CodeMercs BusMaster

IEC62386 Configuration Tool

Code Mercenaries

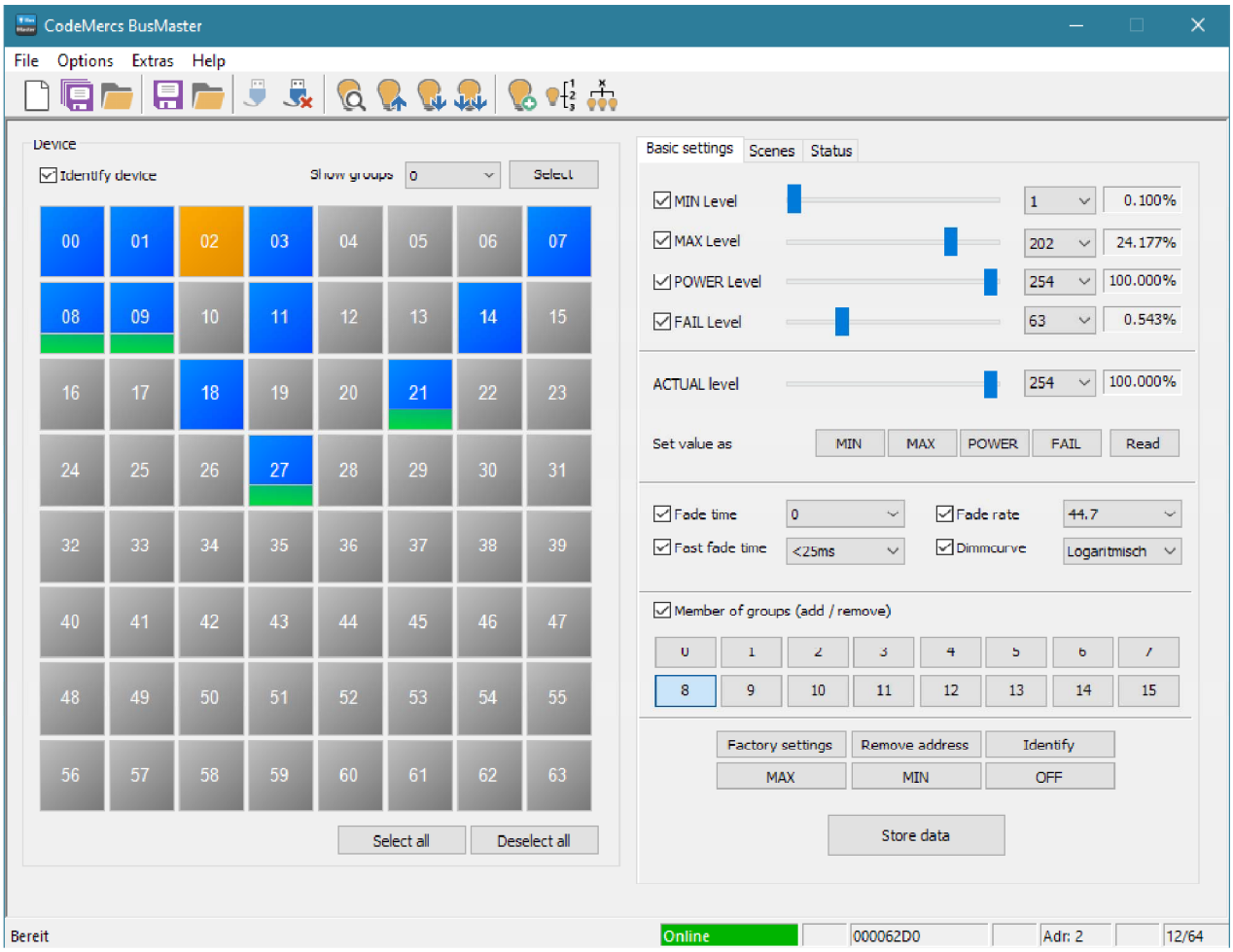
CodeMercs BusMaster is a software tool for addressing and configuration of a IEC62386 bus. It requires a LED-Warrior14U-DR to connect to the bus.

