

Central Control Command

Support communication interface:

- 1、 RS485, 9600,N,8,1
- 2、 RS232, 9600,N,8,1
- 3、 UDP protocol for the 500556, remote port 5067, Local Port 8080.
- 4、 UDP protocol for the 500556-V2, remote port 5062, Local Port 8080.

Command format

Lead code	Control code		Check Code
	Controltype	Value	
2byte	2byte	3byte	1byte
0xA5AB			The last two digits of the sum of the control codes

- 1、 Central control command adopts fixed length of 8 bytes , Lead code: "0xA5AB","0x" It's a hexadecimal code , All the above bytes are: no input is required when writing the control command line.
- 2、 controltype: Scene loading, input mute, input non-mute, input volume +, input volume -, output mute, output non-mute, output volume +, output volume -, Mixer settings, mixer cancel, input volume setting, output volume setting
- 3、 Check Code: Sum of control code bytes (0x100 remainder after the sum of byte 3 to byte 7,)Hex calculation , byte8 = (Byte3+Byte4+ Byte5+Byte6+ Byte7)%0x100

Notes:

- 1、 Scene serial number is 0x01~0x08 (decimalism1~8;
- 2、 The range of start channel and end channel is 0x01~0x10 (Decimal 1~16) , The start channel must be less than or equal to the end channel;
- 3、 Numeric type parameters such as gain and step size must be converted to hexadecimal;
- 4、 Mixer input channel 0x01~0x10 is analog input. 1 to 16 channels, 0x11 for automix input, 0x12 is the feedback cancellation input, 0x13 is the noise cancellation input, 0x14 is the echo cancellation input
- 5、 Control command return code is the same as that sent
- 6、 The "parameter" item of the query instruction is filled with 0 when send.

Scene loading

Lead code	control code				Check Code
	Scene loading	Scenario Groups	Scene serial number	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0130	0x01	0x00~0x08	0x00	The sum of the control codes
For example: load scenario 5, the values of each field are set as follows:					
0xA5AB	0x0130	0x01	0x05	0x00	0x37
The final central command is: A5AB013001050037					

Scene save

Lead code	control code			Check Code
	Scene loading	Reserved bytes		
2byte	2byte	3byte		1byte
0xA5AB	0x0140	0x00		the sum of the control codes
For example: save the scene, and set the value of each field as follows:				
0xA5AB	0x0140	0x000000		0x37
The final central command is: A5AB014000000041				

Input mute

Lead code	Control code				Check Code
	Input mute	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0231	0x01~0x10	0x01~0x10	0x00	the sum of the control codes
For example, set the 5th ~ 12th input channel to mute, and set the value of each field as follows:					
0xA5AB	0x0231	0x05	0x0C	0x00	0x44
The final central command is: A5AB0231050C0044					

Input non-mute

Lead code	Control code				Check Code
	Input non-mute	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0232	0x01~0x10	0x01~0x10	0x00	The sum of the control codes
For example, set the 5th ~ 14th input channel to non-mute, and set the value of each field as follows:					

0xA5AB	0x0232	0x05	0x0E	0x00	0x47
The final central command is: A5AB0232050E0047					

48V Phantom Power On

Lead code	Control code				Check Code
	48V Phantom Power On	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x023B	0x01~0x10	0x01~0x10	0x00	The sum of the control codes
For example: Turn on the phantom power supply of the 5 input channel, and set the value of each field as follows					
0xA5AB	0x023B	0x05	0x05	0x00	0x47
The final central command is : A5AB023B05050047					

48V Phantom Power Off

Lead code	Control code				Check Code
	48V Phantom Power On	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x023C	0x01~0x10	0x01~0x10	0x00	The sum of the control codes
For example: Turn off the phantom power supply of the 5 input channel, and set the value of each field as follows					
0xA5AB	0x023C	0x05	0x05	0x00	0x48
The final central command is : A5AB023C05050048					

Input Sensitivity

Lead code	Control code				Check Code
	Input Sensitivity	Start channel	End channel	Sensitivity	
2byte	2byte	1byte	2byte	1byte	1byte
0xA5AB	0x0238	0x01~0x10		-60->0	The sum of the control codes
Note: set the sensitivity of input channel 2 to -6, then the value is -6(0xFA).					
0xA5AB	0x0238	0x02	0x02	0xFA	0xF8
The final central command is : A5AB02380202FA38					

Input Volume +

Lead code	Control code				Check Code
	Input Volume -	Start channel	End channel	step-by-step	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0233	0x01~0x10	0x01~0x10	0x01~0x0C	The sum of the control codes

Note: the step is the db value increased by the volume of the central control code every time. The value is equal to the db value multiplied by 10.

