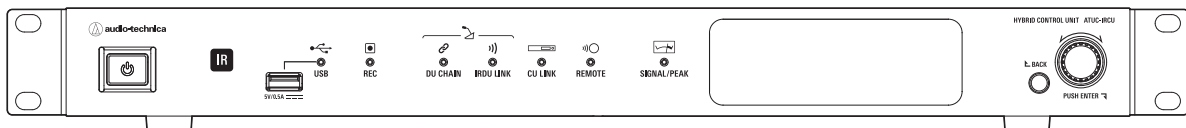
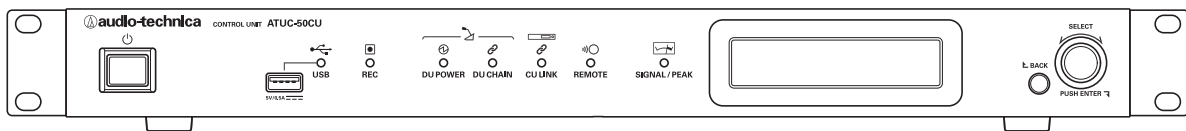


ATUC-50/ATUC-IR

IP Control Protocol Specifications

ATUC-50CU
Control Unit

ATUC-IRCU
Hybrid Control Unit



Update History

Date modified:	Version	Description of update
9/8/2016	50CU:ver1.5	4.2.47 Added INT50 Common Setting Change Request
		4.2.48 Added INT50 Common Setting Acquisition Request
		Deleted Talk On Request
		4.2.65 Added Talk Permission Request
		4.2.63.1/4.2.65.1 Added Talk Status Transition Diagram
		4.2.26/4.2.47/5.2.3 Changed to make Dimmer usable
		4.2.26/4.2.42/5.2.3 Deleted Low cut
		4.2.26/4.2.42/5.2.3 Added Interpretation Language Pattern
		4.2.42/5.2.3 Added Unit type
		4.2.17/5.2.1 Added Number of connected INT50s
		4.2.32/4.2.33 Added Monitor CH Floor Lock
		4.2.33/4.2.45 Separated Auto relative to Mic 2 Input from Value to Item
		4.2.46 Added the command description
		4.2.68/5.2.7 Added the Interpretation Unit level
		4.2.30/4.2.31/4.2.51/4.2.52 Deleted Sub mix 1/2
		4.2.71 Modified the Action parameter
		3 Updated Command List
9/1/2017	50CU:ver1.6.0	4.2.8 Added OLED Display Setting Change Request
		4.2.9 Added OLED Display Setting Acquisition Request
		4.2.30 Added GPIO Setting Change Request
		4.2.29 Added GPIO Setting Acquisition Request
		4.2.30 Added GPO Control Request
		5.2.8 Added GPI Input Notification
		4.2.65 Added Boot Up Preset Setting Change Request
		4.2.66 Added Boot Up Preset Setting Acquisition Request
		4.2.11/5.2.1 Changed Number of DUs and Number of CUs
		4.2.12/ 4.2.13/ 4.2.14/ 4.2.15/ 4.2.24/ 4.2.25/ 4.2.51/4.2.52 Added Mix to Language
		4.2.26/4.2.57/5.2.3 Added Default Monitor Channel
		4.2.32/4.2.33 Added Non-Priority IU Self Mute
		4.2.47/4.2.48 Added Easy Mode
		4.2.57/5.2.3 Added Unit type
		5.2.3 Added the GPIO settings
5.2.4 Added the Cut and Mute status		
2/28/2018	50CU:ver1.6.1	4.2.37 Added GPIO Status Acquisition Request
		4.2.32/4.2.33 Added BNE
		4.2.57/4.2.58/5.2.3/5.2.4 Added Slot number
4/5/2019	50CU:ver2.0.0	4.2.32/4.2.57/5.2.3 Added Monitor channel
		4.2.81/4.2.82 Added the Power On Preset settings

		4.2.17/5.2.1 Added Number of IUs
		5.2.8 Added "MD" to the command
		4.2.57/4.2.58/5.2.3/5.2.4 Added Slot number
		4.2.37 Added the GPIO Status Acquisition command
		4.2.36 Added the serial number to the command example
		4.2.43/4.2.44 Changed the BNE description according to WR
		4.2.32/4.2.33 Changed to support batch changes
		5.2.4 Added Topology
		4.2.2/4.2.3 Added the Operator Name and Operator2 settings
		4.2.10/4.2.11 Added the OLED menu settings
		4.2.32/4.2.57/5.2.3 Added the Boot up Talk On settings
		4.2.32/4.2.57/5.2.3 Added the Rear LED Enable settings
		4.2.32/4.2.57/5.2.3 Added the Push to Talk mode
		4.2.14/4.2.15 Added Header Dot Color Setting Change/Acquisition Request
		4.2.30/4.2.31 Added the Dynamics parameter
		4.2.53/4.2.54 Added Talk Off Audio Setting Change/Acquisition Request
		4.2.83/4.2.84 Added Preset Call Setting Change/Acquisition Request
		4.2.66 Added the Talk Cancel Request command
		4.2.57/5.2.3/5.2.4 Modified the invalid topology range
		4.2.32/4.2.33/4.2.34/4.2.35/4.2.36/4.2.37/4.2.57/4.2.58/4.2.59/4.2.60/4.2.62/4.2.63/4.2.64/4.2.65/5.2.3/5.2.4/5.2.5/5.2.8 Changed to support the unit type specification
		4.2.32/4.2.33/4.2.34/4.2.35/4.2.36/4.2.37/4.2.57/4.2.58/4.2.60/4.2.62/4.2.63/4.2.64/4.2.65 Changed to support the topology specification
		4.2.37/5.2.8 Changed the button status to Push/Release
		Added all to the parameter
		4.2.27 Modified the invalid Gain range
		4.2.34/4.2.35 Modified the GPIO parameter functions
		4.2.18/4.2.19 Added Mute
		4.2.32/4.2.33/4.2.57/4.2.58/4.2.59/4.2.60/4.2.62/4.2.63/4.2.64/4.2.65/5.2.4/5.2.5 Changed the unit type specification method to another parameter
		4.2.34/4.2.35/4.2.36/4.2.37/5.2.8 Deleted the unit type specification
		5.2.3 Deleted the unit type specification from the serial number
		1.3 Added Supported Firmware
		4.2.32.1/4.2.57.1/5.2.3.1 Added List of Valid Parameters for Each Unit Type
		4.2.30/4.2.31 Modified the Center Frequency range
4/26/2019	IRCU:ver1.0.5	Added the ATUC-IRCU/IRCUDAN parameters
		4.2.6/4.2.7 Added Dante Setting Change/Acquisition Request
		4.2.12/4.2.13 Added IR Band Setting Change/Acquisition Request