LED-Warrior14U-DR

1. System requirements
- LED-Warrior14U-DR
- Windows 7 or newer
- 5 MB disk space
- USB-Port

1.1 Functions
- Assigning addresses to IEC62386 bus devices
- All basic settings for control gear according to IEC62386-102
- Full settings for control gear of device type 6 (LED driver)
- Storing and recalling bus settings as projects
- Stored projects can be loaded onto a bus
- Store and copy device settings to other devices

1.2 User interface



gray = unused device address

blue = occupied device address

orange = selected device

blue with green stripe = device belongs to the selected group

2. Connecting, searching, selecting, configuring

Connect to the LED-Warrior14U-DR by clicking on  then scan for already addressed devices on the bus by clicking on 

Devices found on the bus will be displayed blue in the 8x8 matrix. Unused addresses are gray. To select a device click on it, a selected device is orange. When holding the shift key you can select multiple devices by clicking on them.

If the option "Locate Devices" is selected any device that is selected will be set to 100% output, all others will be at 1%. This allows to easily see which devices you are working with at the moment.
Due to the slow data speed on IEC62386 there can be a short delay between selecting or deselecting devices and them being set to their respective brightness.

The drop down menu "Display Group" can show which devices belong to a group. When selecting a group all group members will get a green stripe. The "Select" button then allows to select all group members with one click.

The configuration settings are split into two areas: Basic settings and scenes. Tabs to select between the two parts are on the right half of the window.

3. Basic settings

3.1 Basic settings

The basic settings displays all the general configurations for the selected IEC62386 device (if multiple devices are selected the settings of the device that was selected first are shown) and allows to change them. Clicking on "Write Settings" does write the current values to all selected devices and stores them to their persistent memory. The check boxes next to each value allows to deselect them, so not all values are written.

3.2 ACTUAL Level

„ACTUAL Level“ is a live function that does not write a permanent setting. When changing this value it gets immediately transferred to the device that was selected first (in case of multiple devices being selected), when releasing the slider the value will transferred to all other selected devices. This allows to check out light levels immediately.

The buttons MIN, MAX, POWER, and FAIL set the current ACTUAL Level as the setting for these parameters.

The button "Read" allows to read the current setting from the selected device again (in case some other master has modified it).

3.3 Assigning groups

An IEC62386 device can be a member of multiple of the 16 groups. The buttons for the groups in which the device is a member are indicated by the button turning blue. To add or remove a device (or all selected devices) to a group just click on the respective button.

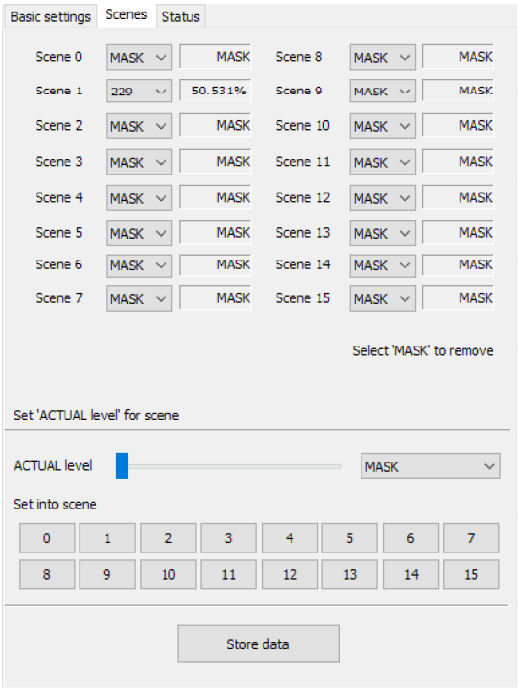
A complete overview of all group memberships is available in the group matrix (chapter 8).

3.4 Other functions

- "Factory Settings" resets the device (or devices) to the factory default settings. The address of the device is not affected.
- "Remove Address" removes the short address of the device (or devices) and makes it available for new addressing. All other settings of the device remain unchanged.
- "Locate" helps to visually identify the selected device by blinking it 5 times.
- "MIN", "MAX", "OFF" sends the respective IEC62386 command to the device to recall the min or max value or switch the device off.

