

2012

Programming Manual

DDP (Dynamic Display Panel)

V 2.1



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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) , ( Advices),

( Example) .

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 will know soon how the S-bus Programming is simple.

1-1 Objective:

After this course you will be able to program the Lights Dimmers and 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:

- ✚ 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.

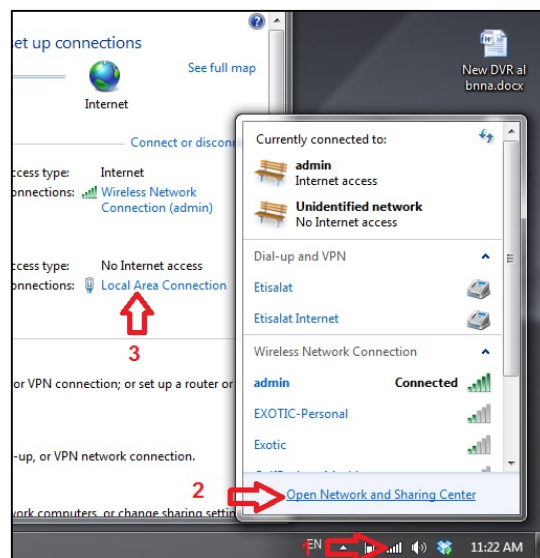
1- Install your S-bus configuration software in your Computer by pressing the **Setup** icon and follow the installation steps windows

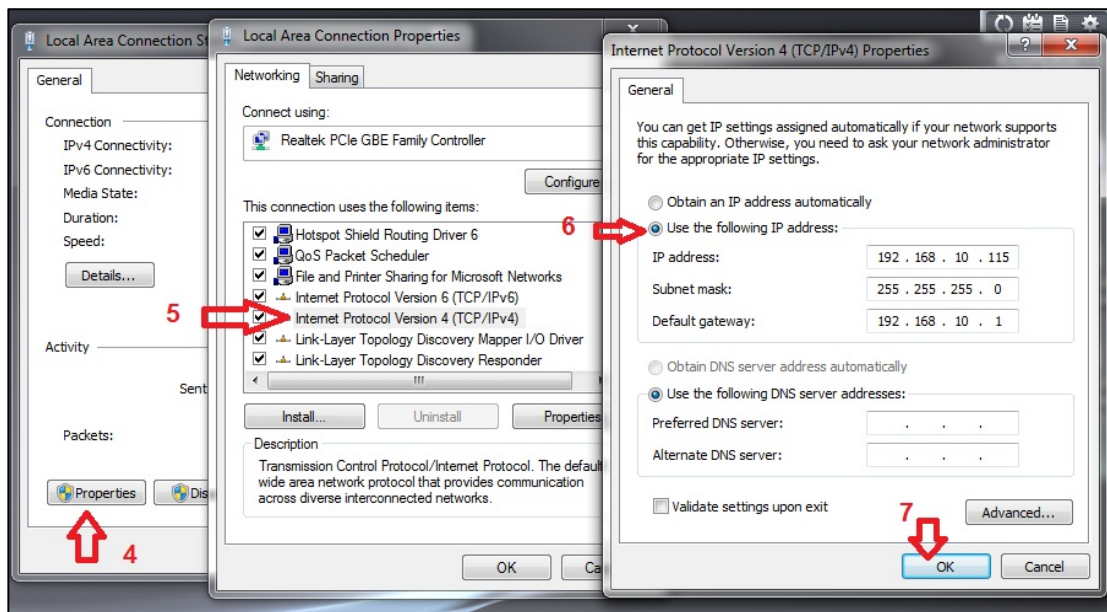
2- Plug in your Ethernet cable (Rj45) in your pc and the other end in the **RSIP** module or **Zaduio** module then **Set** your computer IP Address, for example