For example, increase the volume of input channel 8~12 by 5.0db, and set the value of each field as follows:

0xA5AB	0x0233	0x08	0x0C	0x32	0x7B
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The final central command is : A5AB0233080C327B

Input Volume -

Lead code	Control code				Check Code
	Input Volume -	Start channel	End channel	step-by-step	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0234	0x01~0x10	0x01~0x10	0x01~0x0C	The sum of the control codes

Note: the step is the db value reduced by the volume of the central control code every time. The value is equal to the db value multiplied by 10.

For example, reduce the volume of input channel 8~12 by 5.0db, and set the value of each field as follows:

0xA5AB	0x0234	0x08	0x0C	0x32	0x7C
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The final central command is : A5AB0234080C327C

Output mute

Lead code	Control code				Check Code
	Input Volume	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0331	0x01~0x10	0x01~0x10	0x00	The sum of the control codes

For example, set output channel 5 to mute, and set the value of each field as follows:

0xA5AB	0x0331	0x05	0x05	0x00	0x3E
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The final central command is : A5AB03310505003E

Output non-mute

Lead code	Control code				Check Code
	Output non-mute	Start channel	End channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0332	0x01~0x10	0x01~0x10	0x00	The sum of the control codes

For example, set the 5-10 output channel to non-mute, and set the value of each field as follows:

0xA5AB	0x0332	0x05	0x0A	0x00	0x44
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The final central command is : A5AB0332050A0044

Output volume +

Lead code	Control code				Check Code
	Output volume +	Start channel	End channel	step-by-step	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0333	0x01~0x10	0x01~0x10	0x01~0x0C	The sum of the control codes
Note: step is the dB value of the increase in the volume of the central control code every time. The value is equal to db times 10. For example, increase the volume of 1~16 output channels by 3.0dB for each channel. Set the value of each field as follows: 0xA5AB 0x0333 0x01 0x10 0x1E 0x65					
The final central command is : A5AB033301101E65					

Output volume -

Lead code	Control code				Check Code
	Output volume -	Start channel	End channel	step-by-step	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0334	0x01~0x10	0x01~0x10	0x01~0x0C	The sum of the control codes
Note: step is the dB value that the volume of the central control code decreases every time. The value is equal to db times 10. For example, reduce the volume of each channel of the third output channel by 12dB, and set the value of each field as follows: 0xA5AB 0x0334 0x03 0x03 0x78 0xB5					
The final central command is : A5AB0334030378B5					

Mixer settings

Lead code	Control code				Check Code
	Mixer setting	Input channel	Output channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0435	0x01~0x14	0x01~0x10	0x00	The sum of the control codes
0x11~0x14 Please refer to note 4 for input For example, mix the input signal of 5 channels in the output signal of 8 channels, and set the value of each field as follows: 0xA5AB 0x0435 0x05 0x08 0x00 0x46					

The final central command is : A5AB043505080046

Mixer cancel

Lead code	Control code				Check Code
	Mixer cancel	Input channel	Output channel	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0436	0x01~0x14	0x01~0x10	0x00	The sum of the control codes
0x11~0x14 Please refer to note 4 for input					
For example, cancel the mixing signal from input 5 to output 8, and set the value of each field as follows:					
0xA5AB	0x0436	0x05	0x08	0x00	0x47
The final central command is : A5AB043605080047					

Mixer component Settings

Lead code	Control code				Check Code
	Mixer component Settings	Input channel	Output channel	Mixing amount	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0437	0x01~0x14	0x01~0x10	-72~12	The sum of the control codes
For input 0x11~0x14, please refer to note 4 that the complement is taken when the mixing quantity is negative					
For example:, set the mixing volume of input 5 to output 8 as -10db, and set the value of each field as follows:					
0xA5AB	0x0437	0x05	0x08	0xF6	0x3D
The final central command is : A5AB04370508F63E					

