayed and, if enabled, a tone with play.

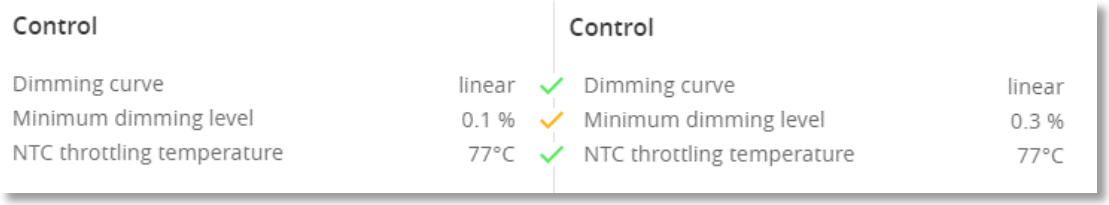


Successful comparison, driver matches profile!

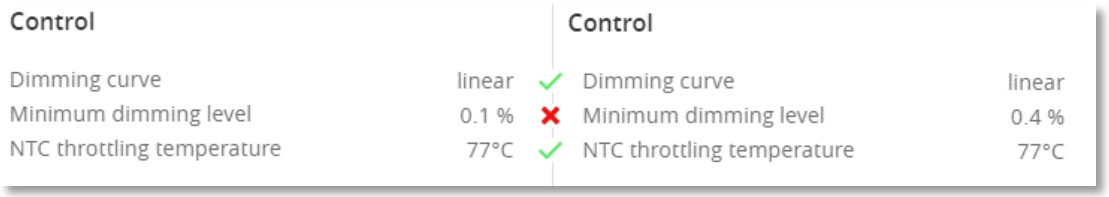


Failed comparison, some driver parameters do not match profile!

Note: there is a +0.2% tolerance when comparing the minimum dimming level parameter. This means:



Pass!



Fail!

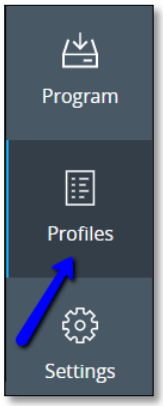
4. Profile tab

4.1. How to create a profile

1) Navigate to the Profiles tab

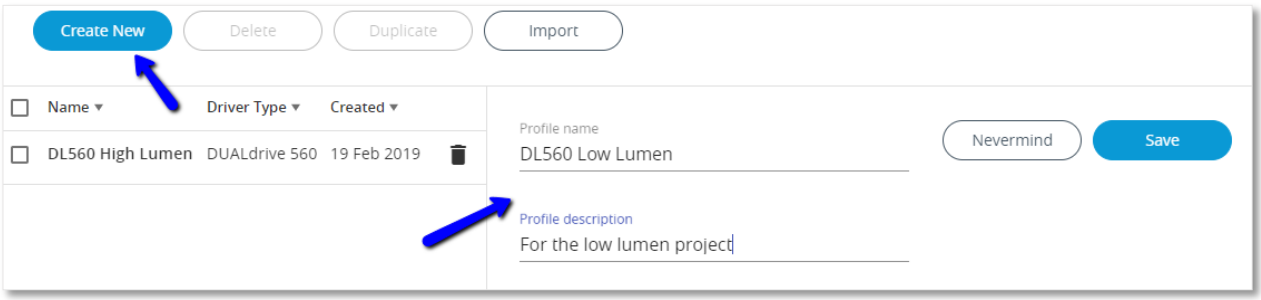
Click **Profiles** from the left menu.

Please note: You must be logged into *Engineer* mode to access Profiles.



2) Give the profile a name and description

With a driver connected, click **Create New** and give the profile a name and description.



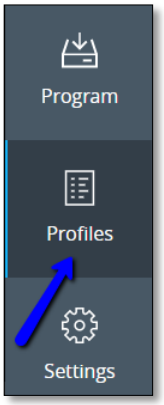
3) Save and edit the new profile

Click **Save** and edit the newly created profile as needed. Click **Save** again to confirm your changes.

