User Manual

DALI System Config Tool_V1.0

Version updated instructions (must read)

Version	Updated Instructions	Updated
User manual -Ver1.0	The first version of English manual released, and the software version has been updated to V1.022	2019/12/02

Contents

Chapter 1 Preface

DALI system config tool is a commissioning software for configuring DALI gateway, to conveniently debug and configure function to DALI gateway, and address DALI device. It can also monitor the exception of the DALI bus.

This manual mainly introduce about the overall framework, usage and functions of the software.

Chapter 2 Software Introduction

2.1 Function Overview

DALI system config tool (hereinafter referred to as DALI system configuration software) is able to debug such as switch, group and scene controlling, etc. to the DALI device connecting on the channel through the DALI gateway. In addition, it can also modify the address of the DALI device on the DALI bus. Therefore, after configuring function to the KNX/DALI gateway through the ETS software, the DALI system configuration software needs to be further configured to complete the functions. For example, group control and scene control, the DALI system configuration software is required to perform group assignment and scene assignment for the DALI device, and DALI address is required to be modified through the software to make DALI device location more compliant with the line layout.

Function overview of DALI system configuration software are summarized as follows:

- **Scan gateway**
- **Import/Export configuration**
- **Initialize the DALI bus, assign address to DALI device**
- **Query device status on the DALI bus, read DALI device configuration**
- **Supporting switch operation for 64 DALI devices of the two channels**
- **Supporting group assignment and read all configuration of the DALI device**
- **Supporting switch operation for the group**
- **Read the lamp or ballast failure status of the DALI device**
- **Assign scenes and set scene brightness values for each DALI device**
- **Address adjustment for devices with DALI addresses programmed**

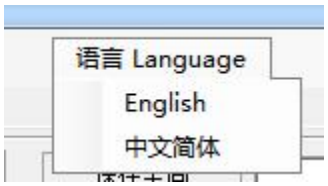
2.2 Operating Environment

Operating systems: Windows XP (32bit), Windows 7 (32/64bit), Windows 8 (32/64bit), Windows 10 (32/64bit).

Operating environment: Run the software directly without installation. Note that there is “FalconRuntime v2.2” run time library on the PC.

2.3 Language

Supporting two languages: Chinese and English, which can be selected under the software menu bar "语言 Language".



Chapter 3 Software Interface

Double-click "KnxDaliDebug.exe" software in the folder where DALI configuration software stored to start up, software interface as shown in Fig.3.1.