		4.2.18/4.2.19 Added the Dante setting parameter
		4.2.19/4.2.21 Added the Input Type parameter
		4.2.49/4.2.50 Added IRDU Common Setting Change/Acquisition Request
		4.2.33/4.2.58/4.2.59/4.2.60/4.2.62/4.2.63/4.2.64/4.2.65/ 5.2.4 Supported IRDU
		4.2.32/4.2.57/5.2.3 Added the IRDU parameter
		4.2.32 Changed not to include Rear LED Setting in processing when All is selected
		5.2.11 Added Battery Level Alert Notification
		5.2.12 Added Error Notification
5/31/2019	50CU:Ver2.1.0 IRCU:Ver1.1.0	4.2.38/4.2.39/4.2.40/4.2.41/4.2.42/5.2.9/5.2.10 Added the VU/DUa association commands 4.2.17/4.2.32/4.2.33/4.2.57/4.2.58/4.2.59/4.2.60/4.2.62/4.2.63/4.2.64/4.2.65/5.2.1/5.2.3/5.2.4/4.2.5 Added the DUa support parameters
12/17/2020	IRCU:Ver1.0.6	4.1 Modified the notes on the Communication Control
3/12/2021	50CU:Ver2.1.2 IRCU:Ver1.1.2	4.2.18/4.2.19 Added Dante to Input Type
5/6/2021	IRCU:Ver1.1.3	4.2.57 Added Battery Status 4.2.93 Added commands 5.2.11 Modified the serial number display
1/11/2022	50CU:Ver3.0.0 IRCU:Ver2.0.0	4.2.94 Added Floor Filter Setting Request 6.4 Added the Version Cross-reference Table

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1 Preface

1.1 Purpose of This Document

This document refers to the command specification to control ATUC-50/ATUC-IRCU (hereinafter referred to as CU) developed by Audio-Technica.

1.2 Definition of Terms and Numeric Representation

The following table shows the definition of terms used in this document.

Term	Description
Host	A device that issues control commands. It refers to application software or a control device.
Device	A device to be controlled.
AT device	A device developed by Audio-Technica.
Message	A character string transmitted per communication in data format.
Command	A command statement to control a device. It is included in a message.
Parameter	Used in combination with a command. It is a setting value that specifies a command behavior.

The numeric representation is defined as follows:

Binary number: A value followed by b Example: 1010 0110b

Hexadecimal number: A value preceded by 0x Example: 0xA6

1.3 Supported Firmware

The following shows the firmware version designed for this document.

No	Product name	FW Version	Remarks
1.	ATUC-50	2.0.0 or later	
2.	ATUC-IRCU	1.0.5 or later	

When the following commands were used for the external IP control in version 1.6.5 or earlier, if they are sent to the INT in version 2.0.0 or later, NAK04 (error) is returned. To process the commands correctly, you need to correct the external control program according to the corresponding command formats.

Command names:

- sduin
- sduaq
- gdust
- gtalk
- deldu
- srcdu
- takof
- reqon
- reqof
- prmit

2 Basic Specifications

The IP control function uses TCP or UDP protocol to control the CU.

2.1 Communication Interfaces

Table 2-1 Communication Interfaces

No	Item	Content	Remarks
3.	Communication system	Full duplex	
4.	Transmission speed	10Mbps / 100Mbps	
5.	Port number	Described later	
6.	Maximum data length ¹	287 bytes (including line feed codes)	32 bytes for Ethernet communication header, 255 bytes for control command
7.	Compatible connector	Device: RJ45 connector (compatible with 10/100 Mbps) Cable: CAT5e or higher	

¹ File Transfer Request and Export Request are exceptions.

2.2 Command Formats

Transmitted commands are categorized as follows:

Table 2-2 Communication Interfaces

No	Command	Content	Remarks
1.	Set Command	Action command	Change the CU settings.
2.	Get Command	Action command	Obtain the CU settings and status.
3.	ACK	Acknowledge	Responds to a Set Command.
4.	NAK	Negative acknowledge	Responds to a Set Command.
5.	Answer	Setting change notification	Responds to a Get Command.
6.	Information	Status change notification	Report the CU settings and status change.
7.	Request	Action request	Requests an action to the host.

2.2.1 Command Common Rules

- (1) Use a single-byte space (_ : 0x20) as a delimiter.
- (2) In general, use ASCII codes for commands and UTF-8 for the parameters of specific commands (Example: Naming a device, etc.).
- (3) Add CR (0x0d) to the end of each command.

Example:

sperm_S_0000_00_NC_“ATUC-50”,1,atuc50,0,,0,0,0,0,0,0_↓

fctr_ACK_↓

fctr_NAK_01_↓

gperm_0000_00_NC_“ATUC-50”,1,atuc50,0,,0,0,0,0,0,0_↓

MD gcust_0000_00_NC_0,50,0,0,0,0,0,0,0,50,0,0,1,25,1,25_↓

RQ confm_0000_00_NC_↓

- _: Indicates a space.
- ↓: Indicates CR (0x0d).
- █: Indicates a command parameter.

2.2.2 Set Command/Get Command

The action command format is shown below.