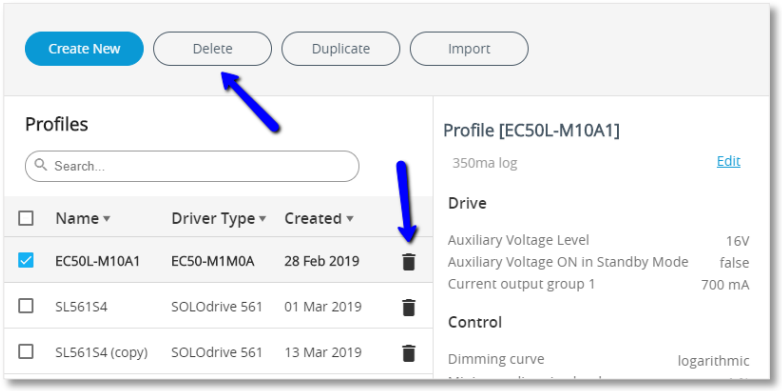
Note: Curve data for LightShape and DT8 products will be generated with the latest FluxTool algorithms

4.2 How to delete a profile

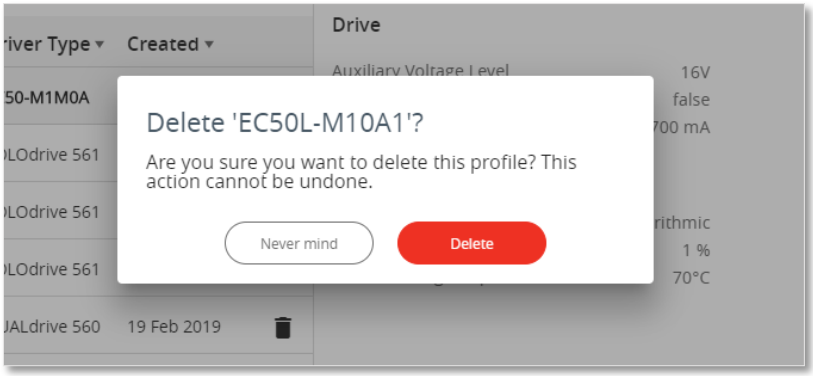
1) **Navigate to the Profiles tab**
Click **Profiles** from the left menu.



2) **Select one or many profiles to delete**
Use the Search bar or sort the list of profiles to find the profile(s) to delete.
Click the trash can icon to next to the profile delete it.
Alternatively, select many profiles using the check boxes and click **Delete**.



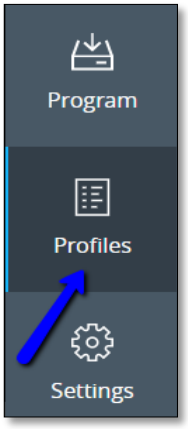
3) **Confirm your choice**
Click **Delete** again to confirm and delete the selected profile(s) or **Never mind** to abort.



4.3 How to duplicate a profile

1) **Navigate to the Profiles tab**
Click **Profiles** from the left menu.

Please note: You must be logged into *Engineer* mode to access Profiles.



2) **Select a profile to duplicate**
Select a profile and click **Duplicate**.

Please note: Duplicating is only allowed with a single profile selected.

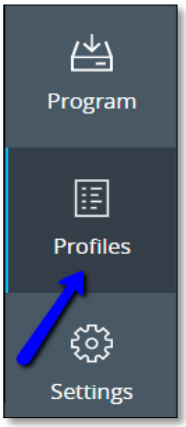
3) **Rename as needed**
The new profile will have a suggested name.
Edit and change the parameters as need.
Click **Save** when done.

Note: Profiles for DT8 or LightShape products will have their curve data identically copied. If you want to regenerate the curve data using latest available algorithms in FluxTool, toggle one of the LightShape parameters before saving.