IP	192.168.10.115
Subnet	255.255.255.0
Gateway	192.168.10.1



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

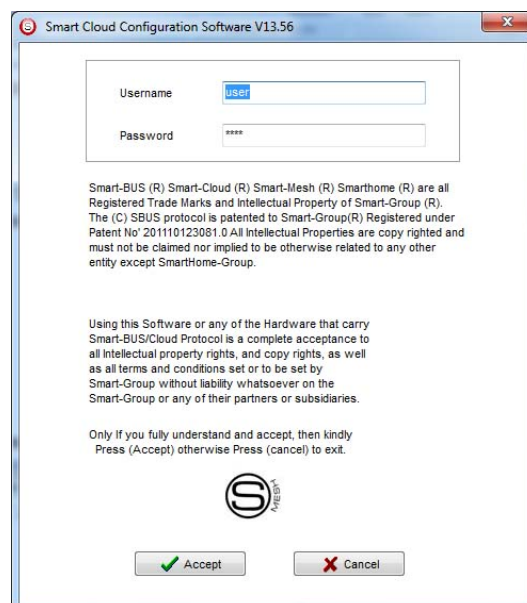




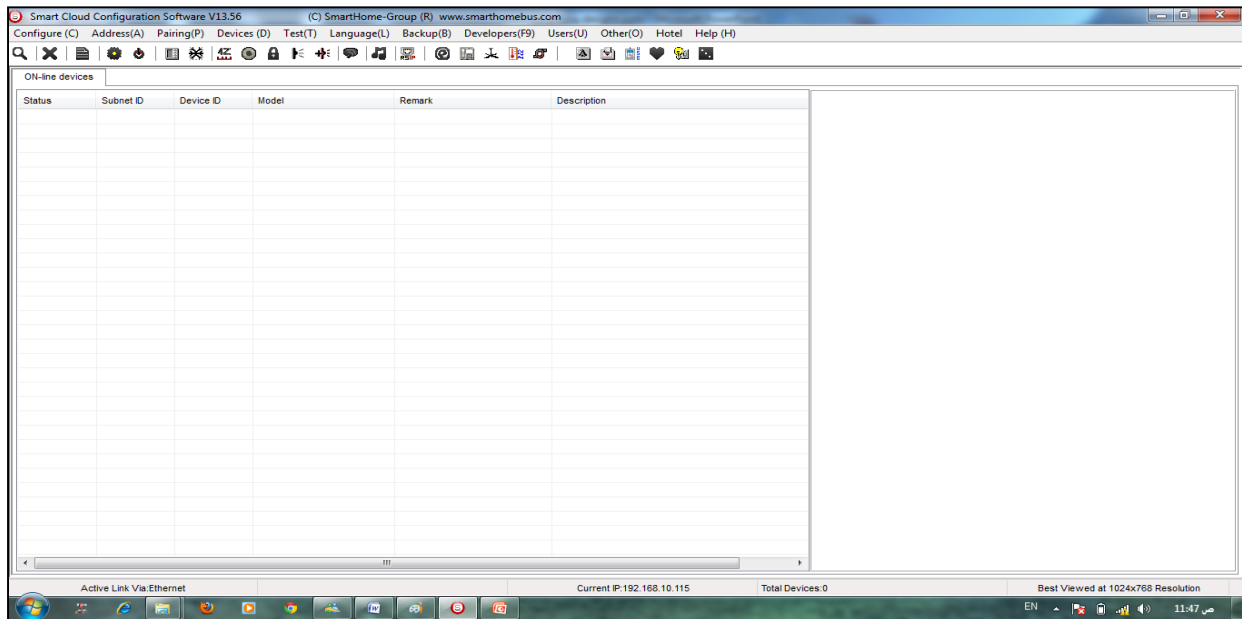
3- Run your S-bus smart cloud Software



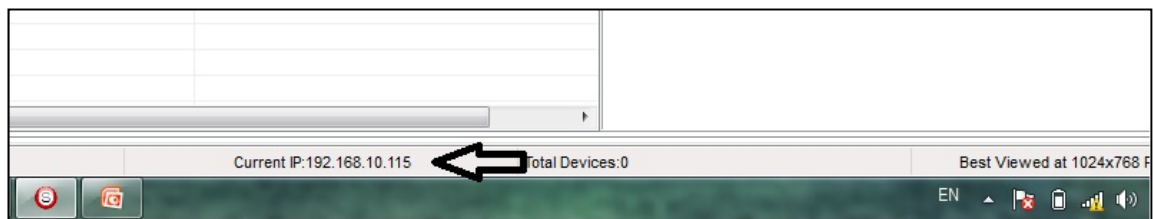
4- The Password window will open, type the default password is **user**



5- Your software will start



6- You can see your current IP on the footer of the software as 192.168.10.115 then your IP setting is ok.



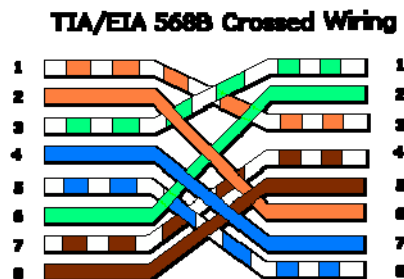
! Set your computer IP setting before starting the S-BUS Smart Cloud.

! 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

- 1- 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

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Administrator>Ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=45ms TTL=64
Reply from 192.168.0.1: bytes=32 time=39ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 45ms, Average = 22ms