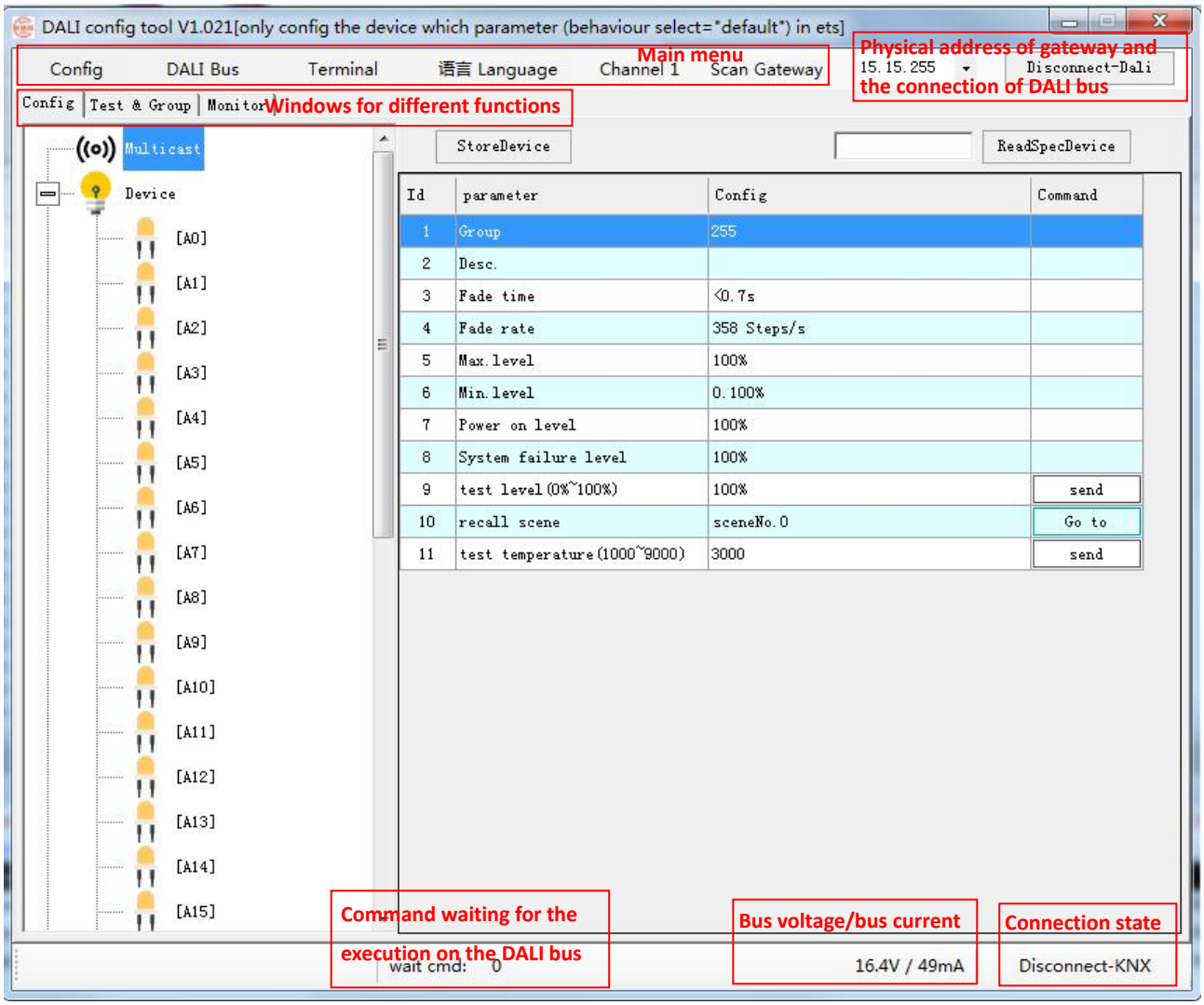


Fig.3.1 Initial interface

The function windows and main menus of the software interface are described in detail in sections below.

3.1 Main menu

Main menu includes 6 items: [Config], [DALI Bus], [Terminal], [语言 Language], [Channel] and [Scan Gateway]. The contents and usage of these groups will be introduced in the following sections.

3.1.1 [Config]

Select [Config] on the main menu bar to get the drop-down menu in Fig. 3.2 [Config].

Fig.3.2 [Config]drop-down menu

① **[Import]：** Import the configuration of a DALI gateway, the imported configuration can be directly applied to the DALI devices. After imported, user can modify the configuration in the software tool or debug the gateway,etc.

② **[Export]：** Export the configuration and save it when finished configuring a DALI device.

3.1.2 [DALI Bus]

Select [DALI Bus] in the main menu bar to get the drop-down menu of [DALI Bus] as shown in Fig.3.3.

Fig.3.3 [DALI Bus] drop-down menu

① **[Local] Read device config:** Read the devices configuration saved on the gateway, including configuration of the DALI devices and configuration of groups, etc.

② **[Remote] Read device config：** Read the configuration of DALI devices on the DALI bus directly (if there are numbers of devices on the channel, this operation will take a long time).

③ **[All] Init DALI Device：** Assign DALI addresses for all DALI devices on the current channel.

④ **[NoAddr] Init DALI device：** Only assign DALI address to the devices that have no address, this operation will not change the DALI address that has already assigned.

Note: During address assignment, if incomplete address assignment occurs, please click [NoAddr]Init DALI device. If no-address assignment fails exceed two times, click [All]Init DALI Device.

3.1.3 [Terminal]

Terminating the operation of the DALI gateway, the DALL device, such as terminating operation during the process of reading the device status, this process will be interrupted; if terminating operation during the initialization of the bus, the initialization may fail. If there are too much data on the DALI bus or being too busy, terminating the operation should be taken into consideration.

3.1.4 [语言 Language]

Select [语言 Language] on the main menu bar to get the drop-down menu in Fig. 3.4 [语言 Language].

① **[English]：** Select English as software language.

② **[中文简体]：** Select Simplified Chinese as software language.

Fig.3.4 [语言 Language] drop-down menu

3.1.5 [Channel]

Select [Channel] on the main menu bar to get the drop-down menu in Fig. 3.5 [Channel].

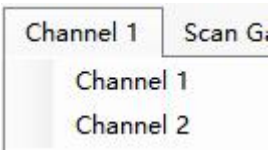


Fig.3.5 [Channel] drop-down menu

DALI output channel, there are 2 channels, each channel can be configured up to 64 devices.

①**[Channel 1]**：Select DALI output channel 1 to configure.

②**[Channel 2]**：Select DALI output channel 2 to configure.

3.1.6 [Scan Gateway]

Scan DALI gateway connected on the KNX bus. Firstly, connecting the KNX bus, then click the icon Connect-KNX on the lower-right corner of the software(as shown in Fig.3.1), and the dialog window as shown in below will pop up to set up the bus connection.