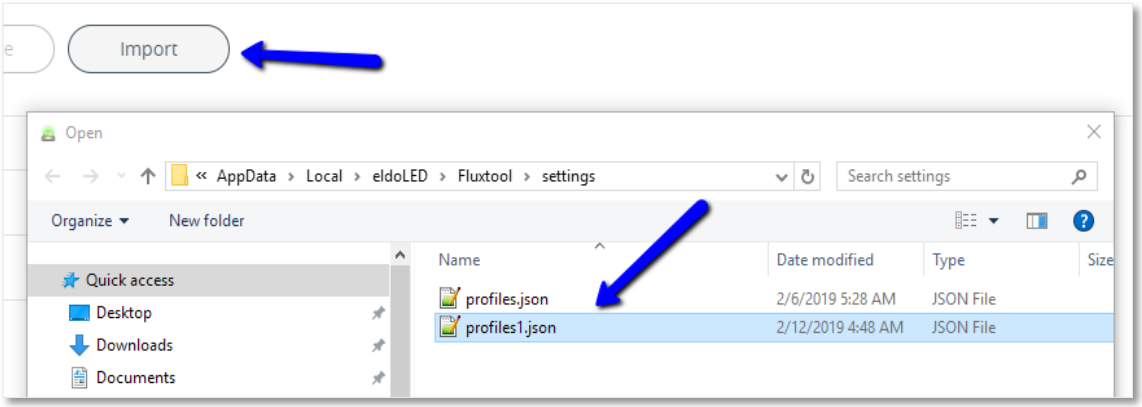
4.4 How to import previously created profiles

1) **Navigate to the Profiles tab**
Click **Profiles** from the left menu.

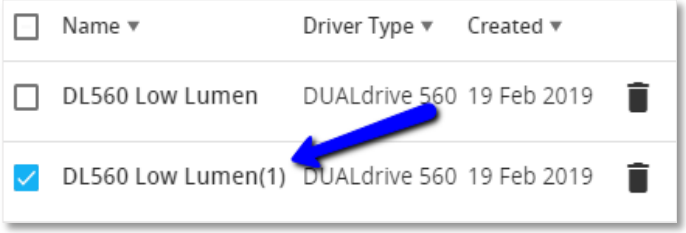
Please note: You must be logged into *Engineer* mode to access Profiles.



2) **Locate the database to import.**
Click **Import** and use the file browser popup to select the desired database file.



3) **Import and rename as needed**
Once you've located the desired database, click **Open** at the bottom of the file browser.
If any profiles from the imported database share the same name as an existing profile, they will automatically be renamed.
Select the profile and click **Edit** to give the profile a new name.



Please note: These profiles will be added (appended) to your current database.

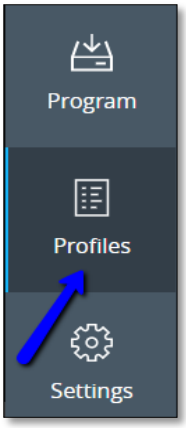
4.5 How to back-up a profile database

Profile databases can be backed up to preserve driver profiles containing i.e. Lightshape curve data, generated with a previous FluxTool version. This can protect those profiles from an unintended regeneration of the curve data when a LightShape parameter was accidentally changed or toggled and saved.

1) Navigate to the Profiles tab

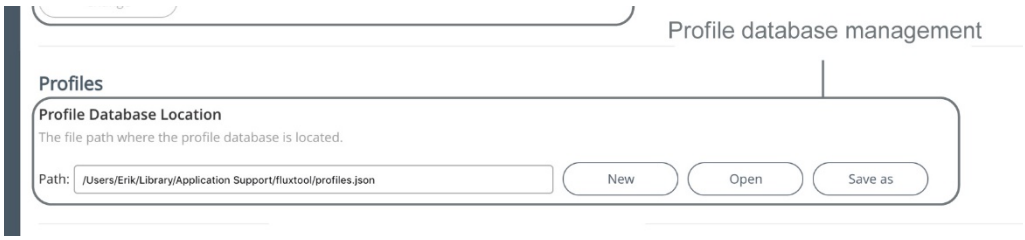
Click **Profiles** from the left menu.

