

Dimmer Protocol

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History

Version	Author	Edit date	Changes
1.0.0	Rain Zhang	2013-6-5	Dimmer

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1 Commands Shared

Address Detection

1.1.1 Detect Address

Remark: Detect address by pressing broadcast address button

Supported Device: All modules which have broadcast button

Operation Code: 0x E5F5		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:		
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0x E5F6		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:		0xFF
Additional Content		
LEN of additional content::2 bytes		
Index of Additional Content	Remark	Value
0	Subnet ID of target device	1byte
1	Device ID of target device	1byte

1.1.2 Modify Address

Supported Device: All modules which have address broadcast button

Operation Code: 0xE5F7		
Target Subnet ID:	Specify old subnet ID of target device	scope 1-254
Target Device ID:	Specify old device ID of target device	scope 1-254
Additional Content		
LEN of additional content::2 bytes		
Index of Additional Content	Remark	Value

0	New Subnet ID	1byte , scope 1-254
1	New Device ID	1byte , scope 1-254

Response

Operation Code: 0x E5F8		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:		0xFF
Additional Content		
LEN of additional content::1byte		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

1.2 Device Backup

1.2.1 Request Total QTY of packages from PC to target Device

Supported Device: All G4 Modules

Operation Code: 0xDC10		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content:0 byte		

Response

Operation Code: 0x DC11		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content:3bytes		
Index of Additional Content	Remark	Value

0	Flag of success or failure	1byte Success=0xF8 Failure=0xF5
1	High 8 bits of Total QTY of packages	Total QTY of Packages : 2 bytes
2	Low 8 bits Total QTY of packages	

1.2.2 Request Current Small Package from PC to target device

Supported Device: all G4 modules

Operation Code: 0xDC14		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is big UDP Package format :No		
Additional Content		
LEN of additional content::2 bytes		
Index of Additional Content	Remark	Value
0	High 8 bits of current Package No	Current Package No: 2 bytes
1	Low 8 bits of current Package No	

Response

Operation Code: 0x DC15		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is big UDP Package format : No		
Additional Content		
LEN of additional content: MAX. 65 bytes (Max. Flash data is 59 bytes)		
Index of Additional Content	Remark	Value
0	High 8 bits of current package No	Current Package No : 2 bytes
1	low 8 bits of current package No	
2	Flag of external flash or inner memory	1byte external flash=1 inner memory=0
3	High 8 bits of flash Start Address	3 bytes
4	Medium 8 bits of flash Start	

	Address	
5	Low 8 bits of flash Start Address	
6	Flash data start	
...		
64 (MAX.)	Flash data end	

1.3 Device Restore

1.3.1 Send Total QTY of Packages from PC to Target Device

Supported Device: All Modules

Operation Code: 0xDC16		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content:2 bytes		
Index of Additional Content	Remark	Value
0	High 8 bits of total QTY of packages	Total QTY of packages : 2 bytes
1	Low 8 bits total QTY of packages	

Response

Operation Code: 0xDC17		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content:1byte		
Index of Additional Content	Remark	Value
0	Flag of success or failure	1byte Success=0xF8 Failure=0xF5

1.3.2 Send Small Package from PC to Target Device

Supported Device: All modules

Operation Code: 0xDC1A		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: MAX. 65 bytes (Max. Flash data is 59 bytes)		
Index of Additional Content	Remark	Value
0	High 8 bits of current package No	Current Package No : 2 bytes
1	low 8 bits of current package No	
2	Flag of external flash or inner memory	1byte external flash=1 inner memory=0
3	High 8 bits of flash start address	3 bytes
4	Medium 8 bits of flash Start Address	
5	Low 8 bits of flash start address	
6	Flash data start	
...		
64 (MAX.)	Flash data end	

Response

Operation Code: 0xDC1B		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content::3bytes		
Index of Additional Content	Remark	Value
0	Flag of success or failure	1byte Success=0xF8 Failure=0xF5
1	High 8 bits of current package No	Current Package No : 2 bytes
2	Low 8 bits of current package No	

1.4 MAC Address

1.4.1 Read MAC Address

Supported Device: All modules

Operation Code: 0x F003		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 0 byte		
Index of Additional Content	Remark	Value

Response

Operation Code: 0xF004		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content: If is not hotel devices ,8 bytes, more bytes no use		
Index of Additional Content	Remark	Value
0	MAC 1st byte	1byte
1	MAC 2nd byte	1byte
2	MAC 3rd byte	1byte
3	MAC 4th byte	1byte
4	MAC 5th byte	1byte
5	MAC 6th byte	1byte
6	MAC 7th byte	1byte
7	MAC 8th byte	1byte
8	1 st byte of Remark	20bytes, If the length of remark is less than 20, please use ASCII of space.
9	2 nd byte of remark	
10	3 rd byte of remark	
11	4 th byte of remark	