Feedback input setting

Lead code	Control code			Check Code
	Noise input setting	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0635	0x01~0x10	0x0100	The sum of the control codes
For example, add the input signal of 5 channels to noise cancellation, and set the value of each field as follows:				
0xA5AB	0x0635	0x05	0x0100	0x41
The final central command is : A5AB063505010041				

Feedback input cancellation

Lead code	Control code	Check Code

	Noise input	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0636	0x01~0x10	0x0100	The sum of the control codes
For example, cancel the signal noise cancellation of input channel 5, and set the value of each field as follows:				
0xA5AB	0x0636	0x05	0x0100	0x42
The final central command is : A5AB063605010042				

Noise input setting				
Lead code	Control code			Check Code
	Noise input setting	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0635	0x01~0x10	0x0200	The sum of the control codes
For example, add the input signal of 5 channels to noise cancellation, and set the value of each field as follows:				
0xA5AB	0x0635	0x05	0x0200	0x42
The final central command is : A5AB063505020042				

Noise input cancellation				
Lead code	Control code			Check Code
	Noise input setting	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0636	0x01~0x10	0x0200	The sum of the control codes
For example, cancel the signal noise cancellation of input channel 5, and set the value of each field as follows:				
0xA5AB	0x0636	0x05	0x0200	0x43
The final central command is : A5AB063605020043				

Echo cancels local input Settings				
Lead code	Control code			Check Code
	Noise input setting	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0635	0x01~0x10	0x0300	The sum of the control codes
For example, add the input signal of 5 channels to noise cancellation, and set the value of each field as				

follows:

0xA5AB	0x0635	0x05	0x0300	0x43
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The final central command is : A5AB063505030043

Echo cancels local input cancels

Lead code	Control code			Check Code
	Noise input setting	Input channel	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0636	0x01~0x10	0x0300	The sum of the control codes
For example, cancel the signal noise cancellation of input channel 5, and set the value of each field as follows:				
0xA5AB	0x0636	0x05	0x0300	0x44
The final central command is : A5AB063605030044				

Echo cancels remote input Settings

Lead code	Control code			Check Code
	Echo remote input	Input chann el	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0635	0x01~0x10	0x0400	The sum of the control codes
For example, cancel the signal noise cancellation of input channel 5, and set the value of each field as follows:				
0xA5AB	0x0635	0x05	0x0400	0x44
The final central command is : A5AB063505040044				

Echo cancels remote input cancels

Lead code	Control code			Check Code
	Echo remote input	Input chann el	Reserved bytes	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0636	0x01~0x10	0x0400	The sum of the control codes
For example, cancel the signal noise cancellation of input channel 5, and set the value of each field as follows:				
0xA5AB	0x0636	0x05	0x0400	0x45
The final central command is : A5AB063605040045				

Input volume setting

Lead code	Control code	Check Code
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	Input volume setting	Channel	Volume	
2byte	2byte	1byte	2byte	1byte
0xA5AB	0x0237	0x01~0x10	-7200->1200	The sum of the control codes
Note: the volume value is equal to db value times 100,				
For example, if the gain value of input channel 2 is set to -20.78, then the volume value is set to -2078(0xF7E2).				
0xA5AB	0x0237	0x02	0xF7E2	0x14
The final central command is : A5AB023702F7E214				

Output volume setting

Lead code	Control code				Check Code
	Output volume setting	Channel	Volume		
2byte	2byte	1byte	2byte	1byte	
0xA5AB	0x0337	0x01~0x10	-7200->1200	The sum of the control codes	
Note: the volume value is equal to the level value times 100.					
For example, if the level value of channel 11 is set to -20.78db, then the volume value is set to -2078(0xF7E2). The values of each field are as follows:					
0xA5AB	0x0337	0x0B	0xF7E2	0x1E	
The final central command is : A5AB03370BF7E21E					

Input equalization setting

Lead code	Control code					Check Code
	Modul e	Type	Segm ent	Channel	Parameter	
2byte	1byte	3Bit	5Bit	1byte	2byte	1byte
0xA5AB	0x08			0x01~0x10		The sum of the control codes
Note: Type 0=Bypass 1=Freq 2=Gain 3=Oct						
For example, set the center frequency of input channel 1 to 20Hz						
0xA5AB	0x08	0x41		0x01	0x0014	0x5E
The final central command is : A5AB08410100145E						

Input volume constraint

Lead code	Control code				Check Code
	Input volume constraint	Channel	The minimum volume	maximum volume	