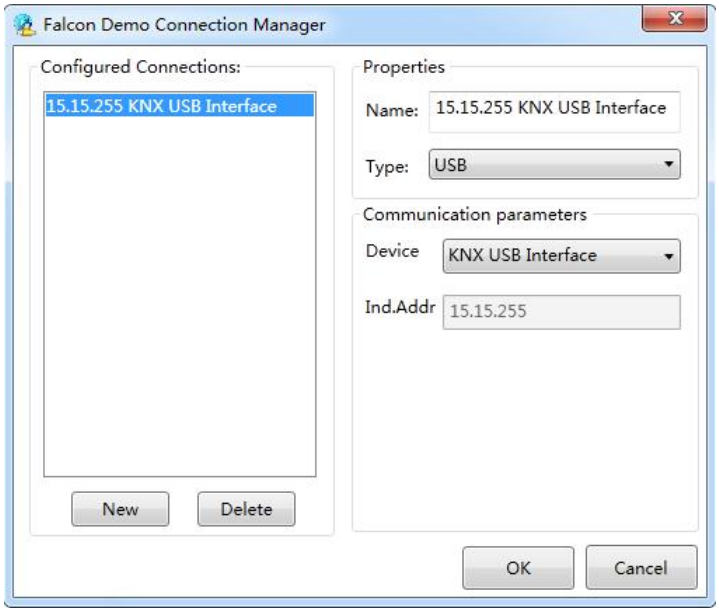


Fig.3.6 Connect- KNX

After the gateway scanning is completed, select the gateway physical address and output channel to be debugged at the upper right of the software (Fig. 3.1). The prerequisite for the gateway to be scanned must be that the physical address and application have been configured via ETS and connected to the KNX bus.

3.2 Configuration Interface

Configuration interface as shown in Fig.3.1, for configuring multicast parameters, device parameters and group parameters.

3.2.1 Device Configuration

Device configuration interface as shown in Fig.3.7, for group editing, scene assignment, parameters editing and testing for the device,etc.