4. Scenes

The tab "Scenes" allows to modify the scene settings of the selected devices.
IEC62386 supports 16 scenes. Those are brightness values stored in each device that can be activated by a scene command. If a device has "MASK" as the value for a scene it will not change its brightness when this scene is activated.



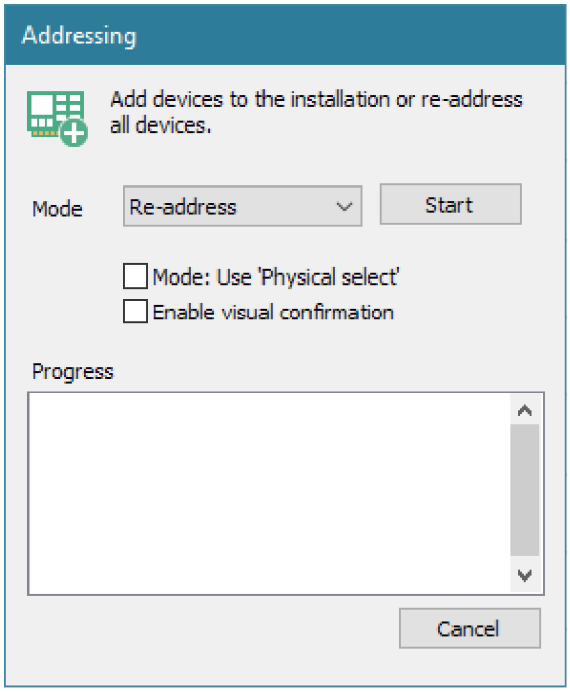
4.1 Set ACTUAL Level for Scene

This allows to directly manipulate the brightness value of the selected device (or devices) and then set that value for scenes.

5. Status

This tab displays the device informations like version, serial number etc. and shows the current status of the device. If multiple devices are selected this is shown for the device that was selected first.

6. Addressing devices
This function open the addressing assistant.



There are two options:
A) Reassign all addresses on the bus (New Addressing)
All short addresses of all devices are reset and a complete new address assignment is done. Devices will likely end up on different addresses than they used before.

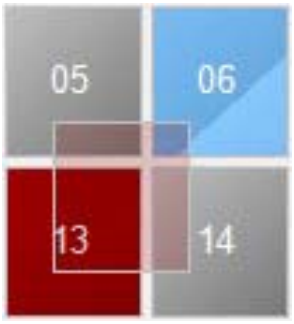
B) Add devices which have no address yet (Add Devices)
All devices which have no short address assigned will be scanned for and added to the bus. At fist the bus is scanned for already addressed devices to check which addresses are in use. Then new devices are identified and assigned to available addresses.

At the start of the addressing operation all devices get the command "Recall Min" by broadcast. This activates the configured minimum brightness for all devices.

The option "Physical Select" allows to address devices by pressing a button or removing the lighting element of the device (depends on the actual implementation of the device and is not supported by all manufacturers). The device that is selected by this method gets the next available short address.

The option "Visual Feedback" allows a direct feedback for the addressing operation. Each device that gets successfully addressed is then switched to 100% brightness. After a complete addressing run all devices should be at maximum brightness.

7. Readdressing devices
The 8x8 device matrix can not only be used to select devices it also allows to change device addresses by drag&drop.



Just drag a device to a different position to move it to that address. If the target address is in use the two devices switch their addresses. If the target address is unused the dragged device gets this address and its old address is then unused.
If the "Locate Devices" option is active the dragged device and any device on the target address is set to 100% brightness. This simplifys the identification which devices will be affected by an address switch.
It is not possible to drag multiple devices, only a single device must be selected when dragging for readdressing.

To avoid address collisions make sure to do a bus scan before changing addresses.