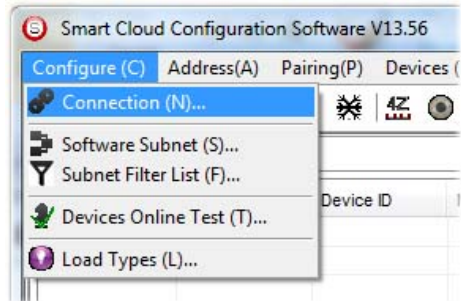
C:\Documents and Settings\Administrator>
```



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

Configure

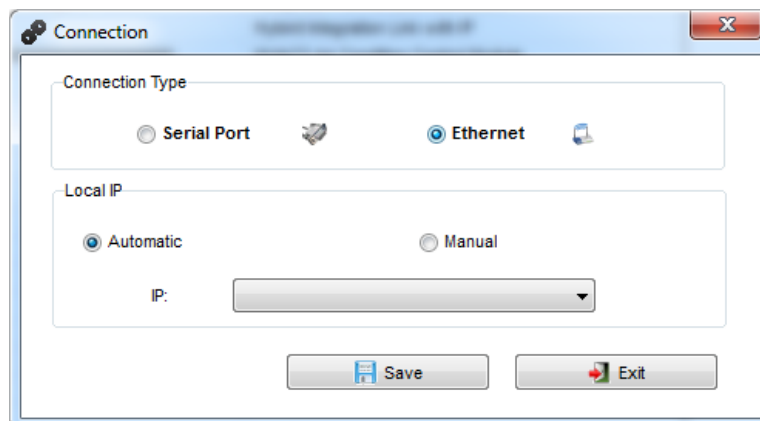


- **1- Connection**

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



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 unique, 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 devices 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.

Address

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)

Pairing

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.

Devices

You can go here directly to Devices setting Categorized by type

Test

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).

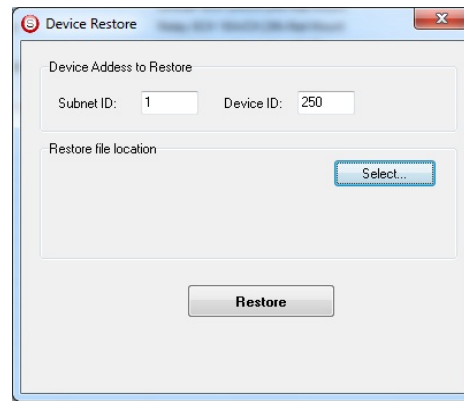
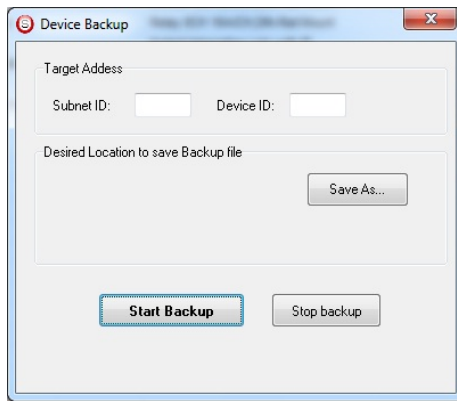
Language

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

Backup

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".
-



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

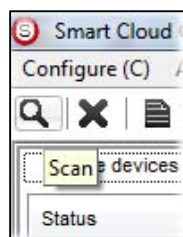
For example one of Dimmer Module Address is (Subnet 1, Device ID 5)

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.



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




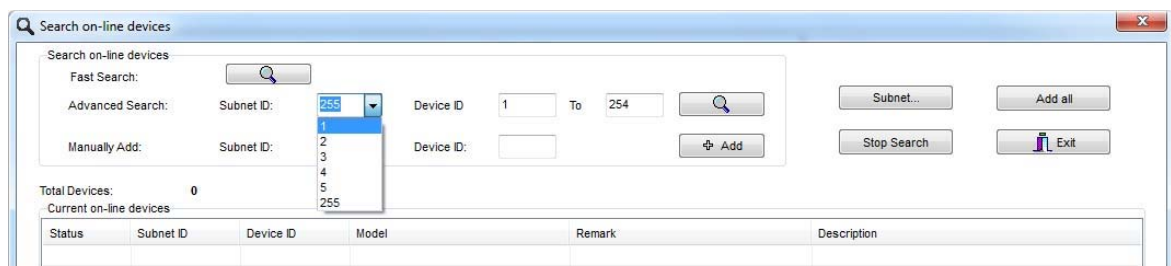
! *Fast search can't load all the Network Devices, it is only load part of the devices, it is only good for small project that contain around 10 devices, and to check the network communication with your PC.*

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



- 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

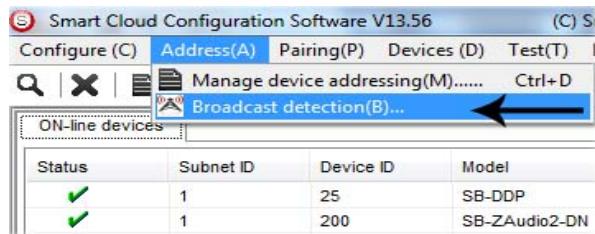
Manual Search is a very fast and useful way to add known Device ID and subnet to your network

Manually Add:	Subnet ID: <input type="text"/>	Device ID: <input type="text"/>	<input type="button" value="Add"/>
---------------	---------------------------------	---------------------------------	------------------------------------

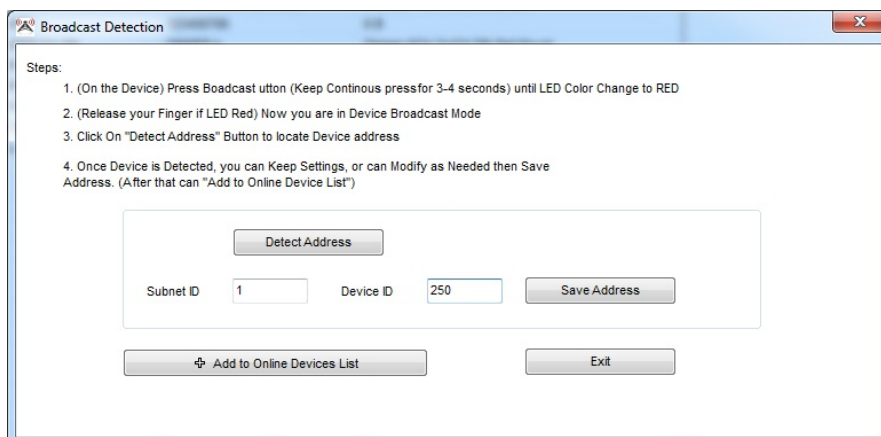
- Type the subnet and device ID that you know
- Click ADD
- Exit the Menu

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

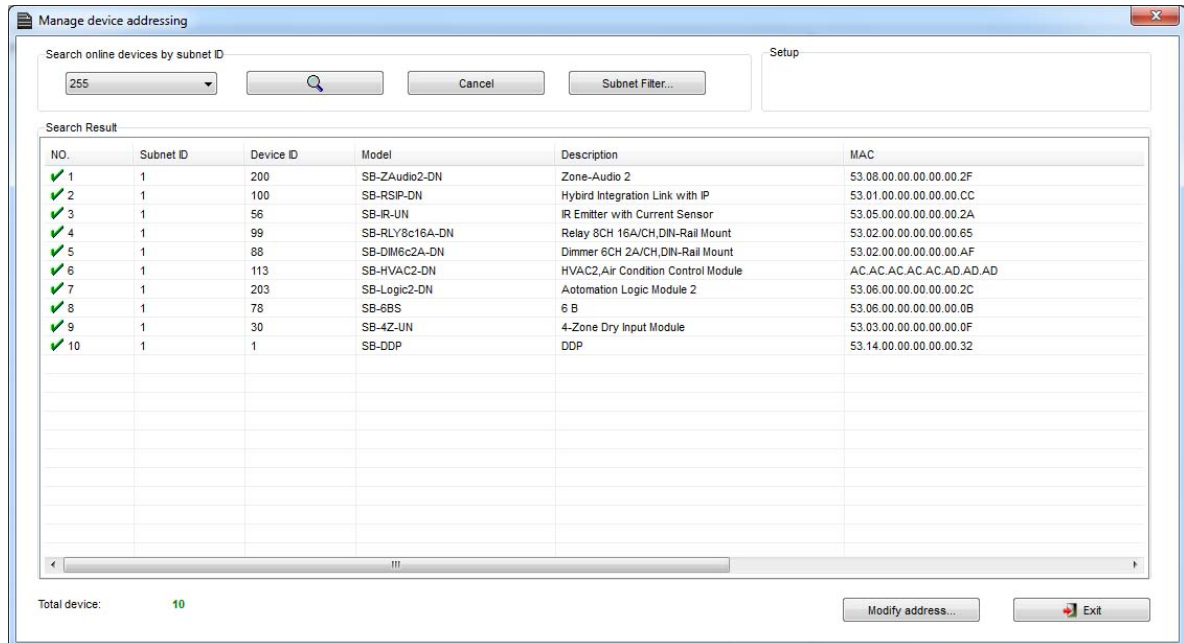




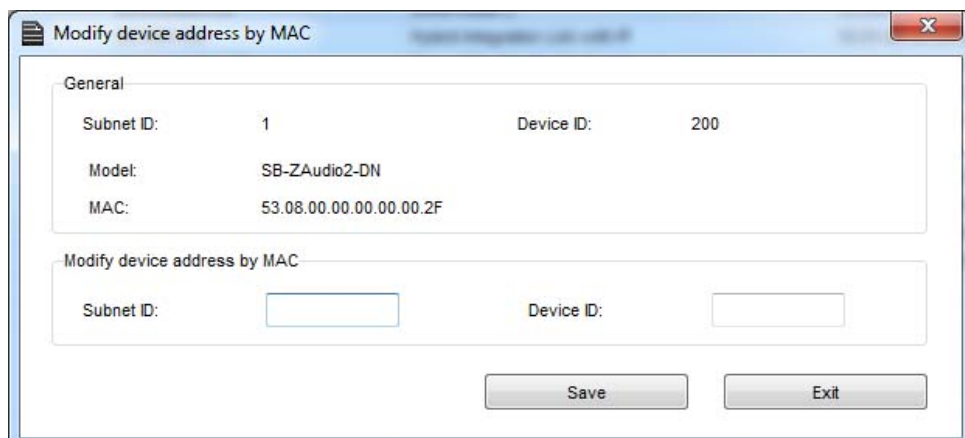
Solve Conflict address search

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 



- 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 it
- New window will open, and then type the new Subnet ID and Device ID, then Click **Save**



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	Type	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 unique 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	Type	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	255	255	N/A
4	255	255	Sequence switch	255	255	N/A
5	255	255	Universal switch	255	255	N/A
			Single channel lighting			
			Curtain switch			
			SMS control			
			Panel control			
			Broadcast scene			
			Broadcast channel			
			Security module			
			Zone-Audio 2			

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

Function type	Parameter 1	Parameter 2	Parameter 3
Invalid	N/A	N/A	N/A
Scene Switch	Area Number	Scene Number	N/A
Sequence Switch	Area Number	Sequence Number	N/A
Universal Switch	Switch Number	ON / OFF	N/A
Single channel	Channel Number	Brightness 0-100%	Fade time 0S - 60 M
Curtain Switch	Switch 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 type	Parameter 1	Parameter 2	Parameter 3
Broadcast scene	All Areas	Scene Number	N/A
Broadcast Channel	ALL Channel	Brightness 0-100%	Fade time 0S - 60 M
Security Module	Area Number	Arming Mode	N/A
Zone-audio 2	Source Control	SD Card/Audio In/FTP Server/FM Radio	N/A
Zone-audio 2	Play Mode	No Repeat/ Repeat Song/ Continued/ Repeat all	N/A
Zone-audio 2	Play List/Radio Channel	PREV Play List/Next Play ListSpecify Play List No/PREV	N/A
Zone-audio 2	Play Control	PREV Song/Next 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 Song	Folder No.	Song No.

3- DDP LCD Panel (Dynamic Display Panel)

In this lesson we will learn about some of the function of the DDP that will cover the Lighting, scenes and HVAC setting.

3-1 DDP Overview

The wall **Dynamic Display Panel** DDP is the first LCD panel in the world that can control lights, shade, security ,Gate Motor, Air-condition, music, infrared. With built in temp. sensor.

The DDP has (4 commands button + 1 button to change between pages) of 4 multi usage pages with AC master page and 8 slave AC pages, music page, password page, and the settings pages.

Each button can be used as single press, keep press, double click, right and left pressing, momentary pressing function ++

3-2 DDP Address Page Password and Language Setting

The DDP panel Address setting can be set by S-bus configuration software, or manually from the DDP panel setting

To set the Address manually, please do the following:

- On your DDP panel keep pressing on the **buttons (4 and 1)** together for couple of second
- Setting page will appear for you as you can see



- As you can see from the menu the 4 button function will be (button 1 confirm, button 2 Arrow up, button 3 Arrow down, button 4 back)
- Go to **system** and press button1 confirm
