

# Programming Manual Gang Switch V2.1



Created By Sameh & Basem



#### Contents

#### **1-Introduction**

Objective 1-1 S-bus products 1-2

#### 2- Start Programming

S-Bus Programming Software overview 2-1 S-bus Configuration Software basic setting 2-2 Devices address and Search 2-3 Steps of basic programming 2-4 What is the MAGIC LINE 2-5

#### **3- Panel Switch Programming**

Panel Switch Type Overview3-1Panel Switch Address and basic setting3-2Panel Switch button Remarks and Modes3-3Panel Switch button Function settings3-4Panel Switch button Memory, Dimming, and LED Setting3-5Panel Switch Setup (Minimum Diming Value and Infrared)3-6

# Before you begin this course

Before you begin this course, you should have:

- Understand the basic bus Diagram Connection Topology
- Understand the Lighting and HVAC Connections Diagram
- Basic Knowledge about IP setting. (please see 2-2)
- Basic Knowledge of using Windows operating system.
- Basic Knowledge of using Windows Painter.

# Prerequisites

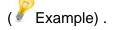
Either

- Products overview course.
- Installation Course.

# How this course is organized

Lighting and HVAC Programming Guide Course Organized in Simple way of

Product overview, Example Picture, ( Notices), ( School Advices),



For Training Course Request Please apply online www.smarthomebus.com

# 1-Introduction

Welcome to S-BUS manual Programming Guide, you are now a Beginner Programmer who well know soon how the S-bus Programming is simple.

# 1-1 Objective:

After this course you will be able to program the Lights Dimmers ad relays with the switches Panel, Program curtain shades control, program the Air condition setting and DDP panel, create and download different Picture on the LCD, and start with Motion sensor and Automate your Project and many more...

# **1-2 S-Bus products:**

S-BUS Products is vary with its powerful and multi functions, it have the high power dimmer and relay, Curtain, DMX and LED controller, Wall switches and Dynamic Display Panel "DDP", HVAC2 Air condition control and different type of sensors, like Motion sensor, light intensity sensor, Ultrasonic sensor, Dry input sensor, Analog input, current sensor, Power meter, Infrared receivers and transmitter, Security and Automation, Audio Module, Rs232, Programming and integrations Module



# 2- Start Programming

In smart home G4 there are two ways For Programming:

- 4 Manual Way (For Basic Programming).
- Pc /Laptop Way (For Basic and Advanced Programming).

## 2-1 S-Bus Programming Software overview

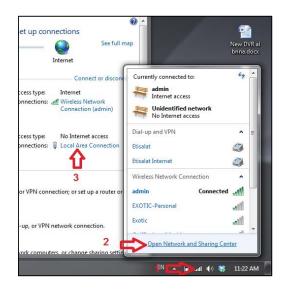
You need on this lesson: to have your computer with you. Running on windows Operating system, Smart Cloud **G4** software, Programming port SB-DN-1IP, that enable you to search for all the devices that connected to the bus network.

1- Install your S-bus configuration software in your Computer by pressing the **Setup** icon and follow the installation steps windows

2- Plug in your Ethernet cable (Rj45) in your pc and the other end in the **RSIP** module or **Zaduio** module then **Set** your computer IP Address, for example

| IP      | 192.168. <mark>10</mark> .115 |
|---------|-------------------------------|
| Subnet  | 255.255.255.0                 |
| Getaway | 192.168. <mark>10</mark> .1   |

The default address for S-bus Product is **192.168.10.xxx** 



| Local Area Connection St                        |  | Internet Protocol Version 4 (TCP/   | /IPv4) Properties  |
|---|--|---|--|
| eneral  | Networking Sharing   | General   |  |
| Connection IPv4 Connectivity:                   | Connect using:   |   | d automatically if your network supports<br>leed to ask your network administrator |
| IPv6 Connectivity:<br>Media State:<br>Duration: | Confi<br>This connection uses the following items:   | Obtain an IP address autor  |  |
| Speed:  | <ul> <li>✓ ➡ Hotspot Shield Routing Driver 6</li> <li>✓ ➡ QoS Packet Scheduler</li> </ul>        | IP address:   | 192 . 168 . 10 . 115   |
| Details   | File and Printer Sharing for Microsoft Networks  | Subnet mask:  | 255.255.255.0  |
|   | Internet Protocol Version 4 (TCP/IPv4)   | Default gateway:  | 192 . 168 . 10 . 1   |
| Activity Sent                                   | Link-Layer Topology Discovery Mappen 70 Divergence      Link-Layer Topology Discovery Responder  | Obtain DNS server address     Obtain DNS server address     Output the following DNS server |  |
| Packets:  | Install Uninstall Prope  | rties Preferred DNS server:   |  |
| TOCKED.   | Description<br>Transmission Control Protocol/Internet Protocol. The de                           | Alternate DNS server:   |  |
| Properties BDis                                 | wide area network protocol that provides communicatio<br>across diverse interconnected networks. | n   | t 7 Advanced   |
| 4   | ОК   | Ca  | OK Cancel  |

3- Run your S-bus smart cloud Software



4- The Password window will open, type the default password is **user** 

| Username                                      | user   |
|---|--|
| Password                                      | ****   |
|   | t-Cloud (R) Smart-Mesh (R) Smarthome (R) are all<br>inks and Intellectual Property of Smart-Group (R). |
|   | col is patented to Smart-Group(R) Registered under   |
|   | 3081.0 All Intellectual Properties are copy righted and  |
| must not be claimed i<br>entity except SmartH | nor implied to be otherwise related to any other   |
|   |  |
|   | or any of the Hardware that carry  |
|   | ptocol is a complete acceptance to<br>ty rights, and copy rights, as well                              |
|   | ditions set or to be set by  |
|   | t liability whatsoever on the  |
| Smart-Group or any                            | of their partners or subsidiaries.   |
|   | erstand and accept, then kindly  |
| Press (Accept) othe                           | erwise Press (cancel) to exit.   |
|   |  |
|   | ( <b>5</b> )   |
|   |  |
|   |  |