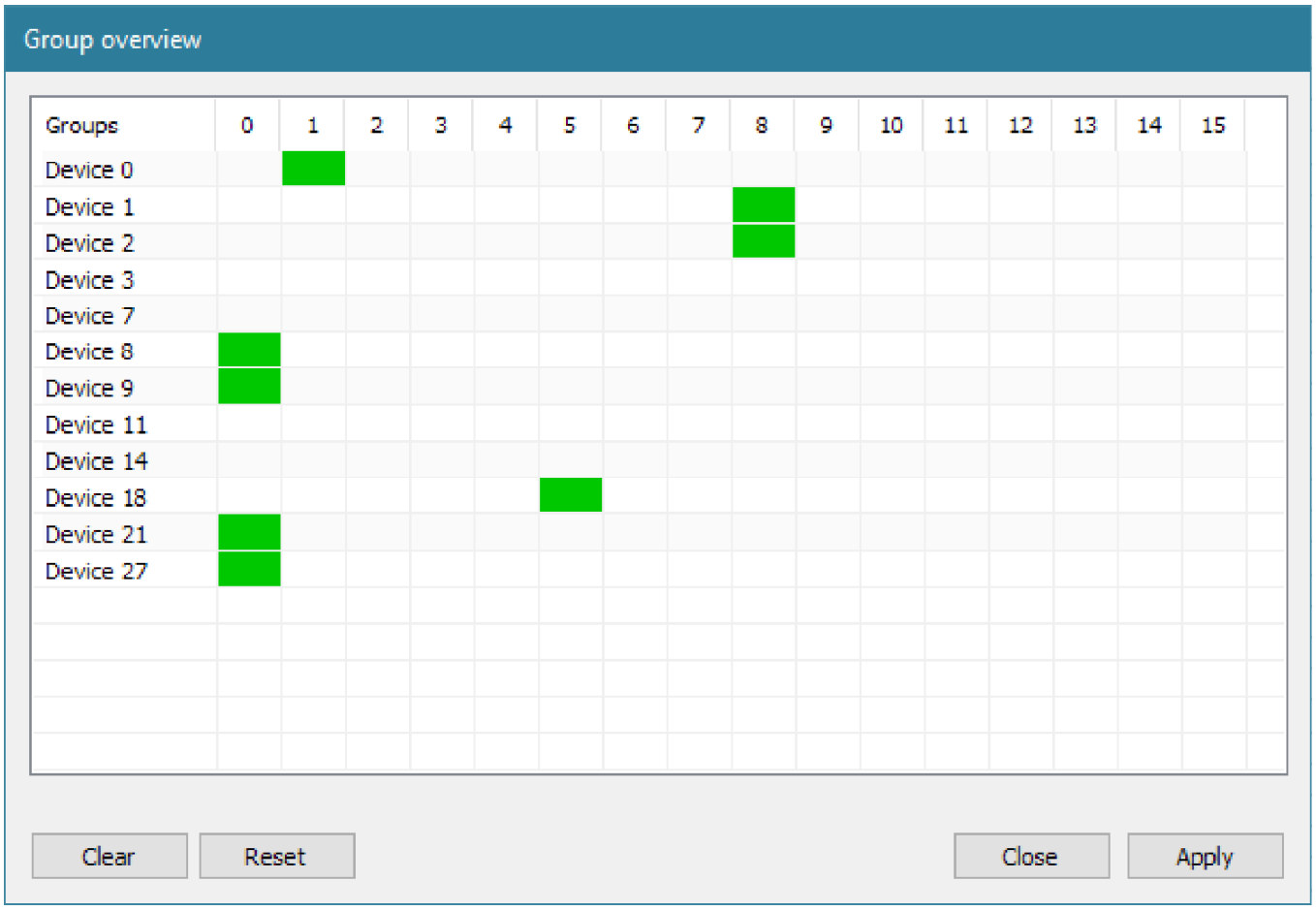
8. Group Matrix
The group matrix shows all devices and their group memberships.

By simply clicking into the matrix you can assign (green) or unassign (clear) a device to a group.

The button "Apply"writes the group settings to the devices. Depending on the number of devices this can take several seconds.

The "Clear" button does cancel all group memberships.

The "Revert" button reverts all changes and returns to the current settings of the devices.