Table 2-3 Action Command Format

No	Item	Content	Size	Remarks
1.	Command	Command string	5byte	See 3. Command List.
2.	Handshake Select	Sequence execution system	1byte	H: Handshake method (Unused) O: One-Way method S: ACK/NAK format
3.	Model ID	Not used	4byte	0000 (fixed)
4.	Unit No	Not used	2byte	00 (fixed)
5.	Continue Select	Divided message system	2byte	NC: No divided message CS: Head of divided message CM: Divided message CE: End of divided message
6.	Parameter	Command parameter	0byte~	See Chapter 4.
7.	End Character	Message end character	1byte	CR (0x0D)

2.2.2.1 Omitting Parameters

When you send a command from the host, you can omit its parameters. To omit, specify data without separating using commas.

Example: To omit all the parameters

```
sperm_S_0000_00_NC_,,,,,,,,,↵
```

Depending on the command, however,

- An error may occur when all the parameters are omitted.
- The parameters may just not be specified instead of being omitted.

The details on the above cases and the parameters that cannot be omitted are provided for each command in Chapter 4.2 or later.

2.2.3 ACK

The acknowledge command format is shown below.

Table 2-4 Acknowledge Command Format

No	Item	Content	Size	Remarks
1.	Command	Command string	5byte	See 3. Command List.
2.	ACK	ACK	3byte	ACK (fixed)
3.	End Character	Message end character	1byte	CR (0x0D)

2.2.4 NAK

The negative acknowledge command format is shown below.

Table 2-5 Negative Acknowledge Command Format

No	Item	Content	Size	Remarks
1.	Command	Command string	5byte	See 3. Command List.
2.	NAK	NAK	3byte	NAK (fixed)
3.	Error Code	Error code	2byte	See Table 2-6.
4.	End Character	Message end character	1byte	CR (0x0D)

2.2.4.1 Error Codes

The error codes are shown below.

Table 2-6 Error Codes

Error code	Error description	Remarks
01	Syntax error	<ul style="list-style-type: none"> A required element is not found. The character string of a required element is incorrect. The character string length for each element is outside the specified range. The message string length including line feed codes is greater than the upper limit.
02	Invalid command	<ul style="list-style-type: none"> The command is not found. (A non-existing command was specified. A command that cannot be used for the device was specified.)
03	Splitting transmission error	<ul style="list-style-type: none"> "CM" or "CE" was specified when "CS" of Continue Select had not been received.
04	Parameter error	<ul style="list-style-type: none"> An invalid channel was specified. The parameter is outside the specified range. Changing a parameter that cannot be changed was attempted. (Changing Priority during Talk On)
05	Transmission timeout	Not used
90	Busy	Unable to process due to a busy state
92	Busy (Save mode)	Unable to process due to p-Fail (power shutdown) occurrence
93	Busy(Extension ²)	Unable to process due to the Extension mode (CU link)
99	Other errors	Errors other than the above

² Extension: Non-Primary CU during CU link. Sending a Set Command to an Extension CU results in an error.

2.2.5 Answer

The command format of the setting status response is shown below.

Table 2-7 Setting Status Return Command Format

No	Item	Content	Size	Remarks
1.	Command	Command string	5byte	See 3. Command List.
2.	Model ID	Not used	4byte	0000 (fixed)
3.	Unit No	Not used	2byte	00 (fixed)
4.	Continue Select	Divided message system	2byte	NC: No divided message CS: Head of divided message CM: Divided message CE: End of divided message
5.	Parameter	Command parameter	0byte~	See Chapters 4 and 4.2.93.
6.	End Character	Message end character	1byte	CR (0x0D)

2.2.6 Information

The command format of the status change notification is shown below.

Table 2-8 Status Change Notification Command Format

No	Item	Content	Size	Remarks
1.	Modify	MD	2byte	MD (fixed)
2.	Command	Command string	5byte	See 3. Command List.
3.	Model ID	Not used	4byte	0000 (fixed)
4.	Unit No	Not used	2byte	00 (fixed)
5.	Continue Select	Divided message system	2byte	NC: No divided message CS: Head of divided message CM: Divided message CE: End of divided message
6.	Parameter	Command parameter	0byte~	See Chapter 4.2.93.
7.	End Character	Message end character	1byte	CR (0x0D)

2.2.7 Request

The command format of the action request is shown below.

Table 2-9 Action Request Command Format

No	Item	Content	Size	Remarks
1.	Request	RQ	2byte	RQ (fixed)
2.	Command	Command string	5byte	See 3. Command List.
3.	Model ID	Not used	4byte	0000 (fixed)
4.	Unit No	Not used	2byte	00 (fixed)
5.	Continue Select	Divided message system	2byte	NC: No divided message CS: Head of divided message CM: Divided message CE: End of divided message
6.	Parameter	Command parameter	0byte~	See Chapter 4.
7.	End Character	Message end character	1byte	CR (0x0D)

