FLD-KIT first run guide [Rev1.2 dated 2021 07 10]

You need

1. LSCB controller board – 1pc

2. Capacitor charger of PCA-series – 1pc

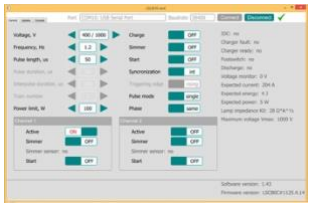
3. Discharge circuit NBU-1012 – 1pc or 2pcs

4. Capacitor bank – 1pc or different number

5. Flashlamps assemblies – one per NBU-1012
6. 24 V DC power supply – 1pc

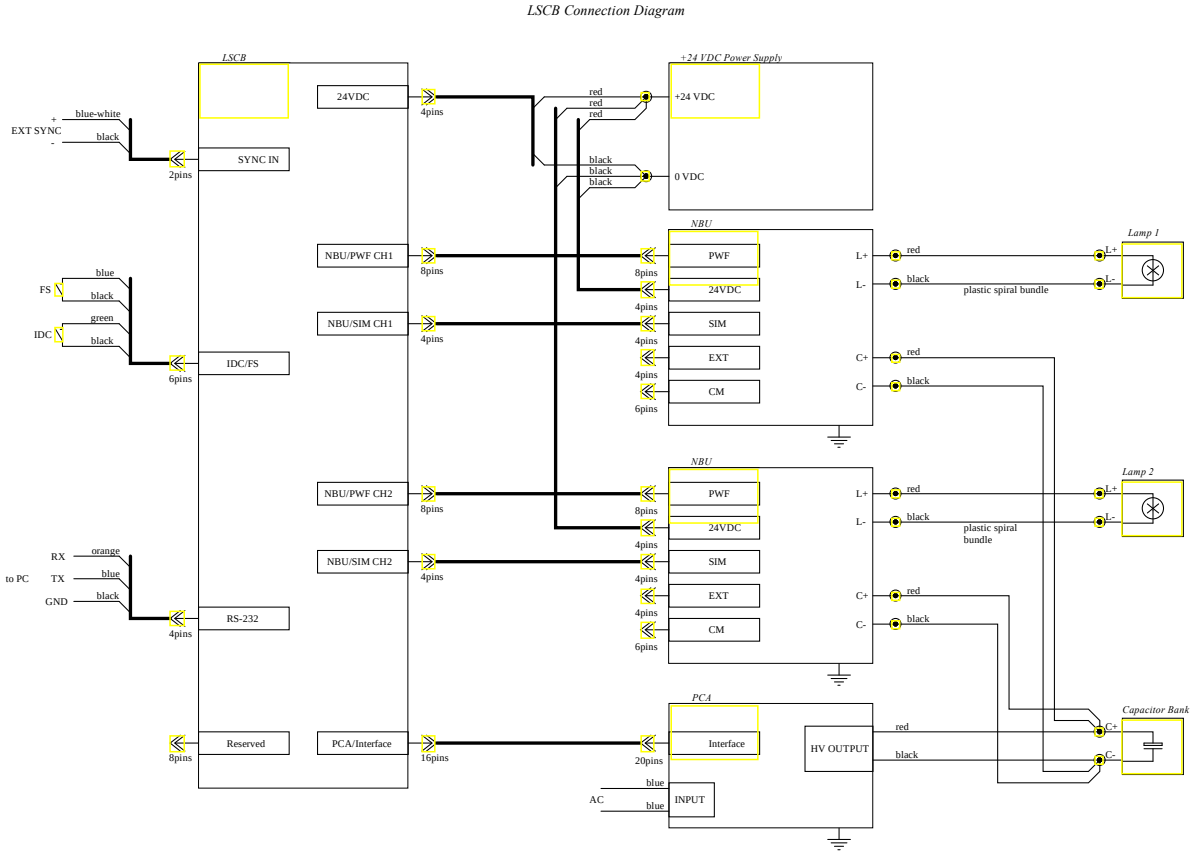
   Note: recommended power is >200W (e.g. Meanwell MPS-200)
7. Set of interconnection cables – 1pc
8. PC with Windows OS – 1pc

9. Software



First run

1. Ensure all AC/DC power supplies are disconnected from the mains
2. Connect all modules as per schema attached



Note 1: We highly recommend to have PCA-series capacitor charger as well as other modules protectively grounded