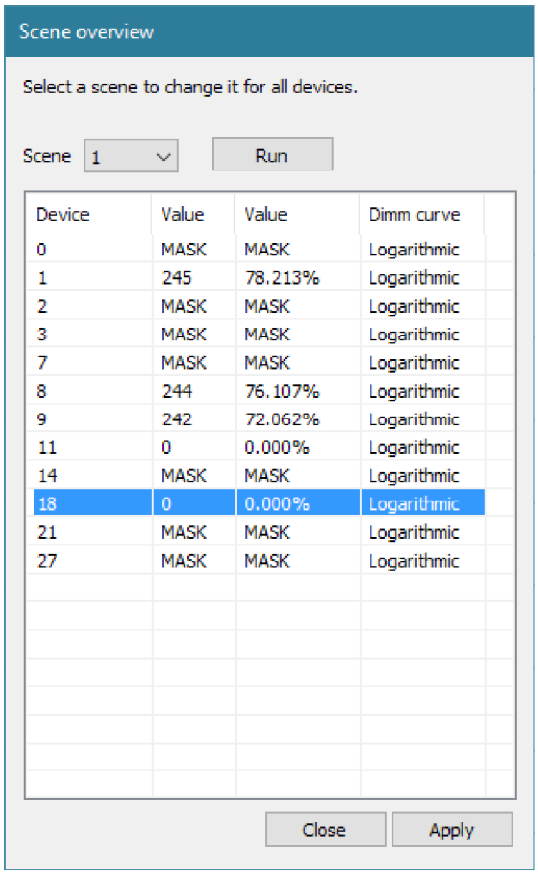


9. Scene overview

The settings of all devices for one scene can be viewed in this window. When selecting the scene the respective data is read from all devices on the bus and shown in the table.

By clicking on a cell in the "Value" column the brightness value can be modified. The "Apply" buttons transfers all changes to the devices.

Clicking on "Activate" sends a broadcast command so all devices will active their scene settings.



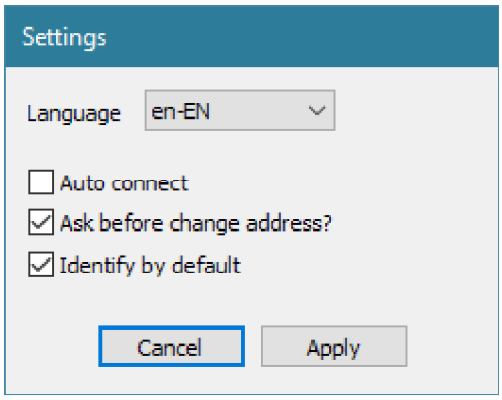
10. Storing and opening projects
All settings of a bus can be stored as a project. This allows to recall them to write them into an already addressed but not configured bus or to review them in offline mode (chapter 13). Depending on the number of devices it can take several seconds to read out all configuration data for storing.
When opening a project while being connected to an IEC62386 bus the BusMaster will verify if the same address are in use on the bus as are contained in the project file. If so the configuration data can be written to the devices on the bus.
This function allows rapid configuration of multiple identical buses. Only the basic addressing needs to be done for each bus, all other settings will be copied automatically.

11. Storing and recalling device configurations
The settings of a device can be stored and loaded onto other devices, independent of the device address. This allows rapid setup of multiple devices with stored presets.

12. Additional Functions
The menu "Execute" allows to directly send some IEC62386 commands in broadcast mode.

13. Offline Mode
When no LED-Warrior14U-DR is physically connected or before the connection to an IEC62386 bus has been established BusMaster will run in offline mode. This allows to load stored projects and review the data but not change any of the data.
Offline mode is terminated when the connection to an IEC62386 bus is established.

14. Program Preferences



BusMaster supports English and German (electable by drop down menu). The language is switched immediately no restarting of the program is required.

- The option "Autoconnect" will cause BusMaster to connect to a LED-Warrior14U-DR, connect to the IEC62386 bus and scan the bus immediately on program start.
- The option "Confirm Address Change" activates a confirmation dialog for drag&drop readdressing.
- "Always Locate" sets the default status for the "Locate Device" option.

15. Additional recommendations

Other bus masters, sensors etc. should not send commands onto the bus during configuration, this could interfere with the configuration and cause problems.

BusMaster supports the complete setup of device type specific parameters only for device type 6 (LED drivers). General settings for all other devices types are possible.

Legal Stuff

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