1.4.2 Modify MAC Address

Supported Device: All modules

Operation Code: 0x F001		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 8 bytes		
Index of Additional Content	Remark	Value
0	MAC 1st byte	1byte
1	MAC 2nd byte	1byte
2	MAC 3rd byte	1byte
3	MAC 4th byte	1byte
4	MAC 5th byte	1byte
5	MAC 6th byte	1byte
6	MAC 7th byte	1byte
7	MAC 8th byte	1byte

Response

Operation Code: 0xF002		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Additional Content		
LEN of additional content: 1 byte		
Index of Additional Content	Remark	Value
0	Flag of success or failure	1byte Success=0xF8 Failure=0xF5

1.5 Read device remark

Remark: This operation has two ways to use

1 Send to specify device to get its remark

2 Broadcast to the LAN to get there devices' remark on the LAN

Supported Device: All modules

1

Operation Code: 0x 000E		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		

Response

Operation Code: 0x000F		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Additional Content		
LEN of additional content: 20 byte		
Index of Additional Content	Remark	Value
0	1 st byte of Remark	20bytes, If the length of remark is less than 20, please use ASCII of space.
1	2 nd byte of remark	
2	3 rd byte of remark	
3	4 th byte of remark	
4	5 th byte of remark	
5	6 th byte of remark	
6	7 th byte of remark	
7	8 th byte of remark	
8	9 th byte of remark	
9	10 th byte of remark	
10	11 th byte of remark	
11	12 th byte of remark	
12	13 th byte of remark	
13	14 th byte of remark	
14	15 th byte of remark	
15	16 th byte of remark	
16	17 th byte of remark	
17	18 th byte of remark	
18	19 th byte of remark	
19	20 th byte of remark	

2

Operation Code: 0x 000E		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Is Big UDP Package format : No		

Response:

**Devices in the same LAN will relay a random number time to response ,
Every one response as send to specify device**

1.6 Write device remark

Supported Device: All modules

Operation Code: 0x 0010		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 20 byte		
Index of Additional Content	Remark	Value
0	1 st byte of Remark	20bytes, If the length of remark is less than 20, please use ASCII of space.
1	2 nd byte of remark	
2	3 rd byte of remark	
3	4 th byte of remark	
4	5 th byte of remark	
5	6 th byte of remark	
6	7 th byte of remark	
7	8 th byte of remark	
8	9 th byte of remark	
9	10 th byte of remark	
10	11 th byte of remark	
11	12 th byte of remark	
12	13 th byte of remark	
13	14 th byte of remark	
14	15 th byte of remark	
15	16 th byte of remark	
16	17 th byte of remark	
17	18 th byte of remark	
18	19 th byte of remark	
19	20 th byte of remark	

Response

Operation Code: 0x0011		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Additional Content		
LEN of additional content: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for success/ failure	1byte,

		Success=0xF8 Failure =0xF5
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1.7 Read firmware version

Supported Device: All modules

Operation Code: 0xEEFD		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 0 byte		

Response

Operation Code: 0xEEFE		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content: 22 bytes,		
Index of Additional Content	Remark	Value
0 ~21	Version info	22 bytes

1.8 Modify subnet ID and Device ID by Mac address

Supported Device: All modules

Operation Code: 0x F005		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 10 bytes		
Index of Additional Content	Remark	Value
0	MAC 1st byte	1byte
1	MAC 2nd byte	1byte
2	MAC 3rd byte	1byte
3	MAC 4th byte	1byte

4	MAC 5th byte	1byte
5	MAC 6th byte	1byte
6	MAC 7th byte	1byte
7	MAC 8th byte	1byte
8	Subnet ID	1byte
9	SubDecive ID	1byte

Response

Operation Code: 0xF002		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Additional Content		
LEN of additional content: 1 byte		
Index of Additional Content	Remark	Value
0	Flag of success or failure	1byte Success=0xF8 Failure=0xF5

1.9 To see whether the specify device is on line

Supported Device: All modules

Operation Code: 0xF065		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Is Big UDP Package format : No		
Additional Content		
LEN of additional content: 0 byte		

Response

Operation Code: 0xF066		
Target Subnet ID:	Specify subnet ID of target device	1byte,scope 1-254
Target Device ID:	Specify device ID of target device	1byte,scope 1-254
Is Big UDP Package format: No		
Additional Content		
LEN of additional content: 0 bytes,		

2 Protocol for Hardware Programming

2.1 Outline

In order to facilitate the primary installer program the hardware.