Please note: You must be logged into *Engineer* mode to access Profiles.



2) Save your profile database

The path where your profile database is located can be found in the profile database management section. Click the **save as** button to save a new copy of your database. Choose a location and file name to save the new database. This new database is directly used by FluxTool as your database. You can open the previous database file by clicking the **open** button.

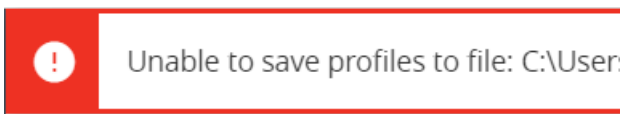


3) Protect your database

Use the path information in FluxTool to find your profile database file located on your PC using a file explorer application. Select the database file you intend to protect (i.e. the “previous database” in step 2). Make sure this database is not currently opened by FluxTool or close the FluxTool program.

For Windows: right click on the database file and select **properties**. To protect this database from writing, check the box next to **read-only**.
For MAC: select file, action-> **Get Info**. In bottom half of the screen, section Sharing & Permissions select the **read-only** option.

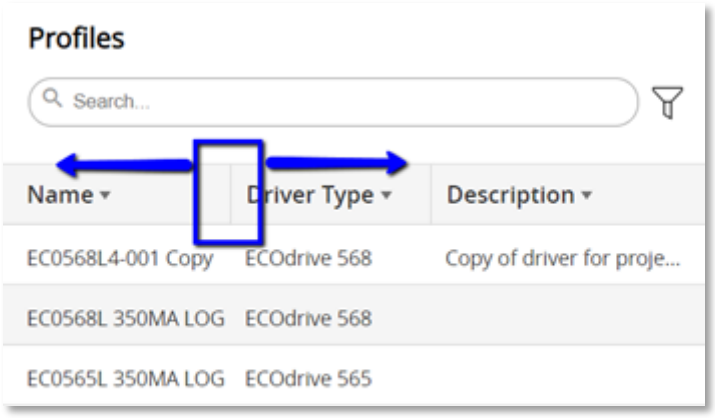
Restart the Fluxtool program. Navigate to settings to open the protected database. When a protected database is opened, Fluxtool will warn you cannot save new of changed profiles. Importing profiles from a protected database to an unprotected database is possible as described in section 4.4



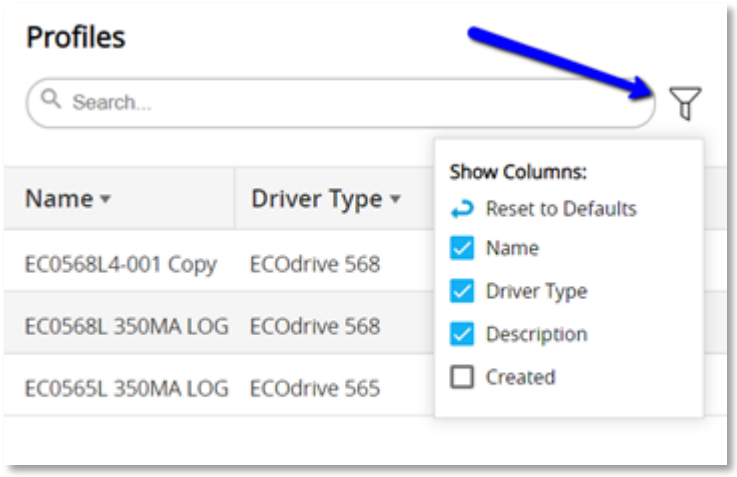
4.6 How to modify the profile list view

It is possible to customize the column size and which columns are shown for the profile list on both the Program tab and Profiles tab (independently). The layout will be maintained through application restarts. To do so, follow the process below.

1) **Resize the column width**
Hover over the divider between columns until the cursor changes. Click and drag left or right to resize.



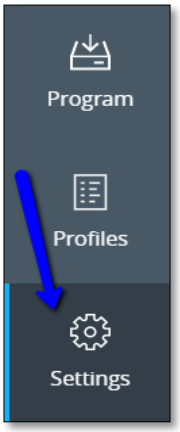
2) **Select which columns are visible**
Click the Filter icon next to the search bar to choose which columns are visible.