2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0241	0x01~0x10	-72~12	-72~12	The sum of the control codes
For example: set the digital gain value of channel 1 as -50db to 0dB, and the values of each field are as follows:					
0xA5AB	0x0241	0x01	0xCE	0x00	0x12
The final central command is : A5AB024101CE0012					

Output volume constraint					
Lead code	Control code				Check Code
	Input volume constraint	Channel	The minimum volume	maximum volume	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x0341	0x01~0x10	-72~12	-72~12	The sum of the control codes
For example: set the digital gain value of channel 1 as -50db to 0dB, and the values of each field are as follows:					
0xA5AB	0x0341	0x01	0xCE	0x00	0x13
The final central command is : A5AB034101CE0013					

GROUP/DCA Channelmanagement					
Lead code	Control code				Check Code
	Channel management	Marshalling no.	Channel	Parameter	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x1001	0x01~0x04	0~7	0/1	The sum of the control codes
For example, set DCA/GROUP grouping 3 and add channel 2. The values of each field are as follows:					
0xA5AB	0x1001	0x03	0x02	0x01	0x17
The final central command is : A5AB100103020117					

GROUP/DCA Channel deleted					
Lead code	Control code				Check Code
	Type switch	Mars halling no.	Parameter	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x1020	1~8	-	-	The sum of the

				control codes
For example: delete DCA/GROUP GROUP 3, each field value is as follows:				
0xA5AB	0x1020	0x03	0x00	0x00 0x33
The final central command is : A5AB102003000033				

GROUP/DCAvolumecontrol

Lead code	Control code				Check Code
	Type switch	Mar shalling no.	Type	Parameter	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x1002	1~8	0~3	0~100/-84~0	The sum of the control codes
Note: when the type is DCA, the parameter range is 0~100. When the type is GROUP, the parameter range is -84~0					
Note: type 0 is input DCA, 1 is output DCA, 2 is input GROUP, 3 is output GROUP					
For example, the volume value of control Group 2 is -8.0, and the value of each field is as follows:					
0xA5AB	0x1002	0x02	0x03	0xF7	0x0E
The final central command is : A5AB10020203F70E					

GROUP/DCA Mute control

Lead code	Control code				Check Code
	Type switch	Marshalling no.	Parameter	Reserved bytes	
2byte	2byte	1byte	1byte	1byte	1byte
0xA5AB	0x1004	1~8	0~1		The sum of the control codes
Note: parameter 1 mute; 0: non-mute					
For example: control DCA/GROUP GROUP 2 to be silent, each field value is as follows:					
0xA5AB	0x1004	0x01	0x0100	0x17	
The final central command is : A5AB100402010017					

The query command

	2byte	2byte	1byte	1byte	1byte	1byte
Scene	0xA5AB	0x01B0	0x01	Para meters, scene number	0x00	Check Code
Input Mute	0xA5AB	0x02B1	Parameter ,mute state, bitwise			Check Code

Output mute	0xA5AB	0x03B1	Parameter ,mute state, bitwise			Check Code
phantom power	0xA5AB	0x02BC	Parameter ,mute state, bitwise			Check Code
Sensitivity	0xA5AB	0x02B8	channel nu mber	Check Code	Parameter	Check Code
Input Volume	0xA5AB	0x02B7	channel nu mber	Check Code		Check Code
Output Volume	0xA5AB	0x03B7	channel nu mber	Check Code		Check Code
<u>mixer</u>	0xA5AB	0x04B5	Input channel	Check Code	Parameter	Check Code
Feedback input	0xA5AB	0x06B6	Input channel	Check Code	Parameter	Check Code
Noise input	0xA5AB	0x06B6	Input channel	Check Code	Parameter	Check Code
Ec ho local input	0xA5AB	0x06B6	Input channel	Check Code	Parameter	Check Code
Echo Remote Input	0xA5AB	0x06B6	Input channel	Check Code	Parameter	Check Code
Mixer 2	0xA5AB	0x04B9	output channel	Parameter , Mixing status, bitwise (simulate input only, others use "mixer" command query)		Check Code
Feedback input 2	0xA5AB	0x06B9	0x01	Parameter , Mixing status, bitwise		Check Code
Noise input 2	0xA5AB	0x06B9	0x02	Parameter , Mixing status, bitwise		Check Code
Echo Local Input 2	0xA5AB	0x06B9	0x03	Parameter , Mixing status, bitwise		Check Code
Echo Remote Input 2	0xA5AB	0x06B9	0x04	Parameter , Mixing status, bitwise		Check Code

The central control terminal sends a request packet, and the device returns a level packet.