2.1.1 Address conflicts red warning

If the software lock flag is turned on (Lock Active), then the module is powered addresses need to detect whether there is a conflict itself, if found to have address conflict, all conflicting module address Broadcast button under the red flashing LED lights require (Led lights 0.3s, off 0.5s) for the red warning.

If the software lock flag is off (Lock inactive), the module power is not required to detect whether the address confliction. It would not carry a red warning so do not waste too much time and affect the normal use.

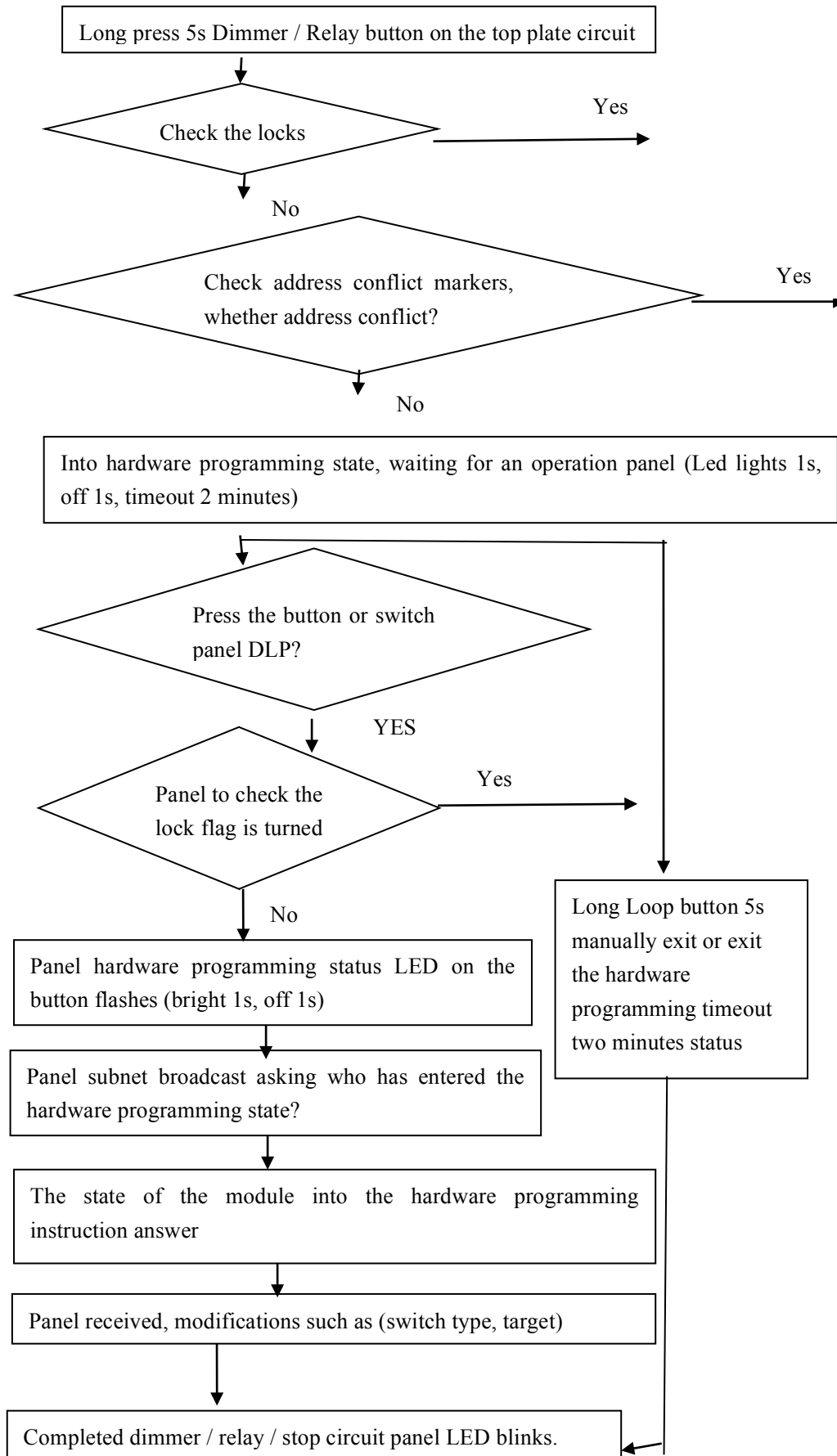
2.1.2 Address modification of human involvement

Primary installer can address on the module changes, without modifying the use of computer software.

Address conflicts exist in the case of address changes:

Address already exists in the case of conflict, where the LED is flashing. Long press button 5s broadcast address for address changes. Modules that can be used automatically assign an address to the current module. Modify the address is complete. LED lights turn green and stops flashing.