3 Command List

Table 3-1 Command List

No	Category	Command	Command Name	Remarks	50CU	IRCU	Type				Ref.
							Set	Get	Req	Info	
1.	System Setting	factr	Factory Default Setting Request	Reset the current data to the factory default setting.	•	•	○				17
2.		sperm	Permission Setting Change Request	Change the Operator/Administrator permission settings.	•	•	○				18
3.		gperm	Permission Setting Acquisition Request	Obtain the Operator/Administrator permission settings.	•	•		○			20
4.		snetw	Network Setting Change Request	Change the network settings.	•	•	○				21
5.		gnetw	Network Setting Acquisition Request	Obtain the network settings.	•	•		○			24
6.		sdant	Dante Setting Change Request	Change the Dante network settings.		•	○				25
7.		gdant	Dante Setting Acquisition Request	Obtain the Dante network settings.		•		○			27
8.		sport	Link Port Setting Change Request	Change the settings for the device connected to the link port.	•	•	○				29
9.		gport	Link Port Setting Acquisition Request	Obtain the settings for the device connected to the link port.	•	•		○			30
10.		soled	OLED Display Setting Change Request	Change the OLED settings.	•	•	○				31
11.		goled	OLED Display Setting Acquisition Request	Obtain the OLED settings.	•	•		○			32
12.		sband	IR Band Setting Change Request	Change the IR Band settings.		•	○				33
13.		gband	IR Band Setting Acquisition Request	Obtain the IR Band settings.		•		○			34
14.		shcol	Header Dot Color Setting Change Request	Change the Header Dot Color settings.	•	•	○				36
15.		ghcol	Header Dot Color Setting Acquisition Request	Obtain the Header Dot Color settings.	•	•		○			37
16.		gvers	Firmware Version Acquisition Request	Obtain the firmware version of the CU.	•	•		○			38
17.		gstat	CU Status Acquisition Request	Obtain the LED status of the CU and the number of DUs connected to the CU.	•	•		○			39
18.		gcust	CU Status Notification	Report the number of DUs connected to the CU.	•	•				○	158
19.	Install Setting	sminp	Mic/Line Input Setting Change Request	Change the Mic/Line Input 1/2 settings in the CU audio settings.	•	•	○				42
20.		gminp	Mic/Line Input Setting Acquisition Request	Obtain the Mic/Line Input 1/2 settings in the CU audio settings.	•	•		○			44
21.		sxinp	Aux Input Setting Change Request	Change the AUX Input settings in the CU audio settings.	•	•	○				46
22.		gxinp	Aux Input Setting Acquisition Request	Obtain the AUX Input settings in the CU audio settings.	•	•		○			47
23.		siinp	Interpretation Input Setting Change Request	Change the Interpretation Return settings in the CU audio settings.	•	•	○				49
24.		giinp	Interpretation Input Setting Acquisition Request	Obtain the Interpretation Return settings in the CU audio settings.	•	•		○			50
25.		scfbs	FBS Common Setting Change Request	Change the FBS common settings in the CU audio settings.	•	•	○				53
26.		gcfbs	FBS Common Setting Acquisition Request	Obtain the FBS common settings in the CU audio settings.	•	•		○			53
27.		safbs	FBS Setting Change Request	Change the FBS settings in the CU audio settings.	•	•	○				54
28.		gafbs	FBS Setting Acquisition Request	Obtain the FBS settings in the CU audio settings.	•	•		○			55
29.		srfbs	FBS Setting Reset Request	Reset Frequency in the FBS settings in the CU audio settings.	•	•	○				57
30.		ssfbs	FBS Status Update Request	Change the FBS Static settings in the CU audio settings.	•	•		○			58
31.		saout	Audio Output Setting Change Request	Change the Output 1 to 4 settings in the CU audio settings.	•	•	○				59
32.		gaout	Audio Output Setting Acquisition Request	Obtain the Output 1 to 4 settings in the CU audio settings.	•	•		○			63
33.		sduin	DU Individual Setting Change Request	Change the following DU individual settings: •Delegate Name •Priority •Audio Group Assign •Microphone •Speaker •Rear LED Color	•	•	○				67
34.		sdueq	DUMicEQ Setting Change Request	Change the MicEQ in the DU individual settings.	•	•	○				72
35.		sgpio	GPIO Setting Change Request	Change the IU GPIO settings.	•	•	○				73
36.		ggpio	GPIO Setting Acquisition Request	Obtain the IU GPIO settings.	•	•		○			75

No	Category	Command	Command Name	Remarks	50CU	IRCU	Type				Ref.
							Set	Get	Req	Info	
37.		svnfc	VU NFC Setting Request	Set the Voting Unit NFC Power.	•	•	○				81
38.		svuio	VU Setting Change Request	Change the DUa VU settings.	•	•	○				82
39.		gvuio	VU Setting Acquisition Request	Obtain the DUa VU settings.	•	•		○			83
40.		sduco	DU Common Setting Change Request	Change the following DU common settings: • Speaker Level • Talk LED Color	•	•	○				88
41.		gduco	DU Common Setting Acquisition Request	Obtain the DU common settings.	•	•		○			89
42.		svdet	Voice Detection Threshold Setting Change Request	Change the DU voice detection settings.	•	•	○				91
43.		sspkv	Speaker Level Setting Change Request	Change Speaker Level.	•	•	○				92
44.		sintc	INT50 Common Setting Change Request	Change the Interpretation Return Unit common settings.	•	•	○				93
45.		gintc	INT50 Common Setting Acquisition Request	Obtain the Interpretation Return Unit common settings.	•	•		○			94
46.		sirco	IRDU Common Setting Change Request	Change the IRDU common settings.		•	○				94
47.		girco	IRDU Common Setting Acquisition Request	Obtain the IRDU common settings.		•		○			96
48.		sreco	Recording Setting Change Request	Change the recording settings.	•	•	○				97
49.		greco	Recording Setting Acquisition Request	Obtain the recording settings.	•	•		○			99
50.		sflor	Talk Off Audio Setting Change Request	Change the Floor audio settings during Talk Off.	•	•	○				101
51.		gflor	Talk Off Audio Setting Acquisition Request	Obtain the Floor audio settings during Talk Off.	•	•		○			102
52.		sftr	Floor Filter Setting Request	Turn On or Off the Floor audio filter.	•	•	○				156
53.	Conference Setting	sconf	Conference Setting Change Request	Change the conference settings.	•	•	○				103
54.		gconf	Conference Setting Acquisition Request	Obtain the conference settings.	•	•		○			104
55.		gconf	Conference Status Notification	Report a change in the conference settings.	•	•				○	160
56.		gdust	DU Status Acquisition Request	Obtain the following DU status: • DU individual settings • Status (Connect/Talk)	•	•		○			106
57.		gdust	DU Status Notification	Report a change in the DU individual settings.	•	•				○	161
58.		gtalk	DU Talk Status Acquisition Request	Obtain the DU talk status.	•	•		○			111
59.		gtalk	DU Talk Status Notification	Report a change in the DU talk status.	•	•				○	166
60.		gconn	Connection Status Notification	Report a change in the DU connection status.	•					○	167
61.		deldu	DU Individual Setting Deletion Request	Delete the DU individual settings.	•	•	○				113
62.		srcdu	DU Identify Request	Blink the LED of the specified DU.	•	•	○				114
63.		srccu	CU Identify Request	Blink the LED of the specified CU.	•	•	○				115
64.		takof	Talk Off Request	Terminate the Talk On mode of the specified DU.	•	•	○				116
65.		reqon	Request Talk Request	Put the specified DU in the Request Talk mode.	•	•	○				117
66.		reqof	Request Talk Deletion Request	Cancel the Request Talk mode of the specified DU (not enter the Talk On mode).	•	•	○				119
67.		prmit	Talk Permission Request	Change the specified DU from the Waiting mode to the Talk On mode.	•	•	○				120
68.		pundo	Talk Cancel Request	Cancel the last Permit Next operation.	•	•	○				122
69.		scgpo	GPO Control Request	Control the IU GPO.	•	•	○				78
70.	ggpst	GPIO Status Acquisition Request	Obtain the IU GPIO status.	•	•		○			79	
71.	gcgpi	GPI Input Notification	Report the IU GPI input.	•	•				○	170	
72.	scvuo	VU Control Request	Control the Voting Unit LED.	•	•	○				85	
73.	gvust	VU Status Acquisition Request	Obtain the Voting Unit status.	•	•		○			86	
74.	gcvui	VU Input Notification	Report the button input from the Voting Unit.	•	•				○	171	
75.	gvnfc	VU NFC Input Notification	Report the NFC ID input from the Voting Unit.	•	•				○	172	
76.	sseff	SFX Setting Change Request	Change the SFX settings.	•	•	○				123	
77.	gseff	SFX Setting Acquisition Request	Obtain the SFX settings.	•	•		○			124	
78.	gsels	SFX List Acquisition Request	Obtain the list of FSX files (only for USB inserted to the CU).	•	•		○			126	
79.	splay	SFX Play/Stop Request	Play and stop SFX.	•	•	○				128	