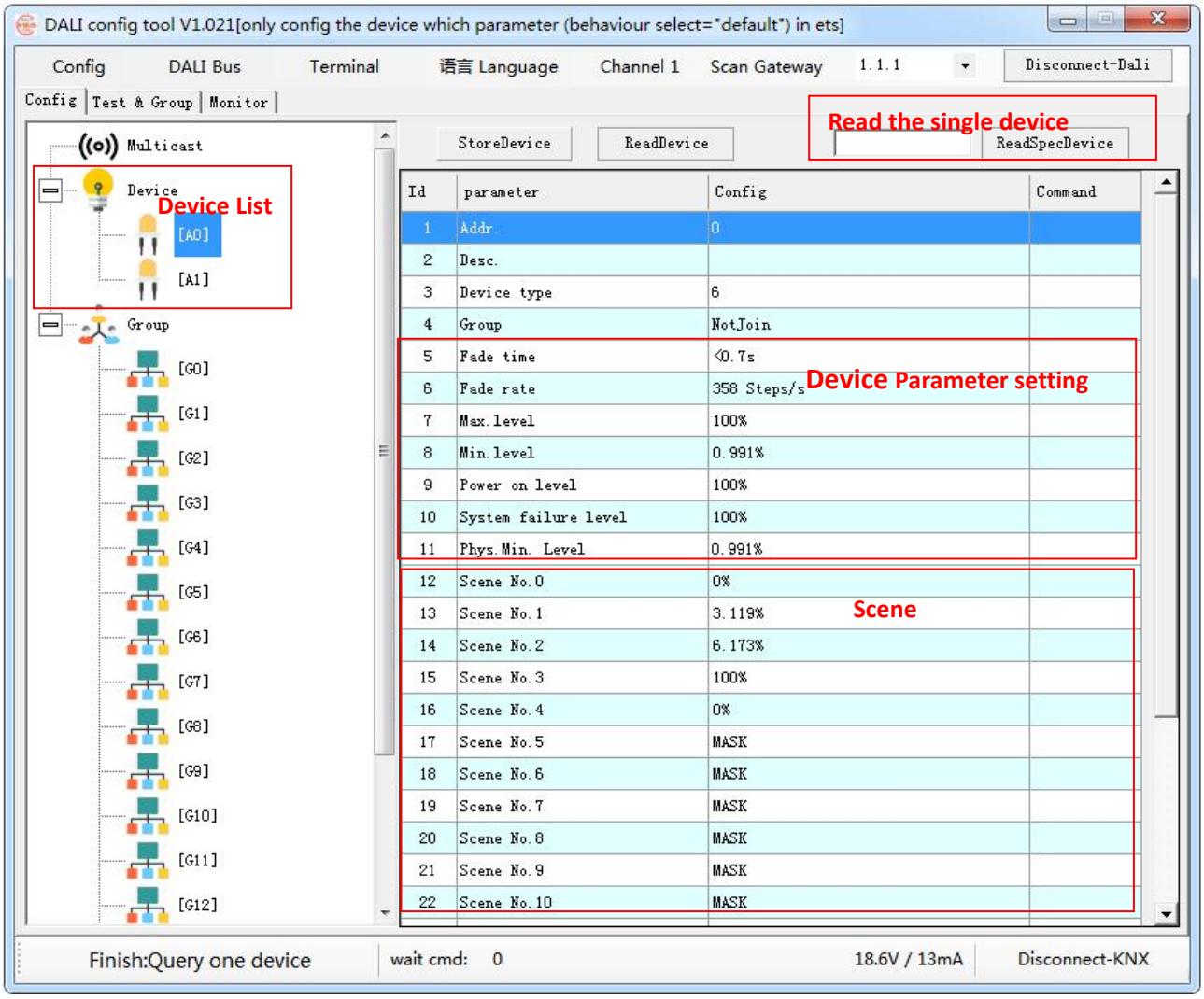


Fig. 3.7（1）Device Configuration interface

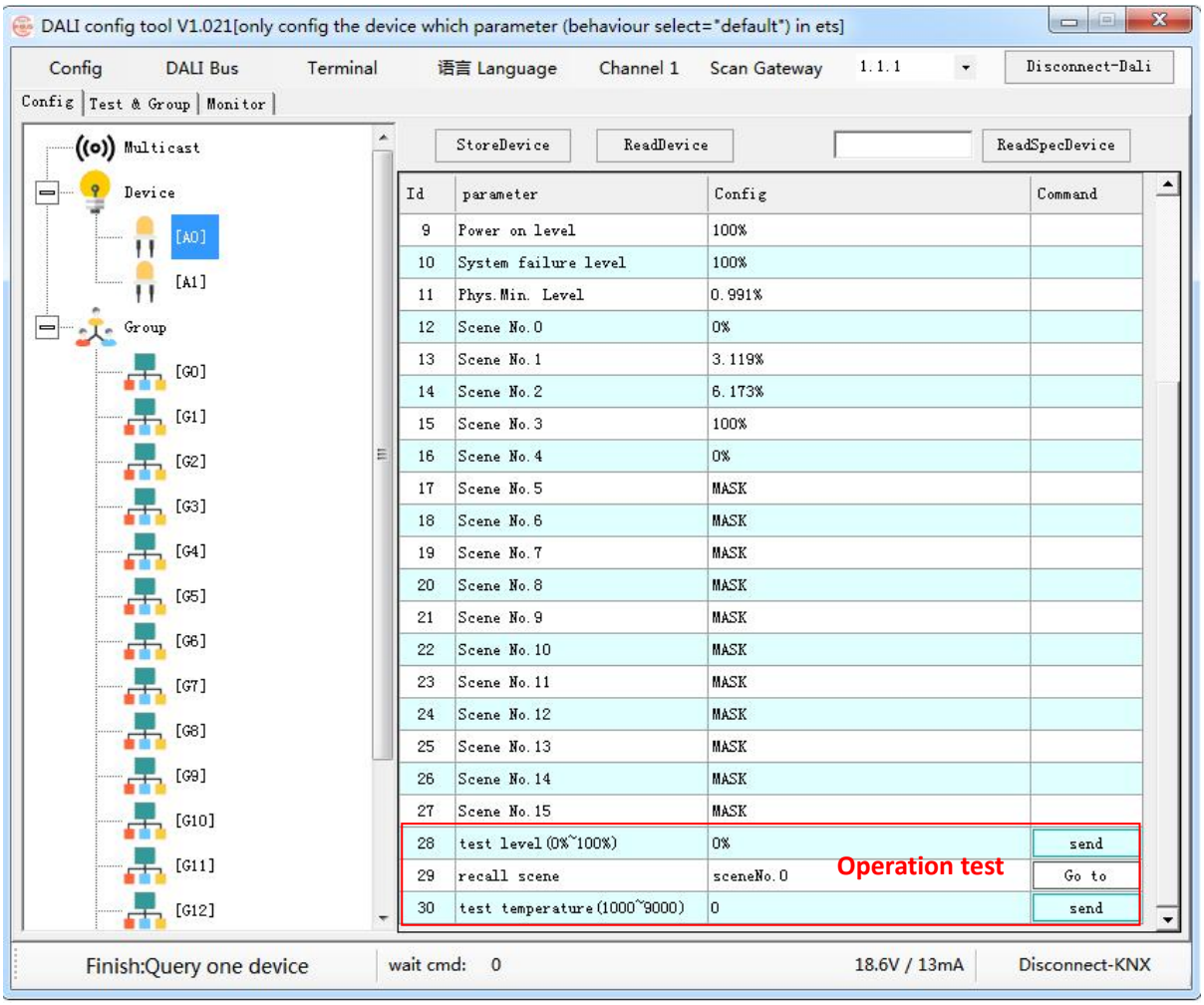
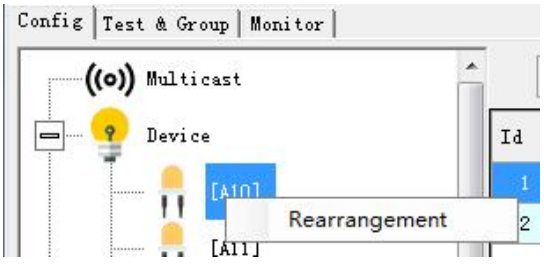


Fig. 3.7（2）Device Configuration interface

① **Device List:** Display all DALI devices on the selected channel in the device list. Device icon  is for general DALI ballast, icon  is for DALI ballast with color temperature controlling.

Right-click device in the device list to rearrange DALI device, as shown in the follows:



② **ReadDevice:** Select a DALI device in the device list, click button “ReadDevice”, read all the information of the device through DALI bus and synchronously display in the software, such as group configuration,scene configuration and parameter setting, etc.