2.1.3 Hardware Programming Flowchart



2.2 The lock flag hardware programming read / write

2.2.1 Read Lock

Supported Device: Dimmer/Relay/HVAC/9in1/DLP/Switch

Operation Code: 0x0280		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0x0281		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content::1 byte		
Index of Additional Content	Remark	Value
0	Status of Lock	1byte Active =1 Inactive=0

2.2.2 Modify Lock

Supported Device: Dimmer/Relay/HVAC/9in1/DLP/Switch

Operation Code: 0x0282		
Target Subnet ID:	Specify subnet ID of target device or Broadcast address 255	scope 0-255
Target Device ID:	Specify device ID of target device or Broadcast address 255	scope 0-255
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Status of Lock	1byte Active =1 Inactive=0

Response

Operation Code: 0x0283		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content::1 byte		
Index of Additional Content	Remark	Value
0	Flag of success/failure	1byte Success =0xF8 Failure=0xF5

2.3 Ask if any address conflict or not?

Supported Device: Dimmer/Relay/HVAC/9in1/DLP/Switch

Operation Code: 0x0284		
Target Subnet ID:	subnet ID of itself	scope 0-254
Target Device ID:	Broadcast device address	255
Additional Content		
LEN of additional content:: 10 bytes		
Index of Additional Content	Remark	Value
0	Subnet ID of itself device	1byte
1	Device ID of itself device	1byte
2	1 st byte of MAC of itself device	1byte
3	2 nd byte of MAC of itself device	1byte
4	3 rd byte of MAC of itself device	1byte
5	4 th byte of MAC of itself device	1byte
6	5 th byte of MAC of itself device	1byte
7	6 th byte of MAC of itself device	1byte
8	7 th byte of MAC of itself device	1byte
9	8 th byte of MAC of itself device	1byte

Response

Operation Code: 0x0285		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content::9 bytes		
Index of Additional Content	Remark	Value

0	If exist same address or not	1byte Exist =1 Do no exist=0
1	1 st byte of MAC of target device	1byte
2	2 nd byte of MAC of target device	1byte
3	3 rd byte of MAC of target device	1byte
4	4 th byte of MAC of target device	1byte
5	5 th byte of MAC of target device	1byte
6	6 th byte of MAC of target device	1byte
7	7 th byte of MAC of target device	1byte
8	8 th byte of MAC of target device	1byte

2.4 Create New Random Address

Note: In order to address conflicts rare chance, you need to generate random numbers in 1-254. Each random number needed temporary. In the query, you need to detect whether there is history. If there is history, re-generate a random number; If there is no record in history, that query the current address is available. If not, continue to continue to generate random addresses.

If the reply is not received within 2s bell indicates that this address is available.

2.5 DLP/Switch Programming

Note: Ask what modules are programmed into the hardware state?

Supported Device: DLP/Switch

Operation Code: 0x0286		
Target Subnet ID:	subnet ID of itself	scope 0-254
Target Device ID:	Broadcast device address	255
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0x0287		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254

Additional Content		
LEN of additional content::7 bytes		
Index of Additional Content	Remark	Value
0	Subnet ID of controlled device (like Dimmer/Relay/HVAC/9in1)	1byte
1	Device ID of controlled device	1byte
2	Device Category	1byte (see the definition below)
3	1 st Parameter	1byte
4	2 nd Parameter	1byte
5	3 rd Parameter	1byte
6	4 th Parameter	1byte

Definition of Parameter according to device category

SN	Device Category	1 st Parameter	2 nd Parameter	3 rd Parameter	4 th Parameter
1	Dimmer	Channel No (brightness =100)	<N/A>	<N/A>	<N/A>
2	Relay	Channel No	<N/A>	<N/A>	<N/A>
3	HVAC	Subnet ID	Device ID	<N/A>	<N/A>
4	Sensors	<N/A>	<N/A>	<N/A>	<N/A>
5	Z-Audio	<N/A>	<N/A>	<N/A>	<N/A>

2.6 After the success of human involvement to modify the address, subnet broadcast to all devices

Supported Device: DLP/Switch/Dimmer/Relay/9in1/HVAC

Operation Code: 0x0288		
Target Subnet ID:	subnet ID of itself	scope 0-254
Target Device ID:	Broadcast device address	255
Additional Content		
LEN of additional content:: 2 byte		
Index of Additional Content	Remark	Value
0	Old Subnet ID (Before modification	1byte

	address)	
1	Old Device ID (Before modification address)	1byte

Remarks:

When the device receives the above address conflicts instruction, testing whether the old address itself address. If they are not the same, no need treatment. If they are the same, generate a random number in a delay of 500ms. Send “**2. Ask if any address conflict or not?**”