5- Your software will start



|                |                 |           |                 | Group (R) www.smarthomebus. |                                  |                 |                                    |
|----------------|-----------------|-----------|-----------------|-----------------------------|----------------------------------|-----------------|------------------------------------|
|                |                 |           |                 |                             | Users(U) Other(O) Hotel Help (H) |                 |                                    |
|                | 😂 👌             |           | ● A ⊨ +   ♥   4 | 🖳 🙆 🔛 🛧 📭 4                 | 7   🖎 🖄 📩 🍁 🐜 🖬                  |                 |                                    |
| N-line devices |                 |           |                 |                             |                                  |                 |                                    |
| tatus :        | Subnet ID       | Device ID | Model           | Remark                      | Description                      |                 |                                    |
|                |                 |           |                 |                             |                                  |                 |                                    |
|                |                 |           |                 |                             |                                  |                 |                                    |
|                |                 |           |                 |                             |                                  |                 |                                    |
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|                |                 |           |                 |                             |                                  |                 |                                    |
|                |                 |           |                 |                             |                                  |                 |                                    |
|                |                 |           |                 |                             |                                  |                 |                                    |
| A              | e Link Via:Ethe |           |                 |                             | Current IP:192.168.10.115        | Total Devices:0 | Best Viewed at 1024x768 Resolution |
| ACIN           | e Link Via Ethe | net 😢 🚺   |                 |                             | Current P. 192.166.10.115        | Iotal Devices.v | مى EN م 🙀 🔒 🔐 (1) 11:47            |

6- You can see your current IP on the footer of the software as 192.168.**10**.115 then your IP setting is ok.

| •   |                           |
|---|---------------------------|
| Current IP:192.168.10.115 Current IP:192.168.10.115 | Best Viewed at 1024x768 F |
|   | EN 🔺 😼 🗊 📲 🕪              |

A Set your computer IP setting before starting the S-BUS Smart Cloud.

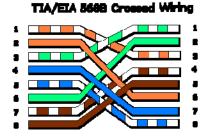
You should always reset your Module every time you change the IP Address in order the new setting to be Active.

After you set your Module IP Address now you should connect the module to Your Computer Network in order to communicate. The connection can be in two ways

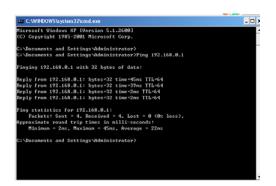
 Connect the 1Port IP/RSIP Module to the HUB or Data Switch and connect your Computer to the same data Switch as standard straight cable Network wiring.



2- Without using the HUB or data switch you can use the cross cable to connect your computer directly to the IP Module, see the next cross wiring diagram of TIA/EIA 568B crossed wiring



You can use the Line command **Ping** to check your connection. On your Computer, Go to start/ Run/ CMD then type Ping 192.168.10.xxx If you see the following results similar to this Picture then your connection is successful

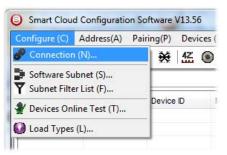


Always the Programmer should carry with his programming kit the cross cable for programming without needs of the Data Switch or HUB.



## 2-2 S-bus Smart cloud Software basic setting

#### <u>Configure</u>



#### • 1- Connection

You can change between Ethernet Connection and Serial Port connection,

the Serial Port connection is old, slow and no longer use. Always Keep the setting on Ethernet connection

| Connection Type               |   |          |      |
|-------------------------------|---|----------|------|
| 🔘 Serial Port                 | Ø | Ethernet | 2    |
| Local IP                      |   |          |      |
| <ul> <li>Automatic</li> </ul> |   | 🔘 Manual |      |
| IP:                           |   |          | •    |
|                               |   | Save     | Exit |

Also you can choose between **obtain Local IP Automatically** (Default), or to **input local IP Manually**.

Input local IP manually you can use it for example, if you are using in your laptop or computer Wireless and wired Network with different IP setting, and you want to choose the right one of it for programming, and don't want your S-bus software to detect your other IP address Automatically.



#### • 2- Software Subnet ID

The S-bus configuration software have fixed Device ID (254), but you can change its subnet ID only, the default software subnet is (Default = 254)

The software default subnet ID address is 254, Device ID 254, this address must be <u>unique</u>, in case other Device has the same address you will not be able to find that Device unless you change the Subnet of the software.

• **3**- Subnet Filter List:

Here you can filter your subnet ID's that mean you can add more ranges if you have more than 254 devicess so you can add another subnet ID

• 4- Devices On-Line test

You can Deactivate or activate the auto test of Online devices (Activate is Default).

• 5- Load type

You can add some Remarks to your Load type to use it as reference and print it out later on the excel sheet.

## <u>Address</u>

Here you can search for the Device Addresses and load the Network and solve any conflict in the address. (For more Information see 3-2)

## <u>Pairing</u>

You can enable pairing or disable either for one device or for all devices, disable meaning you can't program S-bus modules in manual anymore until you enable it again.

## <u>Devices</u>

You can go here directly to Devices setting Categorized by type

## <u>Test</u>

This is important Function to check your Lights Circuit by flashing the lights ON/OFF and then you can give it name (for more information see 3-3 section).

## <u>Language</u>

You can change the Language between English and Chinese, and other Languages

## <u>Backup</u>

Important to backup and restore your Devices address and setting.