③ **StoreDevice:** Store the modified configuration of the device. After storing, this device on the DALI bus can be directly applied to the saved configuration.

④ **ReadSpecDevice**： Input device address in the text box and read the status information of the device, at the same time, parameter configuration of the device in the debug software will also synchronously update. For example: when a DALI device is damaged and need to be replaced, user can read the status information of the device first, then store the damage information to the new device after it is replaced with the new device.**(Note: ensure DALI addresses of both new and old device are the same.)**

⑤ **Addr.:** Display the DALI address of the selected DALI device, users can modify DALI address in the "Test&Group" window interface, as shown in the following Fig.3.10.

⑥ **Desc.:** Device Description, to add a name for DALI device, for example, 2#lamp.

⑦ **Device Type:** Display DALI device type, such as DT6 for displaying 6 in the column

⑧ **Group:** Display the group that DALI device belongs to. "NotJoin" for not assigning to any group.Users can assign DALI devices to a group in the "Test&Group" window interface, as shown in Fig.3.10. After the device is assigned to the group, it will displays in the group list, as shown in the following Fig.3.8.

⑨ **Parameter Setting:** Parameter setting of the DALI device including fade time, fade rate, max.level brightness, min.level brightness, power on level, system failure level and Phys.Min.level brightness, in which Phys. Min.level brightness is the characteristic of the DALI device and cannot be modified.

Note: If parameter settings of the device are configured as template in the ETS, the corresponding parameter settings in the software is invalid, even if they are modified, the settings will be restored to the ETS parameter setting when gateway read the device and find that there are different status information between ETS configuration. The settings can be modified via the debugging software tool only when default setting are configured in the ETS.

⑩ **Scene**：Select one of the DALI devices, scene assignment of this device can be checked in the device list, up to 16 DALI scenes can be configured, users can modify the preset brightness value of each scene. After finishing the modification, click “StoreDevice” button on the upper window. KNX scene number of the corresponding scene can be configured through ETS parameters. “Mask” means the device has not assigned the scene, “Not change” means the brightness of this scene has no change.

Note: there are two modes of recalling scene: Global scene recall and Group scene recall, if the device is not assigned to the group, scene recall only support Global scene recall, if the device is assigned to a group, scene recall also supports Group scene recall.

⑪ **Operation test**：Select a DALI device to be tested in the device list, its brightness, scene recall and color temperature can be tested.

3.2.2 Group Configuration

Group configuration interface as shown in the Fig.3.8, which is used for group parameters setting and group testing.