5 Dimmer

1 Control And Status

1.1 Scene

1.1.1 Scene Control

Operation Code: 0x0002		
Target Subnet ID:	Specify subnet ID of target device	scope 1-254
Target Device ID:	Specify device ID of target device	scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Area No	1byte scope 1-254
1	Scene No Scene No 0 is for stopping scene	1byte scope 1-254

Response

Operation Code: 0x0003		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content::3 + N bytes (If 2=< QTY of channels <= 8 ,N=1; If 8=< QTY of channels <= 16 ,N=2; If 16=< QTY of channels <= 24 ,N=3;)		

Index of Additional Content	Remark	Value
0	Area No	1byte
1	Scene No	1byte
2	QTY of channels	1byte
3	Status of channel1~channel8 Use Binary to describe channel status 0 = Off 1 = On (no percentage) From low bit to high bit Describe channel 1 to channel 8 Example: value1 binary is 0000 0001 ch#1 is on, others is off value25 binary is 0001 1001 ch#1 ch#4 ch#5 is on, others is off	1byte
4	Status of Channel 9~channel 16 (if have more than 8channels) Use Binary to describe channel status	1 byte
5	Status of Channel 17~channel 24 (if have more than 16channels) Use Binary to describe channel status	1 byte

1.1.2 Read scene No. of all zones running

Operation Code: **0xF078**

Target Subnet ID:	Specify subnet ID of target device	scope 1-254
Target Device ID:	Specify device ID of target device	scope 1-254
Additional Content		
LEN of additional content:: 0 bytes		

Response

Operation Code: 0xF079		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content::QTY of zones bytes		
Index of Additional Content	Remark	Value
0	Scene No. scene that zone 1 running	1byte 0 = This zone is not running scene
1	Scene No. scene that zone 1 running	1byte 0 = This zone is not running scene
...	...	...
QTY of zones -1	Scene No. scene that Last zone running	1byte 0 = This zone is not running scene

1.2 Sequence

1.2.1 Sequence Control

Operation Code: 0x001A		
Target Subnet ID:	Specify subnet ID of target device	scope 1-254
Target Device ID:	Specify device ID of target device	scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Area No	1byte 1-254
1	Sequence No No 0 is for stopping sequence	1byte 1-254

Response

Operation Code: 0x001B		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Area No	1byte
1	Sequence No	1byte

1.2.2 Read sequence No. of specify zone running

Operation Code: 0xE014		
Target Subnet ID:	Specify subnet ID of target device	scope 1-254
Target Device ID:	Specify device ID of target device	scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Zone No.	1byte

Response

Operation Code: 0xE015		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No. that zone 1 running	1byte 0 = This zone is not running sequence

1.3 Single Channel

1.3.1 Single Channel Control

Operation Code: 0x0031		
Target Subnet ID:	Specify subnet ID of target device	scope 1-254
Target Device ID:	Specify device ID of target device	scope 1-254
Additional Content		
LEN of additional content:: 4 bytes		
Index of Additional Content	Remark	Value
0	Light Channel No	1byte 1-255 if Channel no is 255, it means broadcast channels of the device.
1	Brightness Level	1byte,0-100 it's percentage of brightness
2	High 8 bits of Running time	Scope of Running time is 0-3600s $H=(\text{Running time}) \div 256$
3	Low 8 bits of Running Time	$L=(\text{Running time}) \text{ Mod } 256$

Response

Operation Code: 0x0032		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content:: 3 bytes		
Index of Additional Content	Remark	Value
0	Current Channel No	1byte,
1	Flag for success/ failure	1byte, Success=0xF8 Failure =0xF5
2	Brightness Level	1byte Scope 0~100

1.3.2 Reversing Control

Remark:

If current status of channel is on, then it will be switched off when received command below;

if current status of channel is off, then it will be switched on when received command below;

Operation Code: 0xDC1C		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 4 bytes		
Index of Additional Content	Remark	Value
0	Channel No	1byte
1	reserved	1byte
2	High 8bits of Running time	1byte
3	Low 8bits of Running time	1byte

Response

Operation Code: 0xDC1D		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2bytes		
Index of Additional Content	Remark	Value
0	Channel No	1byte
1	Flag of success or failure Success=0xF8 Failure=0xF5	1byte

1.3.3 Read Status of Channels

Operation Code: 0x0033		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		

LEN of additional content:: 0 byte

Response

Operation Code: 0x0034		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: (QTY of Channels + 1) bytes		
Index of Additional Content	Remark	Value
0	QTY of Channels	1byte
1	Status of Channel 1	1byte , scope 1-100
2	Status of Channel 2	1byte , scope 1-100
...	...	...
QTY of Channels	Status of last channel	1byte , scope 1-100

1.4 Forwardly Report Status by Relay

Every 5 seconds

or the statues of channel is changed by pressed the button on Dimmer/Relay/Zone Beast

Dimmer/Relay/Zone Beast will report status of by broadcast automatic.