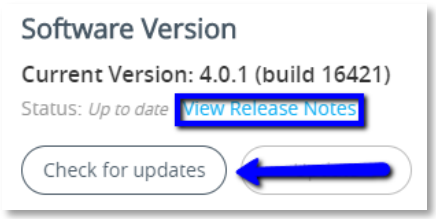
5. Settings Tab

5.1 How to check for and install updates

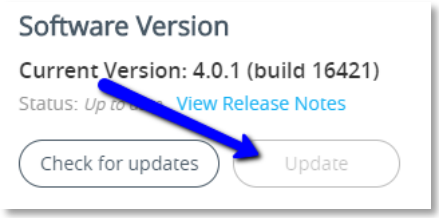
1) **Navigate to the Settings tab.**
   Click **Settings** from the left menu.



2) **Check for updates and view release notes**
   Click **Check for updates** to perform a manual check.
   If there's an update available, you'll be notified via the status field and an icon.
   You'll also be able to view release notes by clicking the appropriate link.



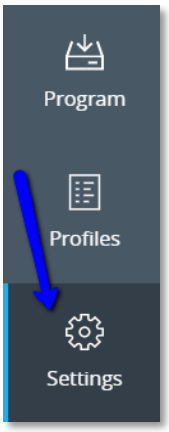
3) **Download and install the update**
   Click **Update** to download and install the update.
   FluxTool will automatically restart as part of the update process.



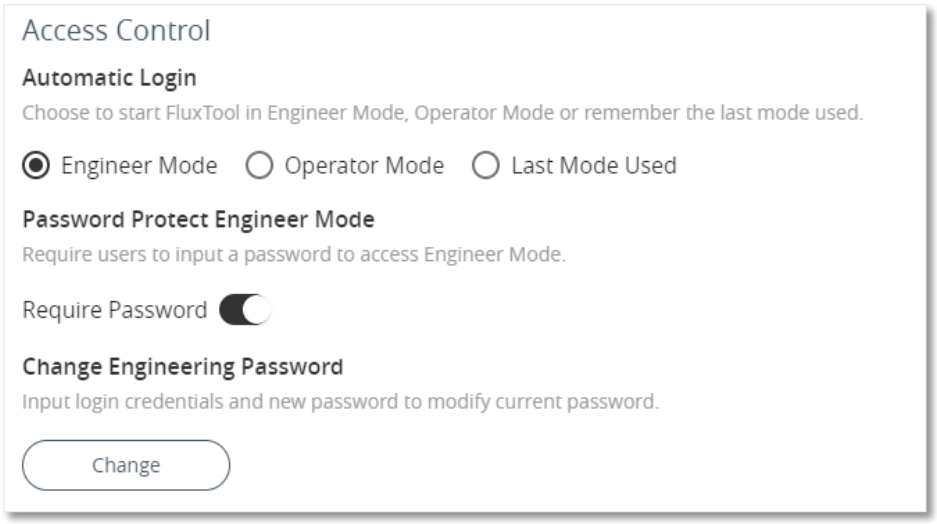
5.2 How to configure access control

1) **Navigate to the settings tab**
   Click **Settings** from the left menu.

   Please note: You must be logged into *Engineer* mode to make changes to access control.



2) **Modify access control settings**
   Change the settings as needed.
   By default, there is no password required to enter *Engineer* mode.
   If you elect toggle Require Password and have not yet created one, you'll be prompted to do so.
   Also, you may change the Engineer mode password by clicking **Change**.