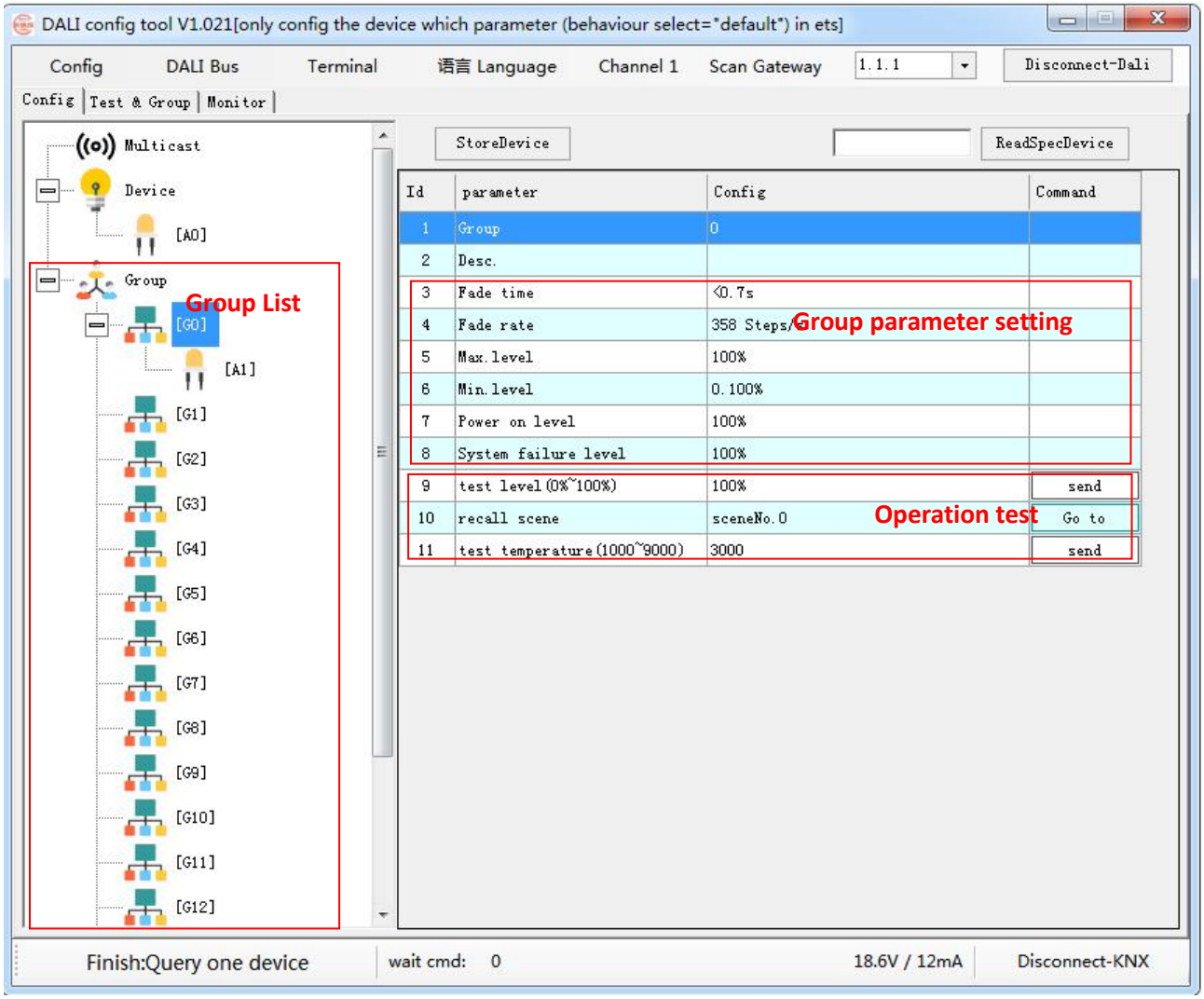


Fig.3.8 Group configuration interface

① **Group List**: In the group list, all online DALI devices of each group can be checked. Select group Gx (x=0..15), devices of each group will be displayed in the group list. Select one of the device in the group, parameters of the device can be checked, specific configuration refers to section 3.2.1.

② **StoreDevice:** Store the modified configuration of the current group, parameters of the online device in the group will be uniformly modified.

③ **Group:** Display group address of the selected Group.

④ **Desc.:** Device Description, to add a name for the group.

⑤ **Parameter setting:** Including fade time, fade rate, max.brightness, min.brightness, power on level and system failure level.

Note: If parameter settings of the group are configured as template in the ETS, the corresponding parameter settings in the software is invalid, even if they are modified, the settings will be restored to the ETS parameter setting when gateway read the device and find that there are different status information between ETS configuration. The settings can be modified via the debugging software tool only when default setting are configured in the ETS.

⑥ **Operation test**：Select a DALI group to be tested in the group list, brightness, scene recall and color temperature of the DALI devices in the group can be tested.

3.2.3 Multicast (Global) Configuration

Multicast configuration interface as shown in Fig.3.9, for global parameter setting, and for all online device testing of the entire channel.