Gets the input level command

Lead code	Control code			Check Code
	Setup Mode	data length	Data	

2 Byte	2 Byte	1 Byte	2 Byte	1 Byte
0xA5AB	0x0004	0x00	0xffff	The sum of the control codes
For example: the values for each field are as follows:				
0xA5AB	0x0004	0x00	0xffff	...
The final central command is.....				

Gets the output level command				
Lead code	Control code			Check Code
	Setup Mode	data length	Data	
2 Byte	2 Byte	1 Byte	2 Byte	2 Byte
0xA5AB	0x0005	0x00	0xffff	The sum of the control codes
For example: the values for each field are as follows:				
0xA5AB	0x0005	0x00	0xffff	...
The final central command is:				

The length of data is:

- . Lead code + setup mode + data length + data + check code
- . Lead code setup mode + data length + checksum = 6
- . Number of bytes of level data = data length - 6
- . Range of level data: 0 ~ -120(all less than -120 are -120)

Level value is 0: loudest

Level value is -120: minimum sound

The last byte is the check digit 0x00 (the return code does not use the check)

E.g:

Dante88 Device sends command: A5AB000400FFFF02

The return code is: A5 AB 00 04 16 CE 9B 9D 9D 9D 9A 9C 9B 88 88 88 88 88 88 88 88 01

Fifth byte 0x16: data length is 22 bits

The data length is followed by 22-6 = 16 channel levels (those shaded in green), the first 8 analog channels, and the last 8 dante channels

Calculation method of actual level value:

CE : 1100 1110 Negate -(0011 0001 +1)= -(0011 0010)= -(0x32) = - 48

88 : 1000 1000 Negate -(0111 0111 +1)= -(0111 1000)= -(0x78) = -120

Playback settings

Lead code	Control code			Check Code
	Playback settings	Type	undetermined	
2byte	2 byte	1 byte	2 byte	1 byte
0xA5AB	0x000E	0x1~0x6	0x0000	The sum of the control codes

Type 1= play 2= pause 3 = stop 4= next 5= last 6= play position

For example, set the current state to play

0xA5AB	0x000E	0x1	0x0000	0x0F
The final central command is: A5AB000E0100000F				

Get play status

Lead code	Control code			Check Code
	Playback settings	Type	undetermined	
2 byte	2 byte	1 byte	2 byte	1 byte
0xA5AB	0x000E	0xFF	0x0000	The sum of the control codes
For example: dd				
0xA5AB	0x000E	0xFF	0x0000	0x0D
The final central command is: A5AB000EFF00000D				

Query instruction example:

1.Query scene, current is scene 5

Sending code: A5AB01B0010000B2

Return code: A5AB01B0010500B7

2.Query input mute, the current input mute channel is 5 ~ 12

Sending code: A5AB02B1000000B3

Return code: A5AB02B1000FF0B2

3.Query output mute, the current output mute channel is 5~12

Sending code: A5AB03B1000000B4

Return code: A5AB03B1000FF0B3

4.Query phantom power supply, the current phantom power supply open channel is 5~12

Sending code: A5AB02B8000000BA

Return code: A5AB02B8000FF0B9

5.Query input 1 sensitivity, the current input sensitivity of channel 1 is -6

Sending code: A5AB02B8010100BC

Return code: A5AB02B80101FAB6

6.Query the volume of input 2. The current input volume of channel 2 is -20.78dB.

Sending code: A5AB02B7020000BB

Return code: A5AB02B702F7E294

7.Query output 2 volume, the current output volume value of channel 2 is -20.78dB

Sending code: A5AB03B7020000CB

Return code: A5AB03B702F7E2A4

8.Query the status of mixer 1 in and 1 out. The current 1st input is mixed to the 1st output. Sending code: A5AB04B5010100BB



Return code: A5AB04B5010100BB
9.Query the status of feedback input 1. The current first input enters feedback processing. Sending code: A5AB06B6010100BE
Return code: A5AB06B6010100BE
10.Query the feedback input state, and the current input of the first channel enters the feedback processing Sending code: A5AB06B9010000BE Return code: A5AB06B901FFFEBD