- For Backup: put the subnet and device ID for desire device , choose the location for the backup file then click "Start backup" ,
- For Restore: put the subnet and device ID for desire device, choose the backup which you already made then click "Restore".



| Device Backup                        | Device Restore               |
|--------------------------------------|------------------------------|
| Target Addess                        | Device Addess to Restore     |
| Subnet ID: Device ID:                | Subnet ID: 1 Device ID: 250  |
| Desired Location to save Backup file | Restore file location Select |
| Start Backup Stop backup             | Restore                      |

## 2-3 Devices address and Search:

Each of S-bus Devices must have its own Address in the Network, the Address for each Device consist of 2 parts:

- Subnet ID
- ✤ Device ID

The subnet ID can be from 0 – 254

And the Device ID can be from 1 - 254

So you can put up to 65024 Deferent Devices in the same network with deferent subnet and device ID Address

For example one of Dimmer Module Address is (Subnet 1, Device ID 5)

#### There is 5 ways to Search for the Devices in the Smart cloud Software

- 1- Fast Search
- 2- Advanced Search
- 3- Manually Search
- 4- Broadcast Address Device Search
- 5- Solve Conflict address search

#### Fast Search

The Fast search is very useful tools to test your communication and search your devices Fast, the Fast search take around 2-15 seconds to finish load the devices information in your network.

| 9 | Smart Cloud    |
|---|----------------|
| С | onfigure (C) / |
| C |                |
| C | Scan e devices |
|   | Status         |

- Click on the Scan button
- Click on the Fast search Button
- Click add all
- Click Exit to exit the Window





Fast search can't load all the Network Devices, it is only load part of the devices, it is only good for small project that contain around 10 devices, and to check the network communication with your PC.

#### Advanced Search

The Advanced Search is a powerful tool for searching your Devices in the network. You can set the Subnet ID you like to search on it and select the range of device ID you want to search for.

Advanced search take 0.3 seconds for each device to load and total of 80 seconds to finish the search and load for 255 devices totally in each subnet.

- Click on the Online Search button
- Go to **advanced search**, put the subnet ID and the range of device ID search

| Search on-li<br>Fast Se<br>Advance |           | Subnet ID: | 255 🗸            | Device ID  | 1 | То  | 254  | Q   | Sut         | inet   | Add all |
|------------------------------------|-----------|------------|------------------|------------|---|-----|------|-----|-------------|--------|---------|
| Manually                           | Add:      | Subnet ID: | 1<br>2<br>3<br>4 | Device ID: | 1 |     |      | Add | Stop        | Search | Exit    |
| tal Devices:<br>Current on-li      |           |            | 5<br>255         |            |   |     |      |     |             |        |         |
| Status                             | Subnet ID | Device ID  | Mode             | 1          |   | Ren | nark |     | Description |        |         |

- Click search ICON
- Click ADD ALL after the search finish
- Click Exit to exit from the window
- click stop to stop the search
- Click subnet to add new subnet to the popup Menu subnet list

Use the Advanced Search Always as your standard way to Load the Devices in the Network to your computer before you program in any new project.



#### Manual Search

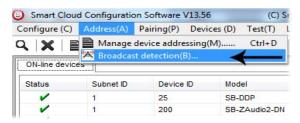
Manual Search is a very fast and useful way to add known Device ID and subnet to your network

| Manually Add: Su | bnet ID: | Device ID: | 🕹 Add |
|------------------|----------|------------|-------|
|------------------|----------|------------|-------|

- Type the subnet and device ID that you know
- Click ADD
- Exit the Menu

#### Broadcast Address Device Search

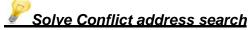
This tool is important when you add new devices or you start your new Project installation, many devices could have the same Address or the communication is not yet tested, this tool is important to check the communication between your device and the bus network and to change its initial address in the first time installation.



- On your software Click Address then broadcast detection
- Go to your device like Dimmer / Relay / sensor or Panel and keep pressing the broadcast Address button for 2 ~ 4seconds until the button LED color change to RED.
- In your software in the Broadcast Detection window click the **Detect Address** Button.
- Your Device ID and Subnet well appear automatically
- To change the address just type the new subnet ID or device ID you want then click **Save Address**
- Click **ADD to online device list** to load your device in the Devices Network List.
- Click Exit to Close the Window

| 4 (0-4)-    | Device) Devec Dev  |                     | 0 <del>1</del> |                  | de la contil de la | Color Change | - 050  |  |
|-------------|--------------------|---------------------|----------------|------------------|--------------------|--------------|--------|--|
|             |                    | adcast utton (Keep  |                |                  | ds) until LEI      | Color Change | to RED |  |
|             |                    | D Red) Now you an   |                | oadcast Mode     |                    |              |        |  |
| 3. Click On | "Detect Address"   | Button to locate De | vice address   |                  |                    |              |        |  |
| 4. Once De  | evice is Detected, | you can Keep Setti  | ngs, or can Mo | dify as Needed t | then Save          |              |        |  |
| Address.    | After that can "Ad | dd to Online Device | List")         |                  |                    |              |        |  |
|             |                    |                     |                |                  |                    |              |        |  |
|             |                    |                     |                |                  |                    |              |        |  |
|             |                    | Detect Add          | ress           |                  |                    |              |        |  |
|             |                    |                     |                |                  |                    |              |        |  |
|             | Subnet ID          | 1                   | Device ID      | 250              |                    | Save Address |        |  |
|             |                    |                     |                |                  |                    |              |        |  |
|             |                    |                     |                |                  |                    |              |        |  |
|             |                    | dd to Online Device | s List         |                  |                    | Exit         |        |  |
|             |                    |                     |                |                  |                    |              |        |  |





This type of search used to solve the conflict address, for example if 2 devices have the same address, then you can easily change the address of it without the need of disconnecting its wires from the network.