- Another list menu will appear as you see



- You can see the **address** consist of 2 number which refer to the subnet ID, and device ID
- change the address by using button2,3 for arrow up+ arrow down- , press button 1 to confirm, and to go to the next setting , press button 4 back to exit the setting
- Also in the system list menu you can change the **Backlight** brightness level from 0-10, **IR** receiving function by enabling or disabling it.
- Also you have the **power save** setting , to set the Delay time by seconds to dim the Backlight to the specify Level as you can see on the **Delay** and **LEVEL** setting
- **Page to** setting to let the DDP LCD to show the default page after the delay time finish.
- After you finish your setting you can press button 4 back and exit.



*Changing the Address manually is **more** convenience and faster for programmer to assign the panels by its address in any new project*

Also you can use the password setting to lock the pages by protected password

To set the password settings, do the following:

- On your DDP panel keep pressing on the **buttons (4 and 1)** together for couple of second.
- Setting page will appear for you as you can see.



- Go to **password** by pressing button 3 arrow down then press button 1 confirm
- The password page will appear as following



- In the **PAGE** setting you can select the page number you need to lock by password, then press button 1 confirm
- In the **USED** you can use the arrow up to enable or disable the password page protection then press button 1 confirm



- In the **PASSWORD** you can press button 3 Arrow down to change the password the following menu will appear



- To change the password you should enter your old password and then your new password, the **default password is 0000**
 - In the **OLD** type your password by using button 2, 3 to change the number and button 1 confirm to go to the next number digit
 - In the **NEW** use the same buttons to type your new password
 - After you finish press button 4 back
- The following page will appear to confirm the password new setting



- Select between YES or NO by pressing button 2,3.

- To **save** the change select yes and press button 1 confirm
- The page that protected by password will be locked after 20 seconds automatically and cannot be open unless you type your right password

To change the setting menu language, do the following

- On your DDP panel Keep pressing on the **buttons (4 and1)** together for couple of second
- Setting page will appear for you as you can see
- Go to Language setting and press button 1
- Chose between the language you have then press confirm button 1



The DDP Language setting will affect the default picture showing on the AC page.



In case you forget your password you use the Master password which is **8465**

3-3 DDP Basic setting

Double click on the Panel (DDP) on the search List

You can type the Name of the Panel Location in the **Remarks**

In the **LCD Backlight** you can

- Adjust the Backlight of the LCD from 0-100%
- Adjust the LED statues Brightness from 0-100%

Also from General you can Change the subnet and device ID of the Panel

DDP

General | Button Assignment | Air conditioning | Floor Heating | Music | Page | Remote Control

Select device

Device: 1-1-SB-DDP

Address

Model: SB-DDP

Subnet ID: 1 Device ID: 1

Remark

Remark: GF MBR Save

MAC address

MAC: 53.14.00.00.00.00.32

LCD back light and LED

LCD Back light: 100

LED: 100 Save

Modify subnet ID and device ID according to MAC

Subnet ID: Device ID: Save

Read flag of showing Temperature or Temperature_Clock

☐ Show Temperature Only ☒ Show Temperature_Clock Both Save

Picture

Exit

Go to **Page** tab

DDP

General Button Assignment Air conditioning Floor Heating Music **Page** Remote Control

Page displays Backlight display and other settings

Backlight display

☒ Always Show

☐ Designate specific time

Backlight Brightness 100%

Panel page jump when Idle

☐ Deactivate jump

☒ Select "jump to" page

Page no. (1-7)

Jump delay (5-150s)

Save

Backlight Display and Other Settings

In this page you can make the Backlight Display setting

You have two options

- Always Show: will keep the Backlight ON all the time
- Designate specific time: to put timeout from 10-99 seconds to go to the Save mode of Backlight brightness level



It is recommended always to set the Backlight to 0% after time in all bed rooms so the Backlight will not disturb the user while he is sleeping

Page jump setting

You have two options for this setting

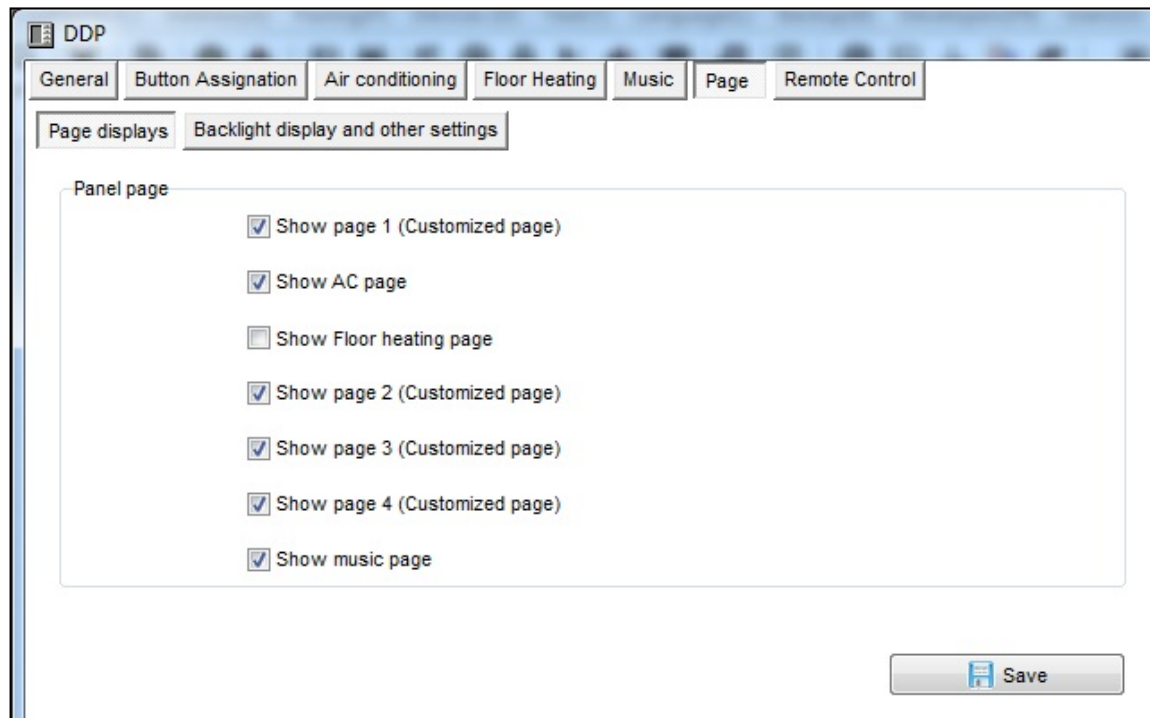
- Never jump: the page will remain and will never change automatically, for example if the user put the DDP panel to page 3 it will remain on page 3 until he change the page by himself
- Designate jump page: the DDP panel will jump to page Number(*) after Jump delay from 5-150 seconds



It is recommended always to put the Jumping page to Default lighting page for example page 1, cause the user will use his lighting mostly in his room more than Air-condition or music or other function

Page displays