No	Category	Command	Command Name	Remarks	50CU	IRCU	Type				Ref.	
							Set	Get	Req	Info		
80.		spllv	SFX Playing Level Change Request	Change the SFX playing level.	•	•	○				129	
81.	Recording	recmd	Recording Request	Start, pause, and top recording.	•	•	○				130	
82.		recst	Recording Status Acquisition Request	Obtain the recording status and time.	•	•		○			131	
83.		recst	Recording Status Notification	Report the recording status and time.	•	•				○	168	
84.		reclv	Recording Level Change Request	Change the recording level.	•	•	○				132	
85.	Log	slogg	Log Setting Change Request	Turn On or Off the log and change the output destination.	•	•	○				133	
86.		glogg	Log Setting Acquisition Request	Turn On or Off the log and obtain the output destination.	•	•		○			134	
87.	Preset	callp	Preset Call Request	Load the preset pattern of the specified bank to the current data.	•	•	○				135	
88.		savep	Preset Save Request	Save the current data to the preset number of the specified bank.	•	•	○				136	
89.		snamb	Preset Bank Name Change Request	Change the preset bank name of the specified bank.	•	•	○				137	
90.		gnamb	Preset Bank Name Acquisition Request	Obtain the present bank name of the specified bank.	•	•		○			138	
91.		sbtp	Boot Up Preset Setting Change Request	Change the boot preset settings at reboot.	•	•	○				140	
92.		gbtp	Boot Up Preset Setting Acquisition Request	Obtain the boot preset settings at reboot.	•	•		○			141	
93.		scals	Preset Call Setting Change Request	Change the DU association method settings at preset call.	•	•	○				142	
94.		gcals	Preset Call Setting Acquisition Request	Obtain the DU association method settings at preset call.	•	•		○			143	
95.		Other	slvmt	Level Meter Setting Request	Change the level notification settings.	•	•	○				144
96.			glvmt	Level Meter Acquisition Request	Obtain the level.	•	•		○			145
97.	lvmon		Level Meter Notification	Report the level.	•	•				○	160	
98.	sdate		Date Setting Request	Change the date.	•	•	○				147	
99.	upload		File Transfer Request	Upload the preset pattern and language file.	•	•	○				148	
100.	ulcan		File Transfer Cancel Request	Cancel uploading the file.	•	•	○				149	
101.	exprt		Export Request	Export the preset pattern and language file.	•	•		○			150	
102.	imprt		Import Request	Import the preset pattern and language file.	•	•	○				152	
103.	confm		Status Confirmation Notification	Check the status with the SOS function by the CU.	•	•				○	153	
104.	gbatt		Battery Status Acquisition Request	Obtain the IRDU battery level.		•		○			154	
105.	gbatt		Battery Level Alert Notification	Report the IRDU battery level alert.		•				○	172	
106.	error		Error Notification	Report the error.		•				○	173	

4 TCP Communications

To control the CU from the host, TCP protocol is used for communications.

4.1 Communication Control

The following figure shows the communication control flow of IP control.