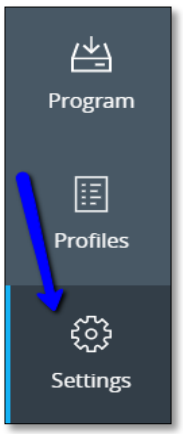


Note: To recover a lost or forgotten password, you have to delete the application cache:

- Close the FluxTool application.
- Go to the FluxTool settings folder:
  - For Windows: open the folder "AppData/Roaming/fluxtool" inside the user's home folder
  - For Mac: open the folder "Library/Application Support/fluxtool" inside the user's home folder
- In this folder, you will find the folder called "Local Storage". Delete all content in this folder.
  Remark: *This action resets all settings to default, including any preference on auto-write or auto-read, and the location of your profiles file.*

5.3 How to manage the profile database

1) **Navigate to the Settings tab**
   Click **Settings** from the left menu.

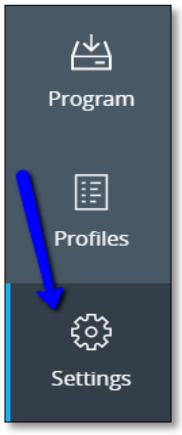


2) **Manage the database connection**
   Under the Profiles section, you have three options:

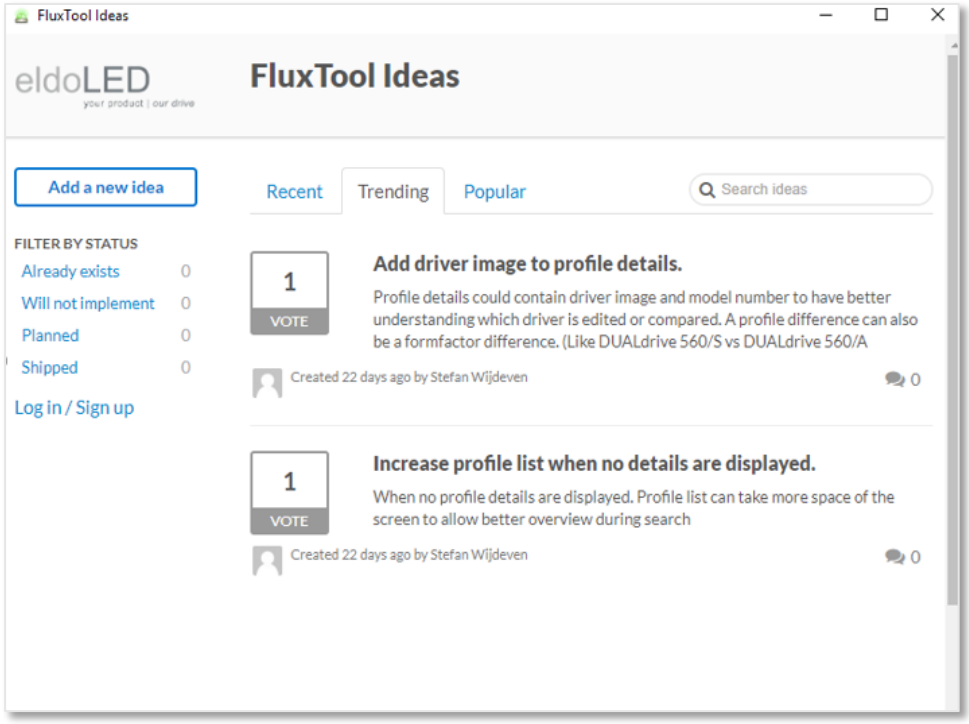
   a) New – click to select a location to create a brand new (also empty) profile database.
   b) Open – click to load an existing profile database.
   c) Save as – click to save a copy of your current profile database and change its path.

5.4 How to submit feedback

1) **Navigate to the Settings tab**
Click **Settings** from the left menu.



2) **Enter your ideas and suggestions**
Click **Send Feedback** at the bottom of the page. This will bring up the FluxTool Ideas page.
You can browse existing suggestions, create new ones, vote and much more. If your idea gets picked up for development, you'll even be notified!



6. Label printing

6.1 How to setup the printer

1) **Printer Requirements**
   FluxTool currently works with USB-connected Zebra printers. These devices must be set as the default printer in the target operating system.