In this tab you can enable or disable showing the page in the panel



Always disable the page that you don't need in your panel to make your Pages more friendly use and save time to navigate between the needed pages only.

3-4 DDP 4 Pages Button Remarks and Modes

Go to **Button Assignment** tab on the DDP Panel setting

You have total 4 pages in you LCD Panel you can configure it according to your needs, to move between pages use the **Combo box** as shown on this Picture

DDP

General Button Assignment Air conditioning Floor Heating Music Page

Select panel

Device 1-1-SB-DDP

Current button 1 Mode Single on/off

Button information 1 1

Button no.	Remark	Mode
1	SPOT	Single on/off
2	LED	Single on/off
3	CHAN	Single on/off
4	BRACKET	Single on/off

Remarks Edit

- Press on **Remarks** Button
- Type your Remarks for each button
- Press **save**
- Go to the next page and do the same for each button

Mode Edit

- Press on **Mode** button
- Edit your button mode for each button
- Press save
- Repeat it for each page you need to configure its button

Edit button mode

General

Data acquisition mode: Device Model: SB-DDP

Subnet ID: 1 Device ID: 1

Remark: GF MBR Button totality: 4

Current page: 1

☐ Modify Mode synchronously

Modify button mode

1 Single on/off 2 Single on/off

3 Single on/off 4 Single on/off

Invalid

Single on/off

Single on

Single off

Combination On

Combination Off

Pressing On/Release Off

Combination on/off

Separated left/right button for pressing on/releasing off

Separated Left/right button for Combination on/off

Dbclick and Single On/Off

Dbclick and Combination On/Off

Separated left/right button(left button is for off, right button is for on)

Save Exit

Mode	How to use	Where to use example	Function
Invalid	No use	When you have extra button that you don't need to use it	No function
Single OFF	Single Press	In room off mode to close the Light channel	To OFF Light or scene,
Single ON	Single Press	Usually used to trigger scene like visitor, meeting mode etc...	To run scene ON , or Lights on every time
Single ON/OFF	Single Press ON , Single Press OFF,	Widely use for ON/OFF light , scene by single press	The classical use of toggling of
Combination ON	Single Press	to Run complex mode that required more than 1 scene and mode by single press	To trigger up to 99 different commands every time
Combination OFF	Single Press	To OFF complex mode that required more than 1 scene and mode by single press	To OFF up to 99 commands every time the button
Combination ON/OFF	Single Press ON, Single Press OFF	To run ON and OFF complex mode that required more than 1 scene	toggling between ON/OFF up to 99
Separated Single	Press on the Right side ON, Left side OFF	Used to open close curtain, Lights,	To trigger single command ON/OFF
Separated Combination on	Press on the Right side ON 50 commands, Left side OFF other 50	Used to trigger different IR, as CH+,CH- , VOL+ , VOL-, curtain Open close , different IR codes triggering	To trigger 50 commands by pressing Right side, other 50 commands

Double fast click on the right button side to trigger double click function, Single Press ON, Single Press OFF, keep pressing Dim/ keep pressing Ramp	Used as extra function to trigger any other scenes on double click of the same button, like Double click can trigger ALL room off	To use the double click to run up to 49 commands while single press will toggle between ON/OFF of different commands	Double click, single switch
Double fast click on the right button side to trigger double click function, Single Press ON, Single Press OFF	Used as extra function to trigger any other scenes on double click and different one for single Press	To use the double click to run up to 49 commands while single press will toggle between 50 commands ON/OFF	Double click, Combination switch
Keep pressing to keep sending on command, On release the OFF command will trigger	Used for example in Bell, gate motor, some IR commands	To run 1 command as momentary pressing	Momentary
Keep pressing to go to Alarm setting, double click to Active and inactive	Used for reminders for meetings, or get up daily, or medicine reminders	To have clock alarm to run many commands on time	Clock



It is recommended using separated Mode always to send IR like TV CH +, CH - , or to open close the Curtain.

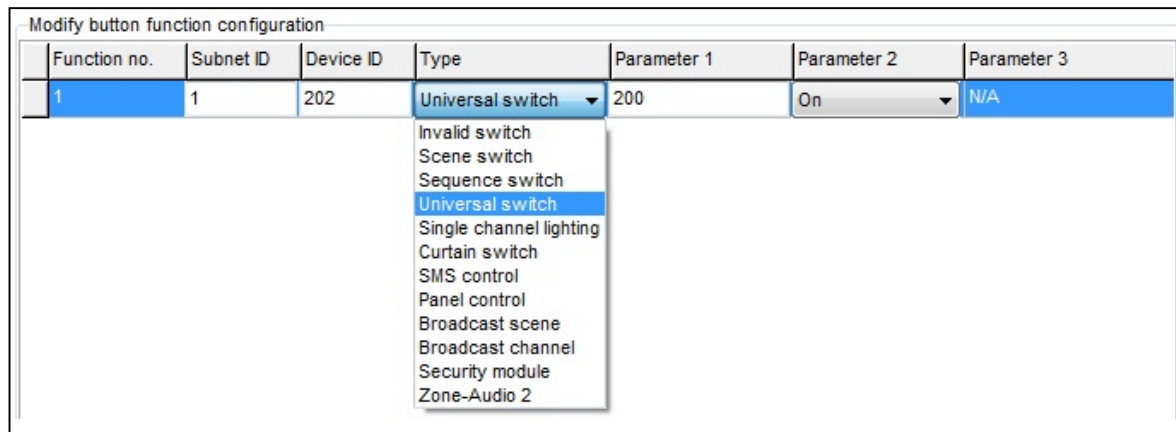


It is not recommended to use Separated Mode for Lighting Purpose, because the button is small and will confuse the user in darkness and in using; it is recommended to use the Single ON/OFF Mode for Lighting

3-5 DDP buttons function setting

For each button you can make different functions of different commands

- On the panel window go to **button 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



- Press Save and Exit.

The Button Function of the DDP panel you can make is listed down on this table

Function type	Parameter 1	Parameter 2	Parameter 3
Invalid	N/A	N/A	N/A
Scene	Area	Scene Number	N/A
Sequence	Area	Sequence Number	N/A
Universal	Switch	ON / OFF	N/A
Single channel	Channel Number	Brightness 0-100%	Fade time 0S - 60 M
Curtain	Switch	Stop / ON/ OFF	N/A