- Click Address or click the Address Shortcut icon

|             | e devices by subnet ID |           |                |                                     | Setup                   |
|-------------|------------------------|-----------|----------------|-------------------------------------|-------------------------|
| 255         | •                      | Q         | Cancel         | Subnet Filter                       |                         |
| Search Resi | uit                    |           |                |                                     |                         |
| NO.         | Subnet D               | Device ID | Model          | Description                         | MAC                     |
| ¥ 1         | 1                      | 200       | SB-ZAudio2-DN  | Zone-Audio 2                        | 53.08.00.00.00.00.00.2F |
| ¥ 2         | 1                      | 100       | SB-RSIP-DN     | Hybird Integration Link with IP     | 53.01.00.00.00.00.00.CC |
| ¥ 3         | 1                      | 56        | SB-IR-UN       | IR Emitter with Current Sensor      | 53.05.00.00.00.00.00.2A |
| ¥ 4         | 1                      | 99        | SB-RLY8c16A-DN | Relay 8CH 16A/CH, DIN-Rail Mount    | 53.02.00.00.00.00.00.65 |
| ¥ 5         | 1                      | 88        | SB-DIM6c2A-DN  | Dimmer 6CH 2A/CH, DIN-Rail Mount    | 53.02.00.00.00.00.AF    |
| ¥ 6         | 1                      | 113       | SB-HVAC2-DN    | HVAC2, Air Condition Control Module | AC.AC.AC.AC.AD.AD.AD    |
| 17          | 1                      | 203       | SB-Logic2-DN   | Actomation Logic Module 2           | 53.06.00.00.00.00.00.2C |
| ✔ 8         | 1                      | 78        | SB-6BS         | 6 B                                 | 53.06.00.00.00.00.0B    |
| ¥ 9         | 1                      | 30        | SB-4Z-UN       | 4-Zone Dry Input Module             | 53.03.00.00.00.00.0F    |
| <b>1</b> 0  | 1                      | 1         | SB-DDP         | DDP                                 | 53.14.00.00.00.00.00.32 |
|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
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|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |
| •           |                        |           |                |                                     |                         |
|             |                        |           |                |                                     |                         |

- Select Subnet **255 (recommended)** or any desired subnet then click the search icon.
- Select the device you want to modify its address then click **modify** Address or double click on
- New window will open, and then type the new Subnet ID and Device ID, then Click **Save**

it

| General            |                         |            |      |
|--------------------|-------------------------|------------|------|
| Subnet ID:         | 1                       | Device ID: | 200  |
| Model:             | SB-ZAudio2-DN           |            |      |
| MAC:               | 53.08.00.00.00.00.00.2F |            |      |
| Modify device addr | ess by MAC              |            |      |
| Subnet ID:         |                         | Device ID: |      |
|                    |                         | Save       | Exit |



## 2-4 Steps of Basic Programming

The Basic Programming for Lighting Motor and HVAC of S-bus Products has procedure of Basic Steps as following

- A- Check the communication between your computer and the Bus
- B- Broadcast each Dimmer, Relay, Motor curtain HVAC control++ initial Address
- C- Change the initial addresses to the desired one (kindly check 2.5 for addresses range).
- D- Give name of each Dimmer, Relay Module (Remark).
- E- Check each Lighting channel circuit if working and connected good
- F- Give name for each channel (remark).
- G- Make an excel sheet for all your Dimmers, relays, other module address and circuit name.
- H- Make Area for each Dimmer, Relay module if required .
- I- Make Scene and Sequence for each Module if required .
- J- Make safety power restore and delay time for scenes and safety as required.
- K- Check the curtain module gives it address and name.
- L- Set the channel name, the running time open and close running time.
- M- Give the switch (6 gangs) and panel (DDP) its addresses and Name.
- N- Assign the panel button to the corresponding scene or channel.
- O- Set the button graphic picture for the DDP for each button.
- P- Check the HVAC address give it address and name.
- Q-Set on off relay sequence.
- R- Set the VAV Voltage output if required.
- S- Set the safety HVAC running sequence T- assign the DDP Panel to its HVAC unit.
- U- Set the FAN speed, cool set point, type, adjust temperature sensor on the panel setting.
- V- Set the required graphic for AC, and panel basic setting
- W- Search for PIR motion sensor and give it address and name
- X- Set the sensitivity, way of triggering, motion, no movement delay and commands
- Y-connect the Z-audio 2 to the s-bus And address it
- Z-Test and enhance your programming.

Following the basic Programming steps procedure will save the programmers time and effort.



## 2-5 What is The Magic Line In our software ? :

In programming in all S-bus Modules you will find the same line with same fields that's why we called it "Magic Line ".

If you want to send any command you have to use this magic line.

| Function no. | Subnet ID | Device ID | Туре             | Parameter 1 | Parameter 2 | Parameter 3 |
|--------------|-----------|-----------|------------------|-------------|-------------|-------------|
| 1            | 1         | 50        | Invalid switch 👻 | 1           | 2           | N/A         |
| 2            | 10        | 11        | Invalid switch   | 12          | 13          | N/A         |
| 3            | 255       | 255       | Invalid switch   | 255         | 255         | N/A         |
| 4            | 255       | 255       | Invalid switch   | 255         | 255         | N/A         |
| 5            | 255       | 255       | Invalid switch   | 255         | 255         | N/A         |

If you notice the Command Line is contained of :

**Function No.** : indicated to Order/Function Number , the maximum order you can put is depend of the module .

**Subnet ID** : each device has subnet ID in our software you can put up to 254 subnet ID.

**Device ID** : additional to the Subnet ID also each device must has uniqe ID to avoid the conflict . and the range is 254.

Each Subnet ID can cover 254 devices and we have 254 subnet ID that means the total Number is 64516 devices.

**Type :** What type of order you want to send, if you notice in the following pic the system has many types depend on the module

| Function no. | Subnet ID | Device ID | Туре  | Parameter 1 | Parameter 2 | Parameter 3 |
|--------------|-----------|-----------|---|-------------|-------------|-------------|
| 1            | 1         | 50        | Scene switch 👻  | 1           | 2           | N/A         |
| 2            | 10        | 11        | Invalid switch  | 12          | 13          | N/A         |
| 3            | 255       | 255       | Scene switch<br>Sequence switch   | 255         | 255         | N/A         |
| 4            | 255       | 255       | Universal switch  | 255         | 255         | N/A         |
| 5            | 255       | 255       | Single channel lighting<br>Curtain switch<br>SMS control<br>Panel control<br>Broadcast scene<br>Broadcast channel | 255         | 255         | N/A         |
|              |           |           | Broadcast channel<br>Security module<br>Zone-Audio 2  |             |             |             |