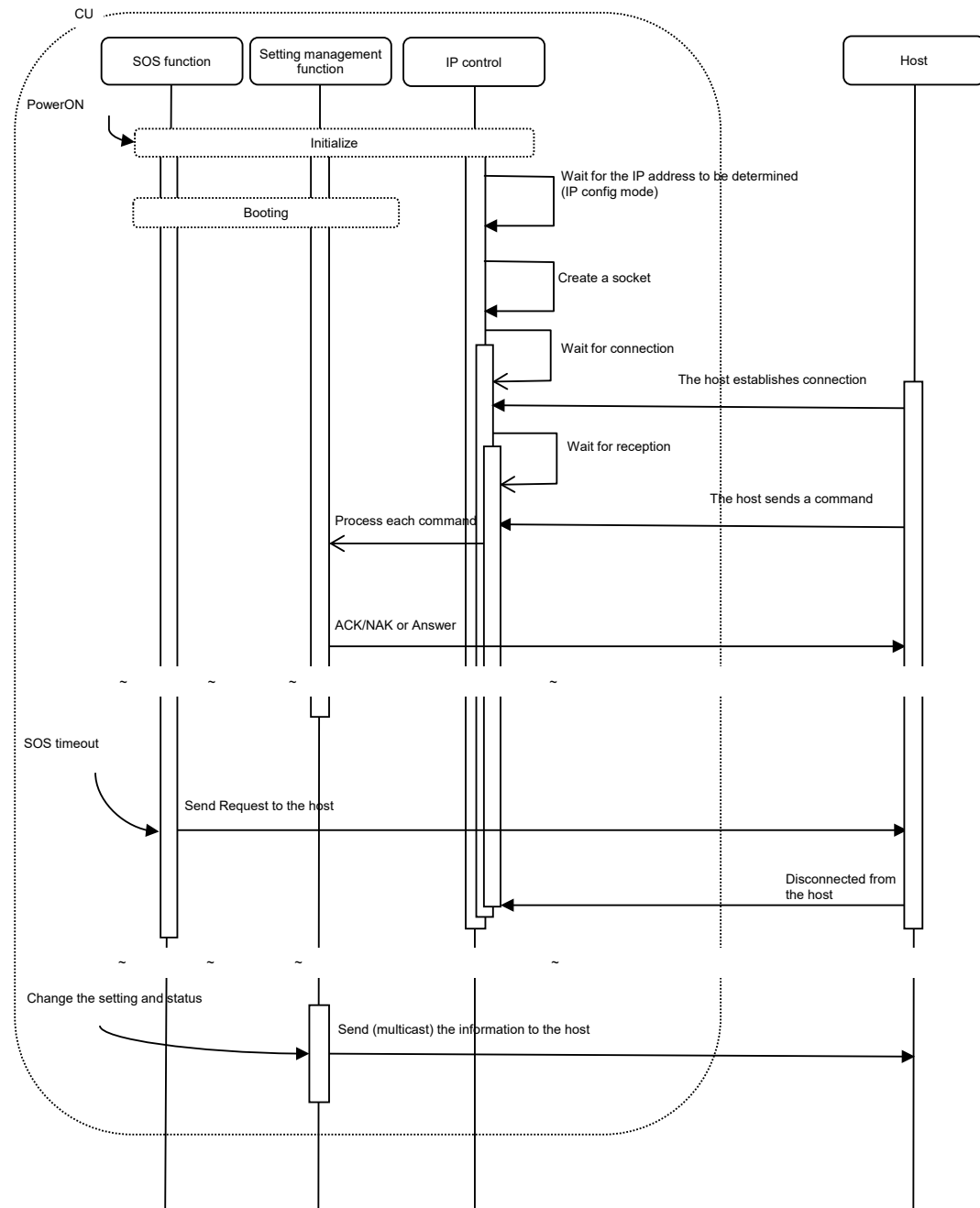


Figure 4-1 Communication Control Flow

- After the system is booted, the status changes from initializing to connection waiting.
- When the host establishes connection with the system, the status changes from connection waiting to reception waiting.
- Received commands are processed by internal processing tasks, and the results (ACK/NAK) are sent.
- Before sending a command next time, you need to check the response (ACK/NAK/Answer) to the command sent last time.
- When the system is disconnected from the host, the status changes from reception waiting to connection waiting.

4.1.1 Communication Start

The host establishes connections with the CU.

Simultaneous connection is limited to 5 devices. If the number exceeds the upper limit, the extra connection fails.

Table 4-1 Communication Control Parameters

No	Name	Default Setting	Remarks
1.	IP Address	Auto	
2.	Port No	17300	

4.1.2 Control Sequence

4.1.2.1 Set Command

Responding to a Set Command, the CU sends ACK/NAK to the sender.

<Example> The sequence of factory default setting is shown below.

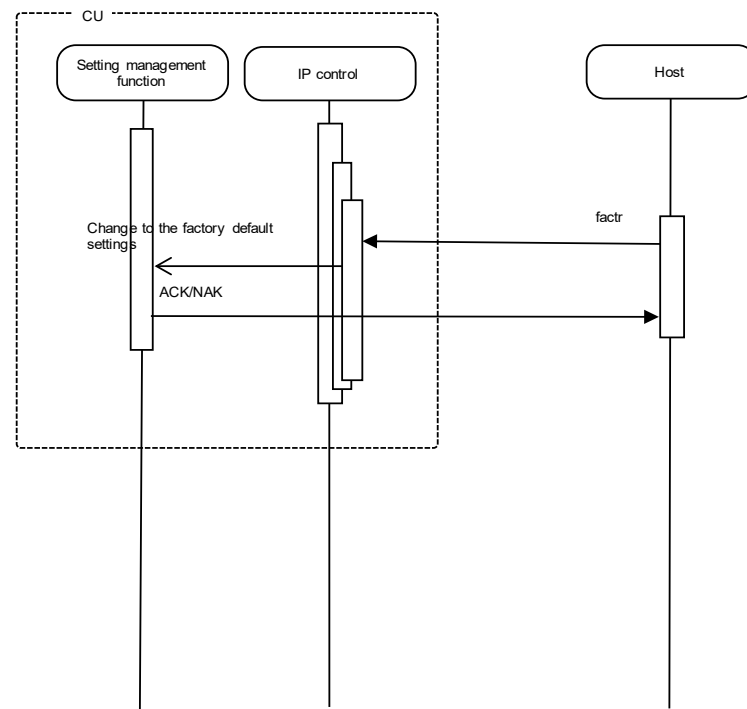


Figure 4-2 Set Command Processing Sequence

If an error occurs in a Set Command, such as a syntax error or incorrect parameter, an NAK command is sent to the sender.

4.1.2.2 Get Command

Responding to a Get Command, the CU sends Answer to the sender.

<Example> The sequence of Audio Output Setting Acquisition Request is shown below.