GPRS	Message	Message SMS Number	N/A
Panel	IR Function	ON / OFF	N/A
Panel control	Lock key of	ON / OFF	N/A
Panel	AC Power	ON / OFF	N/A
Panel	Cooling	0-30 C , 32- 86F	N/A
Panel	FAN Speed	Auto/high/med/slow	N/A
Panel	AC Mode	Auto/Cooling/Heating/FAN	N/A
Panel	Heating	0-30 C , 32- 86F	N/A
Panel	Auto temp	0-30 C , 32- 86F	N/A
Panel	Rise temp	1-5 C/F	N/A
Panel	decrease	1-5 C/F	N/A

Panel	LCD Backlit	ON / OFF	N/A
Panel	Lock key of	ON/OFF	N/A
Broadcast	All Area	Scene Number	N/A
Broadcast Channel	ALL Channel	Brightness 0-100%	Fade time 0S - 60 M
Security	Area	Arming Mode	N/A

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 logic flag On or Off, set the hotel door bell services , disable or 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 Lights
Used to open, close or stop the curtain channel	Curtain Switch
Used to send SMS as alert, Help, Emergency , or information	GPRS Control
Used to turn the Air condition , ON/OFF	Panel control , AC Power
Used to set the Air condition cooling desired temperature to 0-30 C , 32- 86F	Panel control 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 AC Mode
Used to set the Air condition heating desired temperature to 0-30 C , 32- 86F	Panel control Heating Temp
Used to set the Air condition Auto mode desired temperature to 0-30 C , 32- 86F	Panel control Auto temp
Used to Rise the Temperature by 1-5 C	Panel control Rise temp
Used to Lower the Temperature by 1-5 C	Panel control Decrease Temp
Used to set the Backlightof LCD ON / OFF	Panel control LCD Backlit
Used to Hold your AC, so no one can control it, or to lock other room AC. Like children room AC	Lock key of AC
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 all channel of Dimmer or relay	Broadcast Channel
Use to Arm your home in deferent level, like Vacation Away Night, or Disarm, also used to trigger panic , Fire, Emergency	Security Module

3-6 DDP Buttons Memory, Dimming, and LED Setting

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

We can categorize it as:

- **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 statuses.
- **Dimming / not Dimming setting:** it is simple setting you can use **Enabled** when your target light is dimmable, while using **Disabled** when your target is not Dimmable Lights.
- **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, Memory/toggling setting

- Go to **Button assignation** tab on the panel setting
- Press on **Dimming and LED**
- Select the setting for each button you need

The screenshot shows a window titled "Dimming and LED Status". It has a "General" tab with fields for Model (SB-DDP), Subnet ID (1), Remark (GF MBR), Device ID (1), and Current page (1). Below this is the "Dimming and LED Status" section with two tabs: "Single channel" and "Multi-channel". A table lists four buttons with their settings:

Button no.	Dimming	Dimming value	LED Status
1	Enabled	Save	Enabled
2	Disabled	Don't Save	Disabled
3	Enabled	Don't Save	Enabled
4	Enabled	Don't Save	Enabled

At the bottom of the window are "Save" and "Exit" buttons.



Always make the button diming setting Invalid if you control ON/OFF Relay channel, so the user will not confuse in dimming it without any response from the Channel.

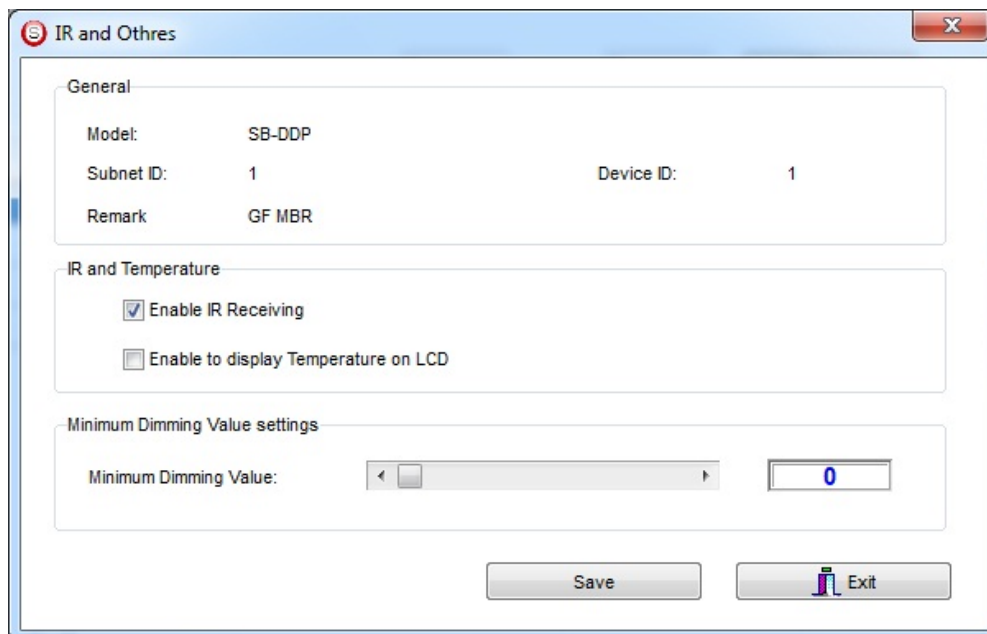
3-7 DDP Setup (Minimum Diming Value and Infrared)


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 Assigation** tab
- Press **IR AND OTHERS** button
- Adjust the Minimum Dimming Value from 0% - 50%
- Uncheck the **Infrared receiving** function to disable or check the box to enable it
- Uncheck the **Display Temp on LCD** function to disable or check the box to enable it



 *be careful when you make the Dimming function valid and Memory, sometimes the user will keep pressing on the button to dim the light to 7% Level and then he will turn it off and on by single press and the Light will change from 0% to 7%, then the user will think the lights is not working. To solve this problem use the minimum dimming value to prevent the user to dim less than the minimum dim level.*



It is recommended always to set the minimum Dim level for all panels that control the Dimmers to 20% - 30%. .

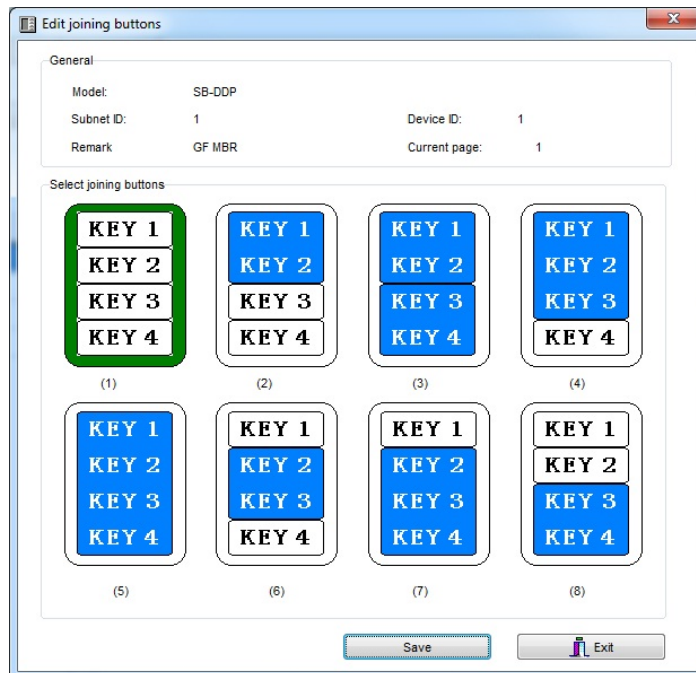
3-8 DDP Combination Way

DDP Combination way is very useful for giant people whom have big Fingers, and old people who can't see the small buttons

You can combine two buttons or more to make it as one button

To make the combination in the Button Assigmentab

- Press on **Joining** button
- Select the way you want to combine your button
- Press **save**.



3-9 DDP Button Picture Edit and Download

You can download bmp Format Picture for each button for both normal Statues and ON statues

To download the Picture

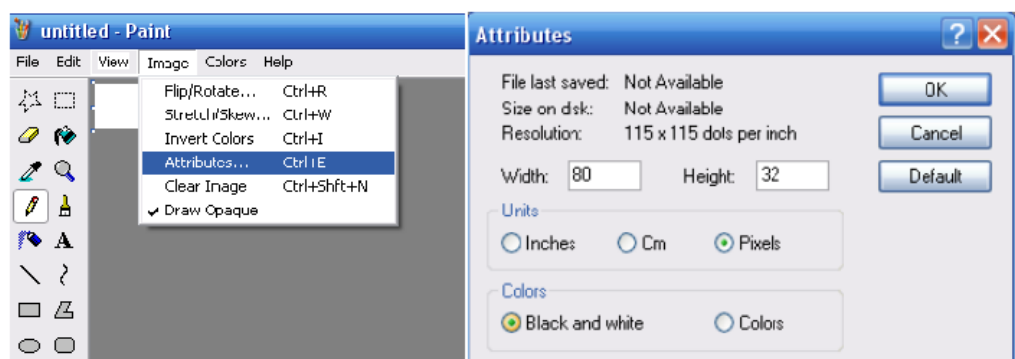
- In the Button Assignment tab select the page you want to download the picture to it from 1-4
- Press on **Pic downloads** button
- Select **Normal Statues or On Statues** for the Picture you want to download.
- **Double click** on the white square
- Brows where the Picture file you need to download then press **open**