Operation Code: 0x EFFF		
Target Subnet ID:	Broadcast address	0xFF
Target Device ID:	Broadcast address	0xFF
Additional Content		
LEN of additional content:: (QTY of zones+1 +nub (nub = 1:Lesser than 8 channels; nub = 2: more than 8 channels and lesser than16 ;nub = 3 :more than 16 channels bytes lesser than24)		
Index of Additional Content	Remark	Value
0	QTY of Zones	1 byte

1	Status of Zone 1	1 byte 0 = sequence others = Scenes
2	Status of Zone 2	1 byte 0 = sequence others = Scenes
QTY of Zones	Status of Zone (QTY of Zones)	1 byte 0 = sequence others = Scenes
QTY of Zones + 1	QTY of Channels	1 byte
QTY of Zones + 2	Status of channel1~channel8 Use Binary to describe channel status 0 = Off 1 = On (no percentage) From low bit to high bit Describe channel 1 to channel 8 Example: value1 binary is 0000 0001 ch#1 is on, others is off value25 binary is 0001 1001 ch#1 ch#4 ch#5 is on, others is off	1 byte

QTY of Zones + 3	Status of Channel 9~channel 16 (if have more than 8channels) Use Binary to describe channel status	1 byte
QTY of Zones + 4	Status of Channel 17~channel 24 (if have more than 16channels) Use Binary to describe channel status	1 byte

2 Settings

2.1 Zone Setting

2.1.1 Read setting of zones

Operation Code: 0x0004		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0x0005		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 4 + QTY of channels bytes		
Index of Additional Content	Remark	Value
0	High 8 bits of device type	1byte
1	Low 8 bits of device type	1byte
2	Subnet ID of target device	1byte , scope 1-254
3	Device ID of target device	1byte , scope 1-254
4	QTY zones of current device	1byte
5	Which zone did channel 1 been divided	1byte

		0 = no divided
6	Which zone did channel 2 been divided	1byte 0 = no divided
7	Which zone did channel 3 been divided	1byte 0 = no divided
...	...	...
4 + QTY of channels	Which zone did last channel been divided	1byte 0 = no divided

2.1.2 Make zones of Relay

Operation Code: 0x0006		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 3 + QTY of zones bytes		
Index of Additional Content	Remark	Value
0	Invalid	1byte
1	Invalid	1byte
2	Zone No.	1 byte
3	Flag for channel 1 is divided into current zone	1 byte 1 = this channel will be divided into current zone 0 = this channel will be not divided into current zone
4	Flag for channel 2 is divided into current zone	1 byte 1 = this channel divided into current zone 0 = this channel did not divided into current zone
Max channel num + 2	Flag for channel Max CH# is divided into current zone	1 byte 1 = this channel divided into current zone 0 = this channel did not divided into current zone

Response

Operation Code: 0x0007			
Target Subnet ID:		Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:		Specify device ID of target device	1byte, scope 1-254
Additional Content			
LEN of additional content:: 1 byte			
Index	of	Remark	Value

Additional Content		
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

2.1.3 Read remark of one zone

Operation Code: 0xF00A		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Zone number	1byte

Response

Operation Code: 0xF00B		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 21 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1 ~20	Zone remark	20 bytes If the length of remark is less than 20, please use ASCII of space.

2.1.4 Write remark of one zone

Operation Code: 0xF00C

Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 21 byte		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1 ~20	Zone remark	20 bytes If the length of remark is less than 20, please use ASCII of space.

Response

Operation Code: 0xF00D		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte

2.1.5 Read type of zone when power on

Operation Code: 0xF051		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0xF052		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of zones bytes		

Index of Additional Content	Remark	Value
0	Type of zone 1	1byte 0 = restore to the statue of power off 1 = restore to specify scene
1	Type of zone 2	1byte 0 = restore to the statue of power off 1 = restore to specify scene
2	Type of zone 3	1byte 0 = restore to the statue of power off 1 = restore to specify scene
QTY of zones - 1	Type of last zone	1byte 0 = restore to the statue of power off 1 = restore to specify scene

2.1.6 Write type of zone when power on

Operation Code: 0xF053		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of zones bytes		
Index of Additional Content	Remark	Value
0	Type of zone 1	1byte 0 = restore to the statue of power off 1 = restore to specify scene
1	Type of zone 2	1byte 0 = restore to the statue of power off 1 = restore to specify scene
2	Type of zone 3	1byte 0 = restore to the statue of power off 1 = restore to specify scene
QTY of zones - 1	Type of last zone	1byte 0 = restore to the statue of power off 1 = restore to specify scene