Parameter 1 ,Parameter 2 and Parameter 3 are related to "TYPE" field like this Table :

| Function            | Parameter 1         | Parameter 2             | Parameter              |
|---------------------|---------------------|-------------------------|------------------------|
| type                |                     |                         | 3                      |
| Invalid             | N/A                 | N/A                     | N/A                    |
| Scene<br>Switch     | Area Number         | Scene Number            | N/A                    |
| Sequence<br>Switch  |                     |                         | N/A                    |
| Universal<br>Switch | Switch<br>Number    | ON / OFF                | N/A                    |
| Single<br>channel   | Channel<br>Number   | Brightness 0-100%       | Fade time<br>0S - 60 M |
| Curtain<br>Switch   | Switch<br>Number    | Stop / ON/ OFF          | N/A                    |
| SMS                 | Message             | Message SMS Number      | N/A                    |
| Panel               | Invalid             | N/A                     | N/A                    |
| Panel               | IR Receiver         | ON / OFF                | N/A                    |
| Panel               | Lock                | ON / OFF                | N/A                    |
| Panel               | AC Power            | ON / OFF                | N/A                    |
| Panel               | AC Cooling          | 0-30 C , 32- 86F        | N/A                    |
| Panel               | ACFan Speed         | Auto/high/med/slow      | N/A                    |
| Panel               | AC Mode             | Auto/Cooling/Heating/FA | N/A                    |
| Panel               | AC Heating          | 0-30 C , 32- 86F        | N/A                    |
| Panel               | Rise temp           | 0-30 C , 32- 86F        | N/A                    |
| Panel               | Reduse temp         | 1-5 C/F                 | N/A                    |
| Panel               | LCD Backlit         | ON / OFF                | N/A                    |
| Panel               | LCD status ligh     | 1~100                   | N/A                    |
| Panel               | Floor heating power | ON / OFF                | N/A                    |
| Panel               | Floor heating mode  | Normal-day-night -away  | N/A                    |
| Panel               | Goto page           | 1~7                     | N/A                    |

| Function<br>type     | Parameter 1                | Parameter 2  | Parameter<br>3         |
|----------------------|----------------------------|--|------------------------|
| Broadcast scene      | All Areas                  | Scene Number   | N/A                    |
| Broadcast<br>Channel | ALL Channel                | Brightness 0-100%  | Fade time<br>0S - 60 M |
| Security<br>Module   | Area Number                | Arming Mode  | N/A                    |
| Zone-audio 2         | Source Control             | SD Card/Audio In/FTP<br>Server/FM Radio                      | N/A                    |
| Zone-audio 2         | Play Mode                  | No Repeat/ Repeat Song/<br>Continued/ Repeat all             | N/A                    |
| Zone-audio 2         | Play List/Radio<br>Channel | PREV Play List/Next Play<br>ListSpecify Play List<br>No/PREV | N/A                    |
| Zone-audio 2         | Play Control               | PREV Song/Next<br>Song/Play/Stop                             | N/A                    |
| Zone-audio 2         | Volume                     | VOL  | 0-100                  |
| Zone-audio 2         | Volume                     | TREBLE   | Reduce/increase        |
| Zone-audio 2         | Volume                     | BASS   | Reduce/increase        |
| Zone-audio 2         | Play Specify<br>Song       | Folder No.   | Song No.               |



# 3- Panel Switch Programming (6/4/2 gang)

## 3-1 Panel Switch Type Overview

The Switch panel in the wall is your interface to control your lights, curtain and other application

The S-bus button switch panels have many types, including the 6 button panel, 4 button panel. 3 buttons panel, 2 buttons panel, and 1 button panel.

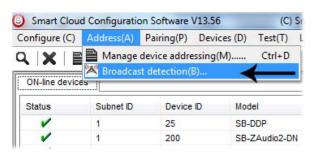
## 3-2 Panel Switch Address and basic setting

To change the address and check the communication you should use the *Broadcast Address Device Search as you see in the section 2-5 before) Every Switch Panel has broadcast button inside it* 



Just click first button and keep pressing until red color coming.

- On your software Click Address



- On your Panel keep pressing the broadcast Address button for 4-5 seconds until LED turn ON
- In your software in the set broadcast detection window press the **Detect Address**
- Your Device ID and Subnet well appear Automatically



- To change the address just type the new subnet ID or device ID you want then press **Save Address**
- Press ADD to load your device in the Devices Network List
- Press Exit to Close the Window

After you load the Panel to the network, double click on it.

- In the basic setting you can type the panel name **remarks**, change its address subnet, and device ID
- Also you can change the **Backlight** brightness and **LED** indicator brightness of the Buttons

| Indicator intensity     |                             |           |       |      |
|-------------------------|-----------------------------|-----------|-------|------|
| Back Light              | •                           |           | ▶ 100 |      |
| Status Light            | •                           |           | ▶ 100 | Save |
| -Modify subnet ID and c | levice ID according to MAC- |           |       |      |
| Subnet ID               |                             | Device ID |       | Save |

## 3-3 Panel Switch button Remarks and Modes

When we go to the Panel setting tab we will see all the buttons listed on the screen, by pressing the **mode** button we can change the Button function as you can see on this picture

| General   |  |                 |   |
|---|--|-----------------|---|
| Data acquisition r  | node: Device   | Model:          | SB-6BS  |
| Subnet ID:  | 1  | Device ID:      | 78  |
|   |  |                 |   |
| Remark  | 123456789  | Button totality | 6   |
|   |  |                 |   |
|   |  |                 |   |
|   |  |                 |   |
| lodify button mode  |  |                 |   |
|   |  |                 |   |
| 1 Single on/o   | 11   | •               | 2 Single on/off   |
|   |  |                 |   |
| 1 Single on/o   |  | ▼  <br>▼        | 2     Single on/off     ▼       4     Single on/off     ▼ |
|   | ff   | •  <br>•  <br>• |   |
| 3 Single on/o<br>5 Single on/o<br>Invalid   | ff   | •               | 4 Single on/off   |
| 3 Single on/o   | ff   | •               | 4 Single on/off   |
| 3 Single on/o<br>5 Single on/o<br>Invalid<br>Single on/o<br>Single on<br>Single off   | ff<br>ff   | •               | 4 Single on/off   |
| 3 Single on/o<br>5 Single on/o<br>Invalid<br>Single on/o<br>Single on<br>Single off<br>Combination  | ff<br>ff<br>ff                                       | •               | 4 Single on/off   |
| 3 Single on/o<br>5 Single on/o<br>Invalid<br>Single on/o<br>Single on/o<br>Single onfo<br>Combination   | ff<br>ff<br>ff<br>n On<br>n Off                      | •               | 4 Single on/off   |
| 3 Single on/o<br>5 Single on/o<br>Invalid<br>Single on/o<br>Single on<br>Single off<br>Combination<br>Pressing O<br>Combination                                 | ff<br>ff<br>ff<br>n On<br>n Off<br>n Off<br>n on/off | •               | 4 Single on/off   |
| 3 Single on/o<br>5 Single on/o<br>Invalid<br>Single on/o<br>Single on/o<br>Single off<br>Combinatior<br>Combinatior<br>Pressing O<br>Combination<br>Diclick and | ff<br>ff<br>ff<br>n On<br>n Off<br>wRelease Off      | •               | 4 Single on/off   |