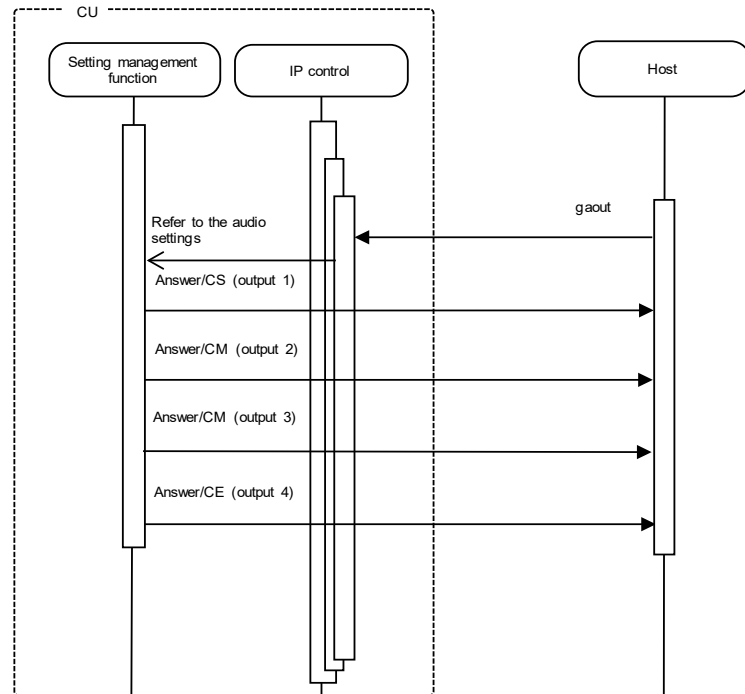


Figure 4-3 Get Command Processing Sequence

If an error occurs in a Get Command, such as a syntax error or incorrect parameter, an NAK command is sent to the sender.

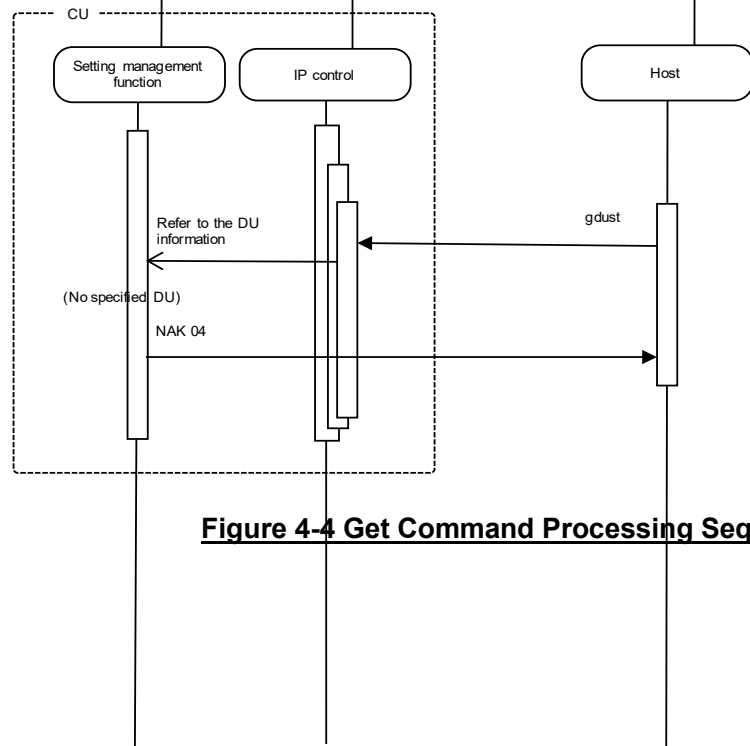


Figure 4-4 Get Command Processing Sequence (NAK)

4.1.2.3 Request

The CU sends a Request command at any timing.

<Example> The sequence of status check notification is shown below.

If the SOS (Auto Mode Change) function is enabled, the CU sends the status check notification command to all the connected sockets. A host receiving the status check notification command needs to send a specific command to the CU.

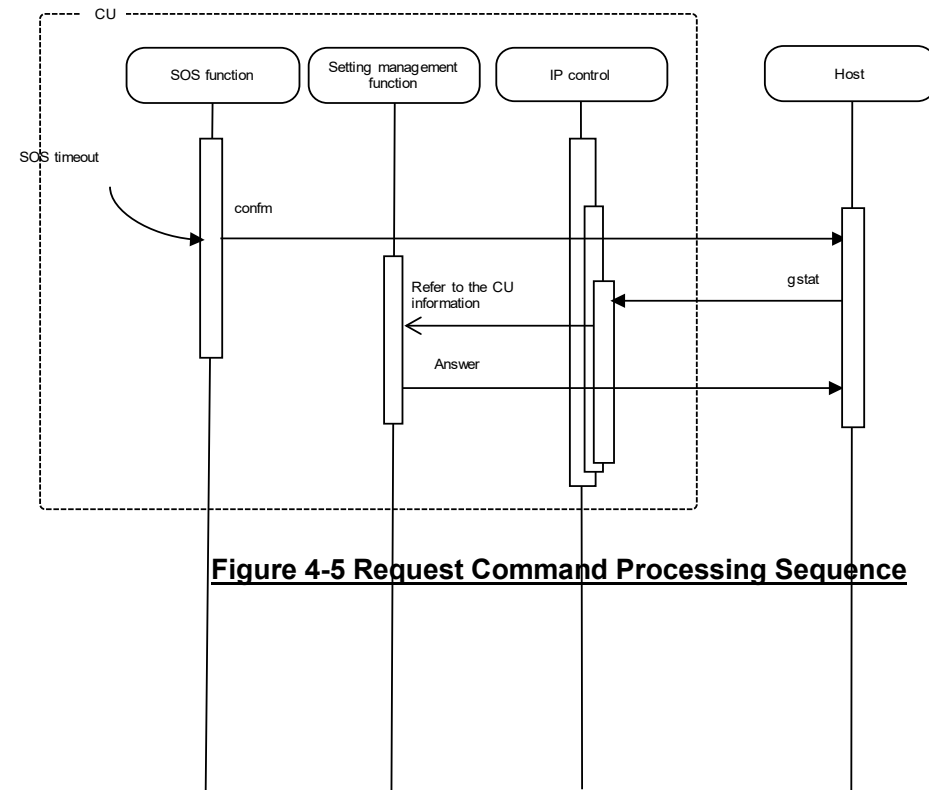


Figure 4-5 Request Command Processing Sequence

4.1.3 Communication Errors

4.1.3.1 Transmission Errors

The following figure shows the sequence when an ACK/NAK transmission error occurs.