Note 2: CM connector of NBU-1012 should be left unconnected

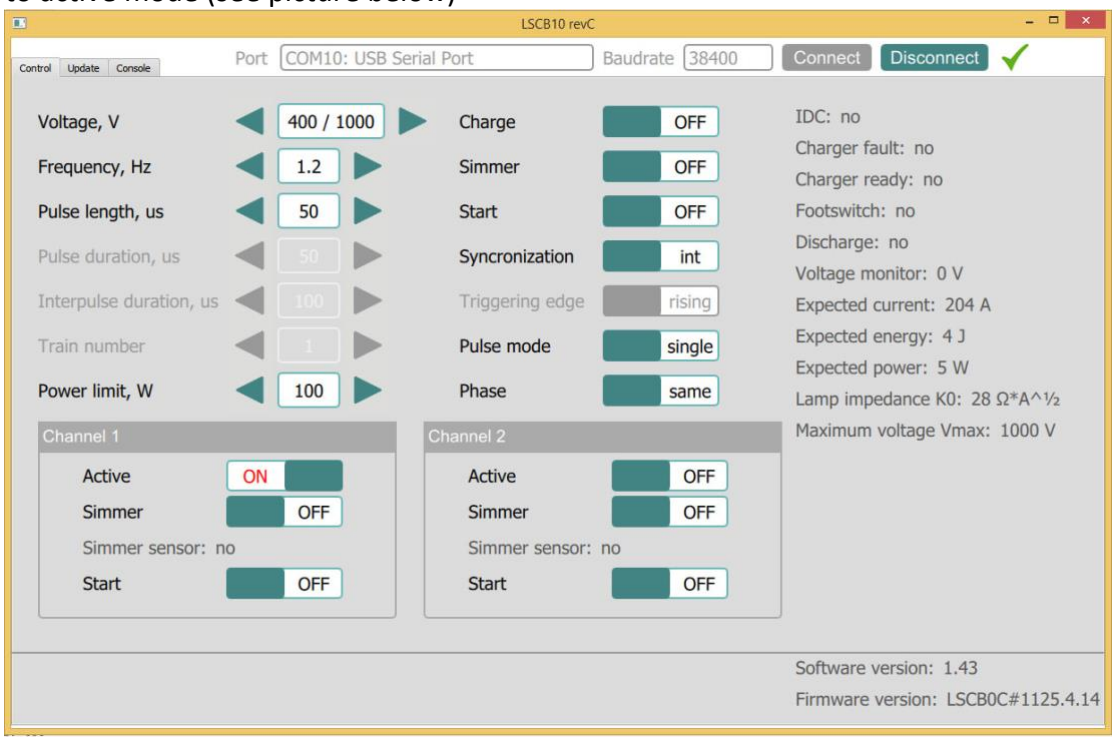
Note 3: EXT connector of NBU-1012 should be left unconnected if serial triggering is supposed, elsewise an external trigger transformer is to be connected to the EXT connector of NBU-1012

Note 4: IDC signal of IDC/FS connector will block operations if its circuit is opened, so you should organize either Door Interlock or its emulation

Note 5: FS and EXT SYNC signals aren't necessary for the simplest operations

3. Startup PC, run software (no installation procedure is needed) - **LSCB10 revC.exe**
4. Apply AC power to 24 V DC power supply

5. Select proper **Port** and press **Connect** button on the screen, the software should switch to active mode (see picture below)



6. Apply AC power to PCA module, if necessary turn on your water cooling system
7. Ensure **Lamp impedance K0** on software screen is set as per d/s of your flashlamp
   Note: if not, set proper K0 via **Console** (see LSCB user manual for command)
8. Ensure **Maximum voltage Vmax** is set as per d/s of PCA module
   Note: if not, set proper Vmax via **Console** (see LSCB user manual for command)
9. Ensure **Power limit** is adequate to your application
10. Select whether you want to run **Channel 1** and/or **Channel 2** and set it to **Active**
11. For the simplest operations set **Synchronization** to **Int**
12. For the simplest operations set **Pulse mode** to **Single**
13. If Channel 1 and Channel 2 are supposed to work simultaneously set **Phase** adequately to your needs
14. Set desired **Voltage**
    Note: we recommend to start from some small value e.g. 300 V
15. Enable PCA-series capacitor charger by pressing **Charge**
16. Ensure **Voltage monitor** shows value similar to the ordered
17. Trigger simmer arc in the desired flashlamp by pressing either common **Simmer** or Channel 1 / Simmer and/or Channel 2 / Simmer
18. Ensure **Simmer sensor** changed its state to **yes**
19. Set desired pulse parameters (**Pulse length** and **Frequency**)
    Note: we recommend to start from some small values e.g. 300 us and 1 Hz
20. Ensure **Expected current**, **Expected energy** and **Expected power** are adequate to your needs
21. Start flashes in the desired channel/channels by pressing either common **Start** or Channel 1 / Start and/or Channel 2 / Start
22. Ensure **IDC** and **Footswitch** do not prohibit the output
23. In the case of any troubles please contact the manufacturer

Advanced operations

1. Follow the same procedure by sending text commands from **Console**. Commands descriptions are given in LSCB user manual.
2. Follow the same procedure by sending text commands from your controller board via RS-232 interface.