Response

Operation Code: 0xF054		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

2.2 Scene Settings

2.2.1 Read scene model

Operation Code: 0x0000		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content::2 bytes		
Index of Additional Content	Remark	Value
0	Area No.	1byte
1	Scene No.	1byte

Response

Operation Code: 0x0001		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content:: N + 4 bytes		
Index of Additional Content	Remark	Value
0	Area No.	1byte
1	Scene No.	1byte
2	Time High 8 Octet	1byte

3	Time Low 8 Octet	1byte
4	Channel 1 Intensity	1byte 0 = Off 100 = On
5	Channel 2 Intensity	
6	Channel 3 Intensity	
7	Channel 4 Intensity	
.		
.		
n	Channel n Intensity	

2.2.2 Modify scene model

Operation Code: 0x0008		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content:: 4 + QTY of channels bytes		
Index of Additional Content	Remark	Value
0	Area No.	1byte
1	Scene No.	1byte
2	Time High 8 Octet	1byte
3	Time Low 8 Octet	1byte
4	Channel 1 Intensity	1byte 0 = Off 100 = On
5	Channel 2 Intensity	
6	Channel 3 Intensity	
7	Channel 4 Intensity	
...	...	...
3 + QTY of channels	Last channel Intensity	

Response

Operation Code: 0x0009		
Target Subnet ID:	Specify subnet ID of target device	scope 0-254
Target Device ID:	Specify device ID of target device	scope 0-254
Additional Content		
LEN of additional content::1 bytes		

Index of Additional Content	Remark	Value
0	Success flag	1byte 0xF8 =success 0xF5=error

2.2.3 Read remark of specify scene of specify zone

Operation Code: 0xF024		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0xF025		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 22 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Scene No.	1byte
2 ~21	Remark of current scene	20 byte ,If the length of remark is less than 20, please use ASCII of space.

2.2.4 Write remark of specify scene of specify zone

Operation Code: 0xF026		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 22 bytes		
Index of Additional Content	Remark	Value

Content		
0	Zone No.	1byte
1	Scene No.	1byte
2 ~21	Remark of current scene	20 byte ,If the length of remark is less than 20, please use ASCII of space.

Response

Operation Code: 0xF027		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5
1	Scene No.	1byte

2.2.5 Read scene No. of every zone when power on

Operation Code: 0xF055		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0xF056		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of zones bytes		
Index of Additional Content	Remark	Value
0	Scene No. for zone 1 when power on	1byte
1	Scene No. for zone 1	1byte

	when power on	
2	Scene No. for zone 1 when power on	1byte
QTY of zones - 1	Scene No. for Last zone when power on	1byte

2.2.6 Modify scene No. of every zone when power on

Operation Code: 0xF057		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of zones byte		
Index of Additional Content	Remark	Value
0	Scene No. for zone 1 when power on	1byte
1	Scene No. for zone 1 when power on	1byte
2	Scene No. for zone 1 when power on	1byte
QTY of zones - 1	Scene No. for Last zone when power on	1byte

Response

Operation Code: 0xF058		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

2.3 Sequence Settings

2.3.1 Read remark of specify sequence

Operation Code: 0xF028		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
2	Sequence No.	1byte

Response

Operation Code: 0xF029		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 22 byte		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No.	1byte
2 ~ 21	Remark of current sequence	20 bytes If the length of remark is less than 20, please use ASCII of space.

2.3.2 Modify remark of specify sequence

Operation Code: 0xF030		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254

Additional Content		
LEN of additional content:: 22 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No.	1byte
2 ~ 21	Remark of current sequence	20 bytes If the length of remark is less than 20, please use ASCII of space.

Response

Operation Code: 0xF031		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No.	1byte

2.3.3 Read setting of sequence running

Operation Code: 0x0012		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
2	Sequence No.	1byte

Response

Operation Code: 0xF013		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254

Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 5 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No.	1byte
2	Model of running	1 bytes 0 = Forward order 1 = Backward order 2 = Forward and backward order 3 = Random order 4 = Invalid
3	QTY of steps of sequence	1 byte
4	QTY of times of sequence running	1 byte Scope : 0 ~99 0 = Running no stop

2.3.4 Modify setting of sequence running

Operation Code: 0x0018		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 5 bytes		
Index of Additional Content	Index of Additional Content	Index of Additional Content
0	Zone No.	1byte
1	Sequence No.	1byte
2	Model of running	1 bytes 0 = Forward order 1 = Backward order 2 = Forward and backward order 3 = Random order 4 = Invalid
3	QTY of steps of sequence	1 byte
4	QTY of times of sequence	1 byte

	running	Scope : 0 ~99 0 = Running no stop
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Response