- Press **download button** for this picture or you can select all the picture you need in this page then press **Download all in the current statues** button
- You can see the download bar running from 0-100%.



You have to be careful for the size of the picture that is written near each button for example, Size W= 80, H= 32 , you can see deferent size you have depend on the combination way



All pictures should be black and white setting and bmp format, to do that in simple way go to windows paint program and set the Image/Attribute and set the Pixels size and the black and white setting then save your picture as bmp.



3-10 DDP Mutual Exclusion Function

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 2 related macros scenes together.

- On the **Button Assignment** press on the **mode linking** button
- Set the value to **YES** for all the buttons of combination mode, or double click mode to be as 1 group together

The screenshot shows a software window titled "Edit mode linking". It contains a "General" section with fields for Model (SB-DDP), Subnet ID (1), Device ID (1), Remark (GF MBR), and Current page (1). Below this is a "Condition:" section with a list of button modes: "The button mode must be the following:", "Combination On", "Combination off", "Combination On/Off", and "Dbclick and Combination On/Off". The main part of the window is a table titled "Edit mode linking" with four columns: "Button no.", "Remark", "Mode", and "Enable mode linking". The table contains four rows of data, all with "Single on/off" in the Mode column and "N/A" in the Enable mode linking column. At the bottom right, there are "Save" and "Exit" buttons.

Button no.	Remark	Mode	Enable mode linking
1	curtain	Single on/off	N/A
2	LED	Single on/off	N/A
3	CHAN	Single on/off	N/A
4	BRACKET	Single on/off	N/A

3-11 DDP Air condition Basic Setting and testing

Go to Air condition tab, you can in this page enable or disable the AC function of the LCD DDP panel, and make all the other AC setting

The screenshot shows the 'Air conditioning' tab in the DDP software. The 'General' section at the top shows 'Subnet ID: 1', 'Device ID: 1', 'Model: SB-DDP', and 'Remark: GF MBR'. Below this, the 'Show AC Page on DDP' checkbox is checked. The 'Control Type' section has two radio buttons: 'By HVAC' (selected) and 'By IR/Relays'. The 'HVAC' section contains fields for 'Subnet ID of HVAC: 1' and 'Device ID of HVAC: 6', with a 'Type' dropdown set to 'G4 HVAC'. To the right, the 'Temperature Calibration' section shows a slider for 'Temperature Calibration on DDP' set to 0°C. Below that, the 'Broadcast Temperature' section has 'Enable Temperature Broadcast' checked, with 'Subnet ID of target Device: 255' and 'Device ID of target Device: 255'. The 'AC Control' section shows a 'Power On' checkbox, a 'Lock' checkbox, and a temperature display of '29 C'. It includes sliders for 'Cool Setpoint: 0 C', 'Heat Setpoint: 30 C', 'Auto Setpoint: 25 C', and 'Dry Setpoint: 18 C'. There are also dropdowns for 'FAN Speed: High' and 'Mode: Cool'. The 'Current Status' is 'Auto,FAN'. At the bottom right, the 'Control Desert Cooler' section has 'Automatic control' checked. Buttons for 'Save', 'Other Setup...', and 'AC Graphic' are visible.

In the **basic information** of Air condition edit the Subnet and device ID for the HVAC Module that related to the panel room then press **save**

For Example if your HVAC Module address is subnet 1 , device ID 113 then type that in the Air condition panel setting and save

This is a close-up of the 'HVAC' section of the 'Air conditioning' tab. It shows the 'Control Type' section with 'By HVAC' selected. Below it, the 'HVAC' section has 'Subnet ID of HVAC' set to '1' and 'Device ID of HVAC' set to '113'. The 'Type' dropdown is set to 'G4 HVAC'. A 'Save' button is located to the right of the 'Type' dropdown.

Also you must enable the DDP to control the normal HVAC module by activate the **Automatic Control**

Control Desert Cooler

☒ Automatic control

 Save

Also you can test your AC control in the **Ac control** section

AC Control

26 C

☐ Power On

☐ Lock

Cool Setpoint: 25 C

Heat Setpoint: 30 C


Auto Setpoint: 25 C

Dry Setpoint: 16 C

FAN Speed: High

Mode: FAN

Current Status: Auto,FAN

 Save

3-12 DDP AC Page control Setup

On the Air condition tab press **other Setup** button

In the temperature Type you can change the function and display settings

Temperature Type: can be (C) Celsius or (F) Fahrenheit

AC control information: you can enable or disable the options of Fan speed

The screenshot shows a software window titled "Air-condition collocation information". It has four tabs: "Temperature model", "Time type", "Temp Range", and "Sensor Model Settings". The "Temperature model" tab is selected. Inside this tab, there are three main sections. The first section, "Temperature type", has a dropdown menu currently set to "C" and a "Save" button to its right. The second section, "Air-condition Control information", contains two groups of checkboxes. The first group is "FAN speed" with checkboxes for "Auto", "High", "Medium", and "Low". The second group is "Mode" with checkboxes for "Cool", "Heat", "FAN", "Auto", and "Dehumidifair". There is a "Save" button at the bottom right of this section. The third section, "Set Power-Saving", has a radio button for "Enable/Disable" which is selected, and two other radio buttons for "Power-saving" and "Power-nosaving". To the right of these is a checkbox labeled "Fan switch off compress" and another "Save" button. At the bottom left of the window, there is a checkbox labeled "Windsweeper".