#### Panel Switch Button Mode Setting

| How to use   | Where to use<br>example  | Function   | Mode                              |
|--|--|--|-----------------------------------|
| No use   | When you have<br>extra button that<br>you don't need to<br>use it  | No function  | Invalid                           |
| Single Press   | In room off mode<br>to close the Light<br>channel  | To OFF Light or<br>scene, every<br>time you press it   | Single OFF                        |
| Single Press   | Usually used to<br>trigger scene like<br>visitor, meeting<br>mode etc  | To run scene<br>ON , or Lights on<br>every time you<br>press   | Single ON                         |
| Single Press ON<br>, Single Press OFF,<br>keep pressing Dim/<br>keep pressing Ramp   | Widely use for<br>ON/OFF light,<br>scene by single<br>press  | The classical<br>use of toggling<br>of single press<br>ON/OFF  | Single<br>ON/OFF                  |
| Single Press   | to Run complex<br>mode that required<br>more than 1 scene<br>and mode by<br>single press   | To trigger up to<br>99 different<br>commands<br>every time the<br>button pressed   | Combination<br>ON                 |
| Single Press   | To OFF complex<br>mode that required<br>more than 1 scene<br>and mode by<br>single press   | To OFF up to 99<br>commands<br>every time the<br>button pressed  | Combination<br>OFF                |
| Single Press ON<br>commands, Single<br>Press OFF<br>commands   | To run ON and<br>OFF complex<br>mode that required<br>more than 1 scene<br>and mode by<br>single press   | To trigger up to<br>99 commands<br>toggling<br>between<br>ON/OFF each<br>time the button<br>pressed  | Combination<br>ON/OFF             |
| Double fast click on<br>the right button side<br>to trigger double click<br>function, Single<br>Press ON, Single<br>Press OFF, keep<br>pressing Dim/ keep<br>pressing Ramp | Used as extra<br>function to trigger<br>any other scenes<br>on double click of<br>the same button,<br>like Double click<br>can trigger ALL<br>room off | To use the<br>double click to<br>run up to 49<br>commands while<br>single press will<br>toggle between<br>ON/OFF of<br>different<br>commands | Double<br>click, single<br>switch |

S-BUS - Lighting Motor and HVAC Programming Guide Ver. 1.2

| Double fast click on<br>the right button side<br>to trigger double click<br>function, Single<br>Press ON, Single<br>Press OFF | Used as extra<br>function to trigger<br>any other scenes<br>on double click<br>and different one<br>for single Press | To use the<br>double click to<br>run up to 49<br>commands while<br>single press will<br>toggle between<br>50 commands<br>ON/OFF | Double click,<br>Combination<br>switch |
|---|--|---|--|
| Keep pressing to keep<br>sending on command,<br>On release the OFF<br>command<br>will trigger                                 | Used for example<br>in Bell, gate<br>motor , some IR<br>commands   | To run 1<br>command as<br>momentary<br>pressing   | Pressing on<br>release off             |

- To edit Button Remarks press Remark edit then Save and Exit

be careful when using Combination mode, the button will not have 2 way feedback statues, then the panel LED cannot be updated if the lights channel ON or OFF from other devices.

Try always to use Single ON/OFF, cause its 2 way updated and simple friendly use for the end user.

## **3-4** Panel Switch button Function settings

For each button you can make different functions of different commands (Reference to the Magic Line 2-5)

- On the panel window go to key assignment
- Press on the Function button
- Press on type popup menu and you can select the function you want as you can see on the picture

| Function no. Subnet ID | ction no. Subnet ID Device ID Type | Туре | Parameter 1 Param              | ter 1 Parameter 2 Param |     |   | arameter 3 |   |  |   |   |  |
|------------------------|------------------------------------|------|--------------------------------|-------------------------|-----|---|------------|---|--|---|---|--|
| 1                      | 1                                  | 99   | Single channel ligh 👻          | 1                       | 100 | • |            | 0 |  | : | 0 |  |
|                        |                                    |      | Invalid switch<br>Scene switch |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Sequence switch                |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Universal switch               |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Single channel lighting        |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Curtain switch                 |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | SMS control                    |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Panel control                  |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Broadcast scene                |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Broadcast channel              |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Security module                |                         |     |   |            |   |  |   |   |  |
|                        |                                    |      | Zone-Audio 2                   |                         |     |   |            |   |  |   |   |  |

- Press Save and Exit.