Operation Code: 0x0019		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

2.3.5 Read detail of a sequence in specify zone

Operation Code: 0x0014		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 3 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
2	Sequence No.	1byte
3	Step No.	1byte

Response

Operation Code: 0x0015		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 6 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte

1	Sequence No.	1byte
2	Step No.	1 byte
3	Scene No.	1 byte
4	High 8 bit of time current step will stop	1byte
5	Low 8 bit of time current step will stop	1byte Unit :100ms

2.3.6 Modify detail of a sequence in specify zone

Operation Code: 0x0016		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 5 bytes		
Index of Additional Content	Index of Additional Content	Index of Additional Content
LEN of additional content:: 6 bytes		
Index of Additional Content	Remark	Value
0	Zone No.	1byte
1	Sequence No.	1byte
2	Step No.	1byte
3	Scene No.	1byte
4	High 8 bit of time current step will stop	1byte
5	Low 8 bit of time current step will stop	1byte Unit :100ms

Response

Operation Code: 0x0017		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 2 bytes		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8

		Failure=0xF5
--	--	--------------

2.4 Single Channel settings

2.4.1 Read channel remark

Operation Code: 0xF00E		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Channel No.	1byte

Response

Operation Code: 0xF00F		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 21 bytes		
Index of Additional Content	Remark	Value
0	Channel No.	1byte
1 ~20	Current channel remark	20 bytes If the length of remark is less than 20, please use ASCII of space.

2.4.2 Write channel remark

Operation Code: 0xF010		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254

Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 21 byte		
Index of Additional Content	Remark	Value
0	Channel No.	1byte
1 ~20	Current channel remark	20 bytes. If the length of remark is less than 20, please use ASCII of space.

Response

Operation Code: 0xF011		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

2.4.3 Read channel load type

Operation Code: 0xF012		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 0 byte		

Response

Operation Code: 0xF013		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of channels bytes		
Index of Additional Content	Remark	Value

0	Channel 1 load type	1byte See the blew table Load type of channel
1	Channel 2 load type	1byte
2	Channel 3 load type	1byte
QTY of channels -1	Last channel load type	1byte

Load type of channel

Undefined	Incandescent Lamp	Magnetic low-Voltage Lamp	Electronic low-Voltage Lamp	Fluorescent lamp	Neon/Cold Cathode Lamp	High-Intensity Discharge(non-dim only)Lamp	Test
0	1	2	3	4	5	6	7

2.4.4 Modify channel load type

Operation Code: 0xF014		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: QTY of channels bytes		
Index of Additional Content	Remark	Value
0	Channel 1 load type	1byte See the blew table Load type of channel
1	Channel 2 load type	1byte
2	Channel 3 load type	1byte
QTY of channels -1	Last channel load type	1byte

Response

Operation Code: 0xF015		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of	Remark	Value

Additional Content		
0	Flag for success or Failure	1byte Success =0xF8 Failure=0xF5

Load type of channel

Undefined	Incandescent Lamp	Magnetic low-Voltage Lamp	Electronic low-Voltage Lamp	Fluorescent lamp	Neon/Cold Cathode Lamp	High-Intensity Discharge(non-dim only)Lamp	Test
0	1	2	3	4	5	6	7

2.5 Limit of Brightness Level percent

2.5.1 Read limit of every channel

Operation Code: 0xF016		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	High limit or low limit	1byte 0 = Low limit 1= High limit

Response

Operation Code: 0xF017		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 + QTY of channels bytes		
Index of Additional Content	Remark	Value
0	High limit or low limit	1byte 0 = Low limit

		1= High limit
1	Channel 1 Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100
2	Channel 2 Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100
QTY of channels	Last channel Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100

2.5.2 Write limit of every channel

Operation Code: 0xF018		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 + QTY of channels bytes		
Index of Additional Content	Remark	Value
0	High limit or low limit	1byte 0 = Low limit 1= High limit
1	Channel 1 Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100
2	Channel 2 Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100
QTY of channels	Last channel Limit Brightness Level percent If the first byte = 0,is low limit If the first byte = 1,is high limit	1byte Scope 0~100

Response

Operation Code: 0xF019		
Target Subnet ID:	Specify subnet ID of target device	1byte, scope 1-254
Target Device ID:	Specify device ID of target device	1byte, scope 1-254
Additional Content		
LEN of additional content:: 1 byte		
Index of Additional Content	Remark	Value
0	Flag for high limit or low limit or Failure or	1byte 0 = low limit 1= high limit 0xF5 = Failure