Like **High low Medium**, and Mode type like **cooling, fan, heating**, and **Auto**, to disable it to appear as option on the DDP panel

Power saving: if enable then the Fan will stop with the compressor when the room temperature become equal or below the desired temperature when FAN mode on Auto.

Time type you can set your time display format.

Temperature range you can set your higher and lower set point for each mode (cool, heat, Auto) so the user can not go above the higher limit, or below the lower limit.

Temperature Range

Cooling Range:

Low-limit: 0 C

High-limit: 30 C

Heating Range:

Low-limit: 0 C

High-limit: 30 C

Auto Range:

Low-limit: 0 C

High-limit: 30 C

Dry Range:

Low-limit: 0 C

Device ID of target Device: 30 C

Save



It is recommended always to set the Limit for Cooling, heating and auto, so the user will not make the desired to freezing or very hot level for each mode and to prevent children to do so.

Sensor Model setting: to refer to the Indoor temp sensor (DDP temp sensor), Outside sensor (Pro HVAC temp sensor). Or Average between both sensors

3-13 DDP Temp Calibration and Lock function

You can Calibrate your DDP temp sensor to give you exact room temperature, for example: sometimes the DDP installed in place where the sun striking it or near heat or cold source, or if the temperature near the wall is not as the temp in the room, then you have to adjust the temp sensor level to be as the reasonable room temperature where the people set or sleep

To do that

- Go to **Air-condition tab** then go to **temperature calibration** section, you can adjust it (-8 to +8 degree).
- Press **save**

Temperature Calibration

Temperature Calibration on DDP: 0 C

Save

Another function is to lock the AC page, you need this function in public area that no need for user to play with Air-condition and the whole control will be centralized from the Automation controller

- Go to **AC control** section, and enable the **Lock** or disable it
- Press **save**

AC Control

26 °C

☐ Power On ☐ Lock

3-14 DDP Slave to other DDP AC setting

One of the unique functions of the DDP is that can control up to 8 other AC Of other panel.

To set the AC Panel slave on the Air condition tab

- go to **slave information** section
- Select **Slave NO** from 1-8
- Type the slave DDP **Subnet** , and **Device ID** no
- check **Enable**
- Press **save**
- Do the same steps for the other slaves up to 8

Slave information

Slave NO. ☐ Enable current slave No

Subnet ID of related DDP Device ID of related DDP



To navigate between slaves AC, on the DDP panel when you are in the AC Page5, go back by Arrow back then you will see the slave AC, press Arrow back again to see more slave AC

3-15 DDP Broadcast Function

This function is important to update the others Devices in the network about the current room temperature

It is useful for Automation and BMS system


Setting broadcast temp to subnet 255, device ID 255 will update all the devices in the Network

Broadcast Temperature

☐ Enable Temperature Broadcast

Subnet ID of target Device: Device ID of target Device:

if Subnet ID and Device ID both equal 255, it means broadcast to all devices

 Save

3-16 DDP AC Graphic setting

In the AC Graphic you can put new Icon for cooling, Heating, Fan, also you can change the English text to any language by downloading bmp file, and to put Room names Picture for all the 8 slaves AC

- Press on the **AC Graphic** button
- In the Content tab you can keep your icon as a default or change it by set up option
- Select the **photo type** and press on the picture
- Brows and open the bmp picture you want picture should be 48 *32 pixel size
- Press **send photo** button to download the picture
- Press **save statues**

Air-condition Photo information

Content Slave Picture

Content

☐ Default

☒ Set up

Photo type

48 x 32 48 x

File name 0

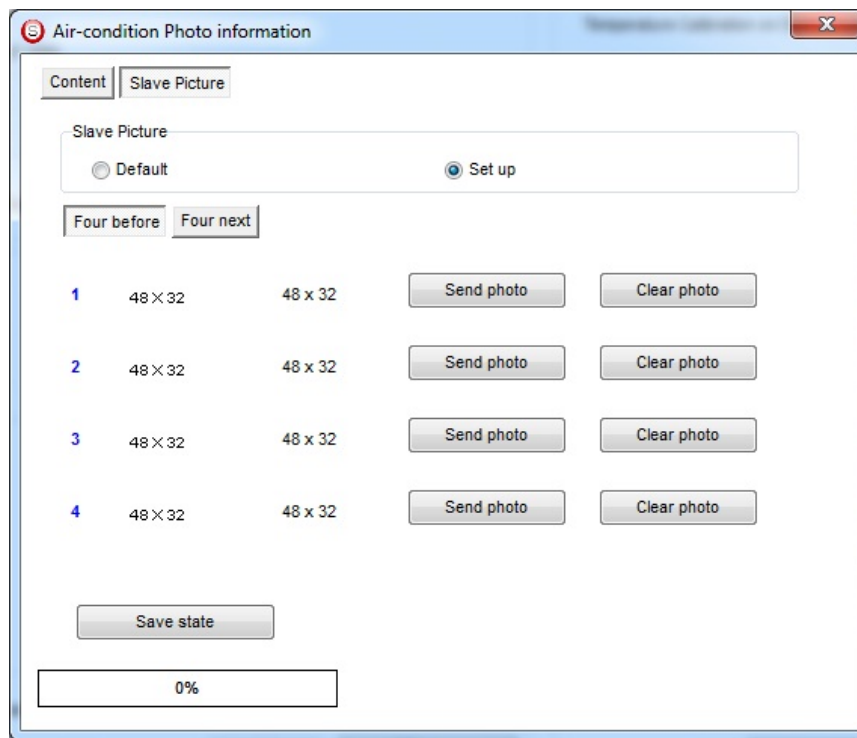
Auto FAN Speed
High
Medium
Low
Cooling
Heating
FAN
Auto Mode

Save state Send photo Clear photo

0%

Also you can put picture for the room for the 1-8 AC slave control

- Go to slave Picture
- Select set up
- Select the tab of 1-4 slave and the other tab for 5-8 rooms picture
- Brows the picture and press on send photo picture to upload it.
- Press **save states**



3-17 DDP Infrared Function overviews.

Also you can use the AC Page to send different Infrared command to control your split AC, or any new models of dry contact

Control Type

☐ By HVAC

☒ By IR/Relays

Control AC by IR

Infrared Control

Cooling temperature

FAN speed

Cooling,Heating

On/off

Heating temperature

Auto Temperature

Dry Temperature

Wind Swept

meter 1

Parameter 2

Parameter 3

Save

	NO.	Subr			