Each Function type is necessary for different Action

#### Example of each one as the table below

| Example of using  | Function Type                 |
|---|-------------------------------|
| Is to disable the function  | Invalid                       |
| Used to trigger the Scene that you create on the Dimmer or Relay Area   | Scene Switch                  |
| Used To trigger the Sequence that you create on the Dimmer or relay Area  | Sequence Switch               |
| Used to send infrared code number, play show control list, set<br>logic flag On or Off, set the hotel door bell services, disable or<br>enable (Motion sensor, light intensity, zone port automation) | Universal Switch              |
| Used to turn one channel lights on./off with special level and running fade time  | Single channel<br>Lights      |
| Used to open, close or stop the curtain channel   | Curtain Switch                |
| Used to turn the Air condition , ON/OFF   | Panel control ,<br>AC Power   |
| Used to set the Air condition cooling desired temperature to  | Panel control                 |
| 0-30 C , 32- 86F  | Cooling Temp                  |
| Used to set the Fan type between Auto, High , Medium , Low  | Panel control                 |
|   | FAN Speed                     |
| Used to set the AC mode to run as Auto, Cooling, Heating , Fan only   | Panel control<br>AC Mode      |
| Used to set the Air condition heating desired temperature to 0-30 C , 32- 86F   | Panel control<br>Heating Temp |
| Used to set the Air condition Auto mode desired temperature to  | Panel control                 |
| 0-30 C , 32- 86F  | Auto temp                     |
| Used to Rise the Temperature by 1-5 C   | Panel control                 |
|   | Up temp                       |
| Used to Lower the Temperature by 1-5 C  | Panel control                 |
|   | Down Temp                     |
| Used to set the Backlightof LCD ON / OFF  | Panel control                 |
|   | LCD Backlit                   |
| Used to trigger same scene number for all the Areas of the dimmer or relay  | Broadcast scene               |
| Used to turn ON/OFF or set channel to brightness level for the  | Broadcast                     |
| all channel of Dimmer or relay  | Channel                       |



When choosing **Combination or double click** mode you have to input the function target number **from ... to** then press **confirm** 

| put function no.<br>Function configura |           | 1         | То                              | Confirm        |                  |        |
|--|-----------|-----------|---------------------------------|----------------|------------------|--------|
| Function no.                           | Subnet ID | Device ID | Туре                            | Parameter 1    | Parameter 2      | Parame |
| 1                                      | 1         | 99        | Single channel lighting contro  | 1(Channel no.) | 100(Intensity %) | 0:0(Ru |
| 2                                      | 2         | 89        | Single channel lighting contro  | 1(Channel no.) | 100(Intensity %) | 0:0(Ru |
| 3                                      | 3         | 89        | Single channel lighting control | 1(Channel no.) | 100(Intensity %) | 0:0(Ru |
| 4                                      | 4         | 89        | Single channel lighting control | 1(Channel no.) | 100(Intensity %) | 0:0(Ru |
| 5                                      | 5         | 89        | Single channel lighting contro  | 1(Channel no.) | 100(Intensity %) | 0:0(Ru |

When using **double click** / **Combination** you can change between each function setting in the radio log as the picture below

| Input function no. from | 1 | То | 5 | Confirm | Switch | Double click |
|-------------------------|---|----|---|---------|--------|--------------|
| input function no. from | · | 10 | Ŭ |         | Switch | Double click |

⚠️ Double click always will save the commands from 51 to 99, be

careful when you change the button mode from double click to Combination mode

only then the old setting of commands from 51 to 99 will remain Active.

Try always to refresh the page, to make sure not old wrong setting appears on the page, to refresh the page press right click on the mouse then press on **Refresh (Clear buffer memory, reread data from device)** 

#### Useful tools for editing your Functions

There are some useful tools to help you while you are making setting for multi functions together like the one in Combination and double click mode

| General   |  |  |  |   |   |   |
|---|--|--|--|---|---|---|
| Data acquisition                                    | mode:  | Device   | Model:   | SB-   | 6BS   |   |
| Subnet ID:  | 1  |  | Device ID:   | 78  |   |   |
| Remark  | 123456789  |  | Current buttor                                     | 1   |   |   |
| Mode  | Dblclick an  | nd Combinati   | on   |   |   |   |
| Modify subne  | -  | -  |  |   | the intensity synch<br>parameter 3 synchi           | -   |
| Modify device<br>Modify device<br>Modify type s     | ID synchron  | nously<br>ly   |  |   | parameter 3 synchi                                  | -   |
| Modify device                                       | ID synchron  | nously<br>ly   | Туре   |   |   | -   |
| Modify device<br>Modify type s<br>Modify button fur | e ID synchron<br>synchronous   | nously<br>ly<br>ration   | Type<br>Single channel lighting                    | Modify Parameter 1  | parameter 3 synchi                                  | ronously<br>Parameter 3                                       |
| Modify device<br>Modify type s<br>Modify button fur | e ID synchron<br>synchronous   | nously<br>ly<br>ration<br>Device ID  |  | Modify Parameter 1 1(Channel no.)                               | parameter 3 synchi<br>Parameter 2                   | Parameter 3<br>0:0(Running time(mm.s                          |
| Modify device<br>Modify type s<br>Modify button fur | e ID synchron<br>synchronous<br>nction configur<br>Subnet ID           | nously<br>ly<br>ration<br>Device ID<br>99  | Single channel lighting                            | Modify Parameter 1 1(Channel no.) 1(Channel no.)                | Parameter 2<br>100(Intensity %)                     | ronously  |
| Modify device<br>Modify type s<br>Modify button fur | e ID synchron<br>synchronous<br>nction configur<br>Subnet ID<br>1<br>2 | Incusive and the second | Single channel lighting<br>Single channel lighting | Modify Parameter 1 1(Channel no.) 1(Channel no.) 1(Channel no.) | Parameter 2<br>100(Intensity %)<br>100(Intensity %) | Parameter 3<br>0:0(Running time(mm:s<br>0:0(Running time(mm:s |



**Modify Subnet ID synchronously:** to modify all subnet ID together and save the time of editing each one alone

**Modify Device ID synchronously:** to modify all Device ID together and save the time of editing each one alone

**Modify type synchronously:** to modify all function type together and save the time of editing each one alone

**Modify the intensity synchronously:** to modify all Level brightness intensity together and save the time of editing each one alone

**Modify parameter 3 synchronously:** to modify all the parameter 3 together and save the time of editing each one alone which is depend on the type.

## 3-5 Panel Switch button Memory, Dimming, and LED Setting

Beside the Button mode and function there are three important setting for each button.