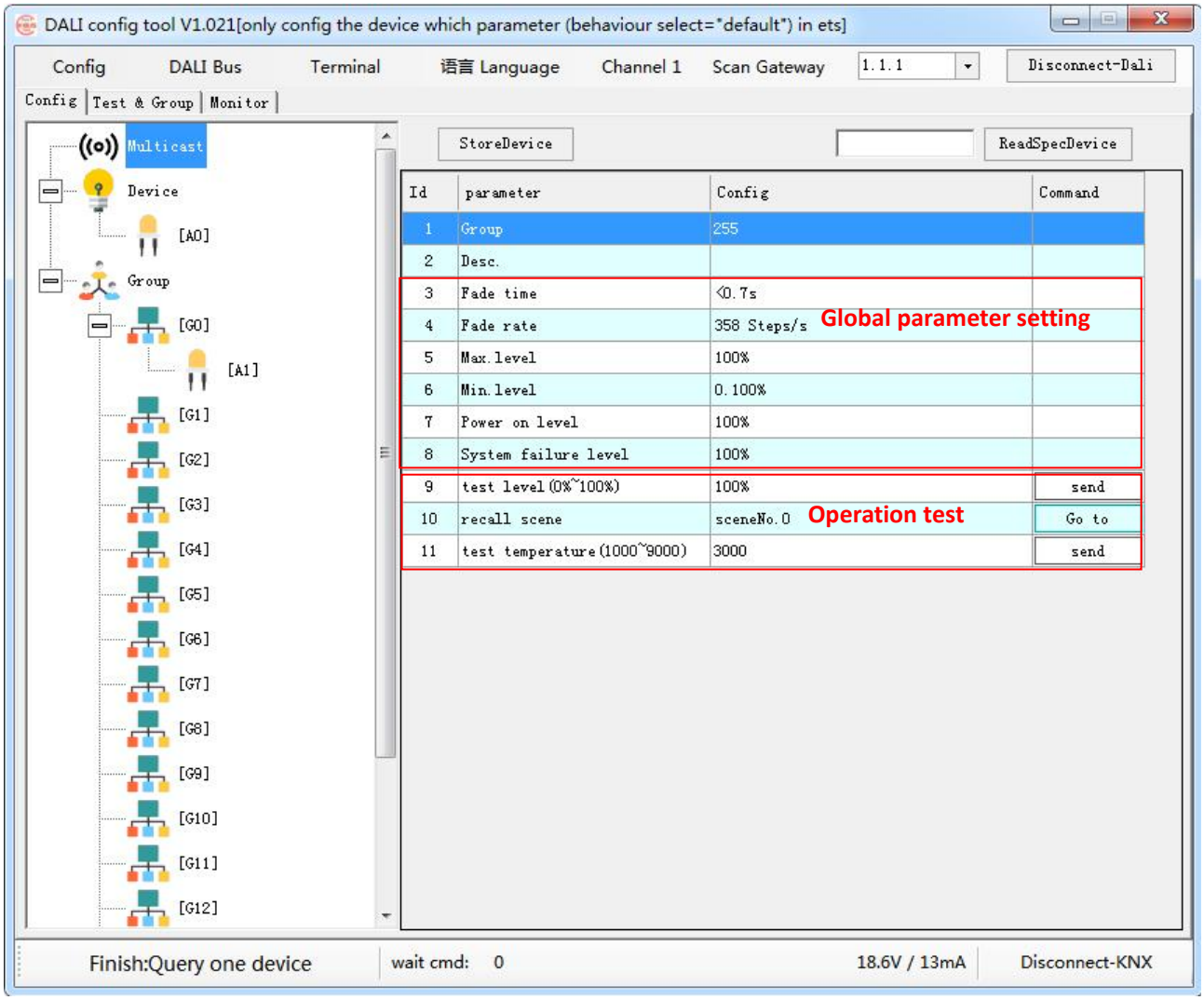


Fig.3.9 Multicast Configuration interface

① **StoreDevice**：Store the modified configuration to all online DALI devices in the channel (the parameters of all online devices in the channel will be uniformly modified).

② **Group:** 255 for Multicast configuration .

③ **Desc.:** Device Description, to add a name for multicast control in the channel.

④ **Parameter Setting:** Global parameter setting including fade time, fade rate, max.brightness, min.brightness, power on level and system failure level.

Note: If parameter settings of the device are configured as template in the ETS, the corresponding parameter settings in the software is invalid, even if they are modified, the settings will be restored to the ETS parameter setting when gateway read the device and find that there are different status information between ETS configuration. The settings can be modified via the debugging software tool only when default setting are configured in the ETS.

⑤ **Operation test:** Testing brightness, scene recall and color temperature for DALI devices on the entire channel.

3.3 Test&Group Interface

Test&Group interface as shown in Fig.3.10, here you can view all the connected DALI devices on the DALI bus, including ballasts, lamp failure status, grouping, and so on. Switch operation of each lamp and each group, modification of DALI device address and group assignment of DALI device can be operated.