2) **Create a label template**
   Here's an example ZPL template and the resulting label:

```
^^XA
^^PW290 ^^FX Print width in dots
~SD20 ^^FX media darkness 0-30
^^CF0,25 ^^FX default font type and size
^^XZ
^^XA
^^FO10,20,20^^BQ,2,4
^^FDMM, WO 1234^^FS
^^FO120,30^^FDECOdrive 566^^FS
^^FO120,60^^FDProfile: ec0566l^^FS
^^FO120,90^^FDSkyLark Luminaire^^FS
^^FO120,120^^FD900mA^^FS
^^FO180,120^^FDlogarithmic^^FS
^^FO10,140^^FDWO 1234^^FS
^^XZ
```

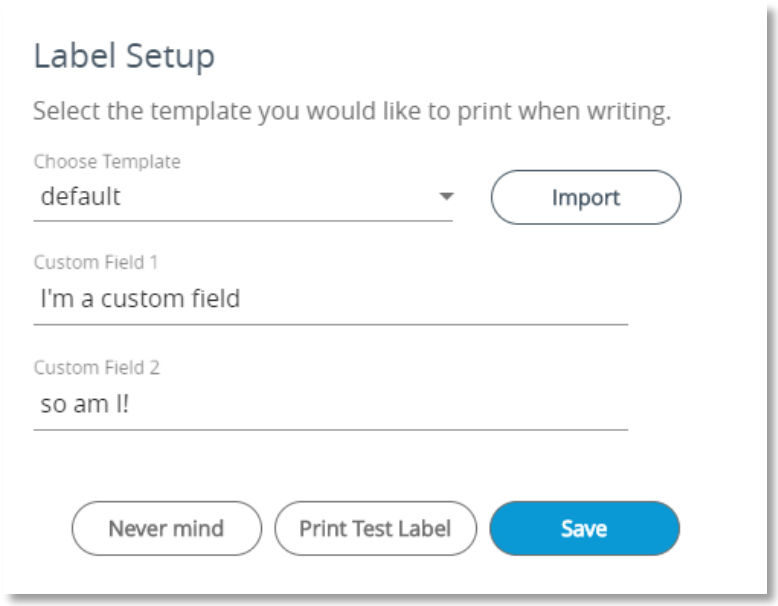
For detailed information on ZPL, go to the Zebra Support and Download section, which has extensive product documentation available.

While creating a ZPL label template is outside the scope of this document, the following resource is useful for quickly validating your label design:

Online label renderer: http://labelary.com/viewer.html

6.2 How to configure label printing

1) **Setup the label**
On the **Program** tab, click **Label Setup** to bring up the Label Setup dialog:



Within the Label Setup dialog, select the template to use. You can add new templates by clicking Import and navigating to the label file you'd like add. Once added the label file will be copied to the label template folder and available for future use.

Note: You can also add templates to the label directory using Windows explorer or Mac Finder.
The default paths are:

- Windows: C:\Program Files\FluxTool\resources\assets\labels
- Mac: /Users/<user name>/Library/Application Support/eldoLED/Fluxtool/labels/zpl

Enter values for Custom Field 1 and 2 (optional). Click **Save** when done.

2) **Turn on/off label printing**
After selecting an available template, label printing will be turned on by default. To disable label printing, click the toggle next to **Print Label**.

6.3 How to design a label (for FluxTool)

1) Add profile parameters to the label

The following profile parameters are available for printing:

Profile Parameter Name	Label Variable Name	DMX	LEDcode, DALI, 0-10V
Switch: alternative show index	alt_show_index	Yes	No
Current output group 1	current_cs1	Yes	Yes
Current output group 2	current_cs2	Yes	Yes
Current output group 3	current_cs3	Yes	Yes
Current output group 4	current_cs4	Yes	Yes
Daisy-chain cluster mode: slave count	daisy_chain_cluster_slave_count	Yes	No
Daisy-chain mode	daisy_chain_mode	Yes	No
Dimming curve	dimming_curve	Yes	Yes
Fail mode	dmx_failure_behaviour	Yes	Yes
Network resolution	dmx_network_resolution	Yes	Yes
Network start address	dmx_start_address	Yes	Yes
DMX termination	dmx_termination	Yes	No
Switch mode	external_input_mode	Yes	No
Group 1 channel mapping	group_1_mapping	Yes	No
Group 1 scaling	group_1_scaling	Yes	No
Group 2 channel mapping	group_2_mapping	Yes	No
Group 2 scaling	group_2_scaling	Yes	No
Group 3 channel mapping	group_3_mapping	Yes	No
Group 3 scaling	group_3_scaling	Yes	No
Group 4 channel mapping	group_4_mapping	Yes	No
Group 4 scaling	group_4_scaling	Yes	No
Network channel count	group_count	Yes	No
Interpolation	interpolation	Yes	Yes
LightShape active	light_shaping_active	Yes	Yes
LightShape CCT Balance Curve	light_shaping_cct_balance_curve	Yes	Yes
LightShape maximum CCT	light_shaping_cct_max	Yes	Yes
LightShape minimum CCT	light_shaping_cct_min	Yes	Yes
LightShape nominal CCT output 1	light_shaping_cct_output_1	Yes	Yes
LightShape nominal CCT output 2	light_shaping_cct_output_2	Yes	Yes
LightShape control strategy	light_shaping_control_strategy	Yes	Yes
LightShape luminous flux optimization method	light_shaping_flux_optimization_method	Yes	Yes
LightShape luminous flux output 1	light_shaping_flux_output_1	Yes	Yes
LightShape luminous flux output 2	light_shaping_flux_output_2	Yes	Yes
LightShape Forward Voltage 1	light_shaping_forward_voltage_1	Yes	Yes
LightShape Forward Voltage 2	light_shaping_forward_voltage_2	Yes	Yes
LightShape maximum luminous flux	light_shaping_maximum_flux	Yes	Yes
Auxiliary Voltage ON in Standby Mode	mid_aux_on_in_standby_mode	Yes	Yes
Auxiliary Voltage Level	mid_aux_voltage_level	Yes	Yes
Minimum dimming level	minimum_level	Yes	Yes

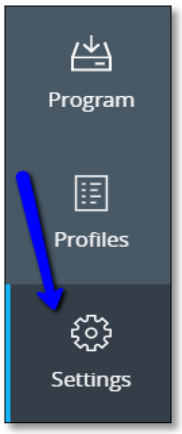
Profile Parameter Name	Label Variable Name	DMX	LEDcode, DALI, 0-10V

NTC throttling temperature	ntc_throttling_temperature	Yes	Yes
Power scaling	power_scaling	Yes	Yes
Scene 1 output 1	scene_1_output_1	Yes	Yes
Scene 1 output 2	scene_1_output_2	Yes	Yes
Scene 2 output 1	scene_2_output_1	Yes	Yes
Scene 2 output 2	scene_2_output_2	Yes	Yes
Show index	show_index	Yes	No
Show running	show_running	Yes	No
Startup mode	startup_behaviour	Yes	Yes

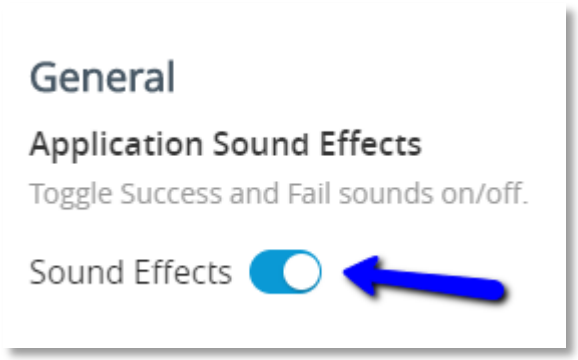
Also, you may print the programming date in the format “YYYY/MM/DD” using the variable name: date in your label. Additionally, you may add up to two custom fields using the label setup dialog.

7. How to enable sound effects

1) **Navigate to the Settings tab**
   Click **Settings** from the left menu.



2) **Turn on Sound Effects**
   Turn on/off Sound Effects using the toggle.



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