We can categorize it as:

- 1- **Dimming Enable / Disable:** it is simple setting you can use Dimming when your target lights is dimmable, while using not dimmable when your target is not Dimmable Lights.
- 2- Save / Don't save : the save will save the last Dimming value, every time you switch ON the light channel it will go to the last lights brightness Level you set before switching it OFF, while the Don't save will turn the lights brightness to the maximum level and not save the last statues.
- 3- **LED enable / Disable Setting**, you can enable your 2 way Button LED statues, while in some situation you need always to disable the button LED.

#### How to make LED, Dimming, Save /don't save setting

- Go to Button Assignation tab on the panel setting
- Press on **Set button**
- Select the setting for each button you need

| eneral         |               |               |            |
|----------------|---------------|---------------|------------|
| Model:         | SB-6BS        |               |            |
| Subnet ID:     | 1             | Device ID:    | 78         |
| Remark         | 123456789     | Current page: | 1          |
| imming and LEC | ) Status      |               |            |
| ingle channel  | Multi-channel |               |            |
| Button no.     | Dimming       | Dimming value | LED Status |
| 1              | Enabled       | Save          | Enabled    |
| 2              | Enabled       | Don't Save    | Disabled   |
| 3              | Enabled       | Save          | Enabled    |
| 4              | Disabled      | Don't Save    | Enabled    |
| 5              | Enabled       | Don't Save    | Enabled    |
| 6              | Enabled       | Don't Save    | Enabled    |
|                |               |               |            |



#### **Mutual Exclusion Function**

This function is used on switch panel to link between two or more combination ON/OFF button mode to consider them as 1 group, and to prevent the confusion of using two related macros together.

- On the Button Assignation press on the Mode linking button
- Set the value to **YES** for all the buttons of combination ON/OFF to be as 1 group together

| General          |  |   |                          |  |
|------------------|--|---|--------------------------|--|
| Model:           | SB-6BS                                       |   |                          |  |
| Subnet ID:       | 1  | Device ID:  | 78                       |  |
| Remark           | 123456789                                    |   |                          |  |
| Condition:       |  |   |                          |  |
| The button       | mode must be the following                   | ng:   |                          |  |
| Combinatio       | n On   |   |                          |  |
| Combinatio       | n off  |   |                          |  |
| Combinatio       | n On/Off                                     |   |                          |  |
| Dblclick an      | d Combination On/Off                         |   |                          |  |
| Edit mode linkin |  |   |                          |  |
| Button no.       | Remark                                       | Mode  | Enable mode linking      |  |
|                  |  | Combination On  | NO                       |  |
| 1                | button 1                                     |   |                          |  |
| 1                | button 1                                     |   |                          |  |
| 1                | button 1<br>button 2                         | Combination on/off  | YES                      |  |
| 1<br>2<br>3      |  |   |                          |  |
|                  | button 2                                     | Combination on/off  | YES                      |  |
| 3                | button 2<br>button 3                         | Combination on/off<br>Single on/off                                   | YES<br>N/A               |  |
| 3                | button 2<br>button 3<br>button 4             | Combination on/off<br>Single on/off<br>Single on/off                  | YES<br>N/A<br>N/A        |  |
| 3<br>4<br>5      | button 2<br>button 3<br>button 4<br>button 5 | Combination on/off<br>Single on/off<br>Single on/off<br>Single on/off | YES<br>N/A<br>N/A<br>N/A |  |
| 3<br>4<br>5      | button 2<br>button 3<br>button 4<br>button 5 | Combination on/off<br>Single on/off<br>Single on/off<br>Single on/off | YES<br>N/A<br>N/A<br>N/A |  |
| 3<br>4<br>5      | button 2<br>button 3<br>button 4<br>button 5 | Combination on/off<br>Single on/off<br>Single on/off<br>Single on/off | YES<br>N/A<br>N/A<br>N/A |  |
| 3<br>4<br>5      | button 2<br>button 3<br>button 4<br>button 5 | Combination on/off<br>Single on/off<br>Single on/off<br>Single on/off | YES<br>N/A<br>N/A<br>N/A |  |
| 3<br>4<br>5      | button 2<br>button 3<br>button 4<br>button 5 | Combination on/off<br>Single on/off<br>Single on/off<br>Single on/off | YES<br>N/A<br>N/A<br>N/A |  |

Try to make two buttons as combination ON/OFF with many commands and set them mutual exclusion to YES and recognize the difference

Mutual exclusion is active only on Combination ON/OFF for the **6button panel**, while its active on all combination modes and double click modes of the DDP and new series of Wall switch panels).



# 3-6 Panel Switch Setup (Minimum Dimming Value and Infrared)

**Minimum Dimming value:** is used to force the panel not to dim the light from the button by keep pressing it in order not to go below the minimum level of dimming

**Infrared function**: is used to enable or disable the IR receiving function on the panel,

To make the setting of the of the Minimum Level and IR setting

- Go to Button Assignation tab
- Press setup button
- Adjust the Minimum Dimming Value from 0% 50%
- Uncheck the Infrared receiving function to disable or check the box to enable it

| General    |                                   |            |    |
|------------|-----------------------------------|------------|----|
| Model:     | SB-6BS                            |            |    |
| Subnet ID: | 1                                 | Device ID: | 78 |
| Remark     | 123456789                         |            |    |
|            | ature<br>e IR Receiving           |            |    |
|            | e IR Receiving ing Value settings | Þ          |    |

Minimum level is very important and useful function to avoid the confusion for the user when he dims some **SAVE VALUE** button to 10% and the spot lights will appear as OFF while it is 10% dimming, when the user press the button single press it will toggle between 10% and 0% and the user will think the lights is burned cause he will not notice the 10%.

Minimum level recommended being as **20%** so the lights will not go below this level when the user keep pressing the button.

IR disabling is useful when 2 panel near each other in 1 room and the remote control sending to the both panel and the functions is confusing the user, disabling 1 panel IR is recommended on this situation.

For More info please Enjoy our youtube channel : <u>http://www.youtube.com/SmartG4/</u>