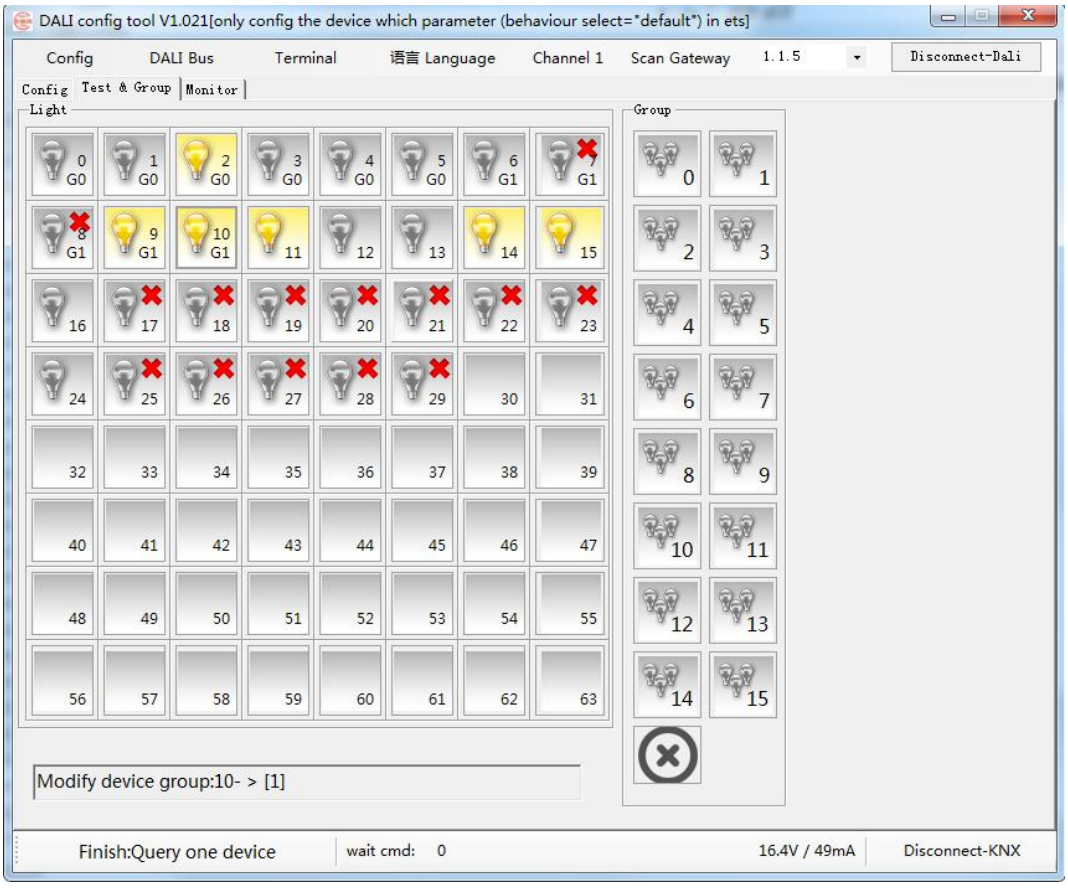


Fig.3.10 Test&Group Interface

① **Single control test:** Click each DALI device icon, DALI gateway will be on or off. When the on command is executed, the device will on with the maximum brightness value. The group assigned by the DALI device can also be viewed in the DALI icon. If it is not assigned to any group, the group number Gx will not be displayed, and a DALI device can only be assigned to one group.

② **Group control test:** Click the group icon, DALI gateway will on or off all DALI devices belonging to the group. When the command is executed, the device will on with the maximum brightness value.

③ **Replace the address:** After initializing the DALI bus, all DALI devices will get a DALI address. If the address does not match the expected, we can adjust it on this interface. For example, modify the device address to an unused address. Drag the device icon for the modified address to the unused address icon. If the device address needs to be modified to an already used address, an unused address is required as an intermediary to temporarily store the device to be removed, and the device can be modified by vacating the address. **Therefore, it is recommended to connect with no more than 63 devices on the DALI bus to facilitate changing the DALI address via software.**

For devices that are newly connected to the DALI bus, an initial no address operation can be performed, and these new devices will also be assigned addresses.

④ **Group assignment:** Click the DALI device icon and drag directly to the right group control icon to assign the device to the group. If drag to the icon  on the right of the group list, that is to delete group.

⑤ **Status of the DALI device:** Analysis is as follows:

: The address is not used and there is no DALI device on the icon.

: The DALI device at this address is working normally and is on.

: The DALI device at this address is working normally and is off, and has been assigned to group G0. **Note: G0 in the DALI system corresponds to G1 in the KNX system.**

: Indicates that the DALI lamp has failed or is not connected.

: Indicates that the DALI ballast has failed or is not connected.

: Group control icon, indicates that the DALI group is off.

: Group control icon, indicates that the DALI group is on.

3.4 Monitor Interface

Monitor interface as shown in Figure 3.11, is used only for debugging the DALI bus.

When the DALI bus is operated, this interface can monitor the data communication on the DALI bus. For example, during initializing the bus, you can see the address assignment of the DALI device. At the same time, it can also monitor the query process of device status, read the process of device configuration and so on.

Fig. 3.11 Monitor Interface

Chapter 4 DALI Bus Debugging Steps

This chapter mainly introduces the operation flow and precautions of DALI bus debugging through software tools. For a newly installed project, the debugging steps are as follows:

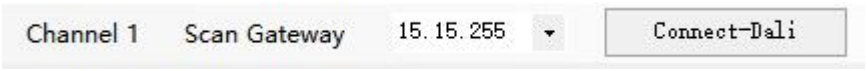
1.Before using the software for debugging, first configure the parameters of the KNX/DALI gateway through ETS and confirm that the gateway is running normally.

2.Double-click the "KnxDaliDebug.exe" program in the DALI configuration software storage folder to start the software.

3.Connect the KNX bus.

4.Scan gateway.

5.Select the gateway physical address and channel to debug, and Connect-Dali.



6.Read device config： (If the DALI device is installed in the first time, usually it will automatically initial after DALI bus is power on.): Read all the device configuration that has stored on the local gateway,including single device configuration, group configuration and scene assignment, etc. After the read operation is completed, check out whether the number of DALI devices is correct. If it is correct, directly perform the lamp test and modify the DALI address. If the number of devices is incorrect, DALI bus need to be initialized , and the DALI address need to be reassigned, then perform the lamp test and modify the DALI address. In addition, a single device state can be read on the device configuration interface, as shown in Fig.3.7(1), or read device configuration remotely. In general, using [Local] Read device config, when the device on the DALI bus has changed, or when the number of local read device config is abnormal, you can click [Remote] Read device config to synchronize (read device config remotely will take a long time.)

Note: Add DALI device to a configured project, if the added DALI device is installed for the first time, you can directly add it to the project. After adding the project, adjust its DALI address. If the device with DALI address is added and the address is multiplexed with the DALI device in the project, the DALI bus needs to be initialized, which will cause the previous adjusted DALI address to change. Therefore, it is recommended that the newly added DALI device should be added to the project after it is separately allocated the unused address.

7.After finish step 6, configuration of DALI device such as scene configuration, parameter configuration and group assignment, etc. can be modified. After finish the modification, store to device.

8.Export configuration: Save the configuration of the gateway.