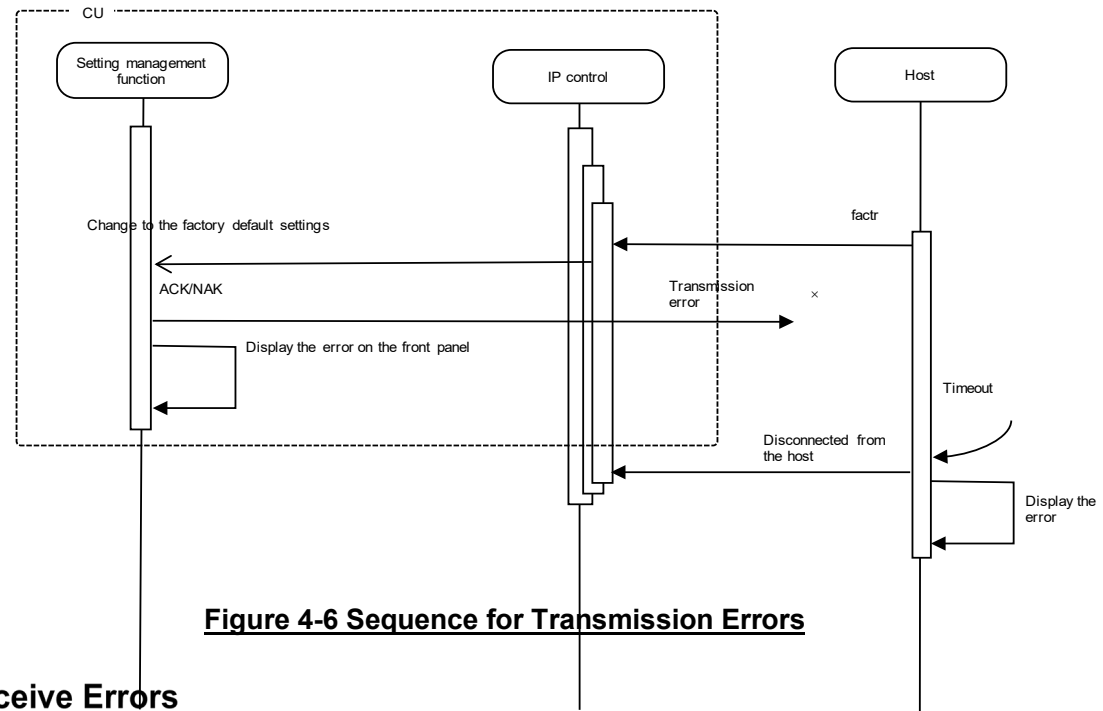


Figure 4-6 Sequence for Transmission Errors

4.1.3.2 Receive Errors

The following figure shows the sequence when a command receive error occurs.

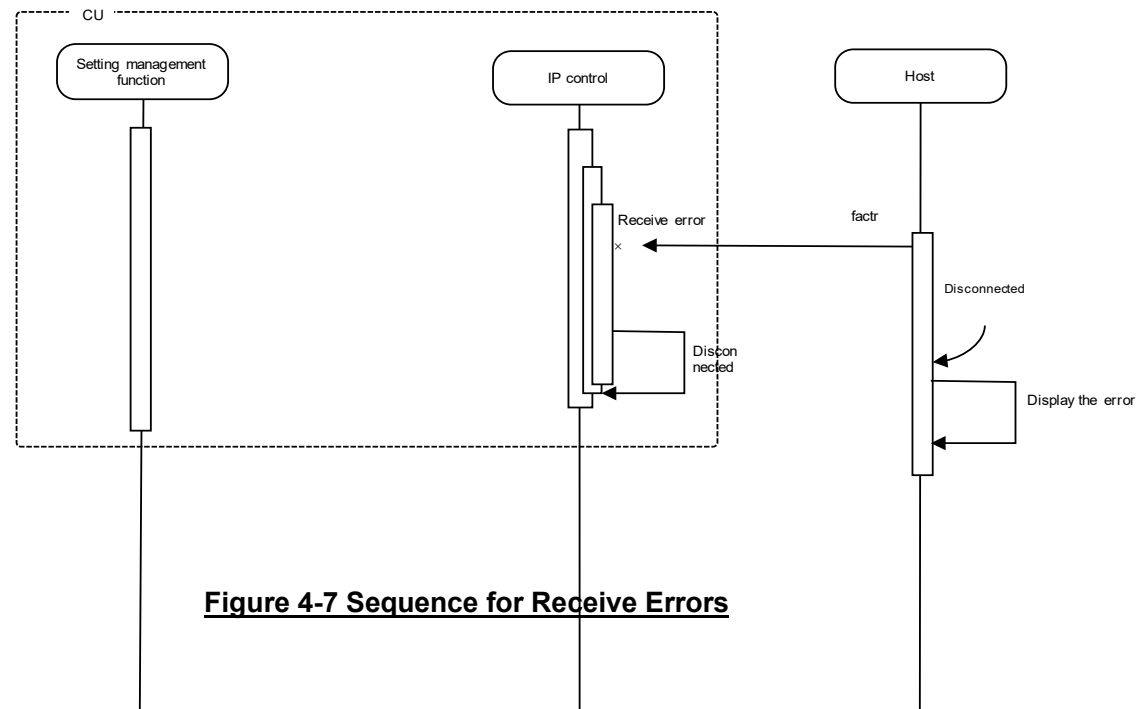


Figure 4-7 Sequence for Receive Errors

4.1.3.3 Message Split Receive Timeouts

The following figure shows the sequence when a message split receive timeout occurs.

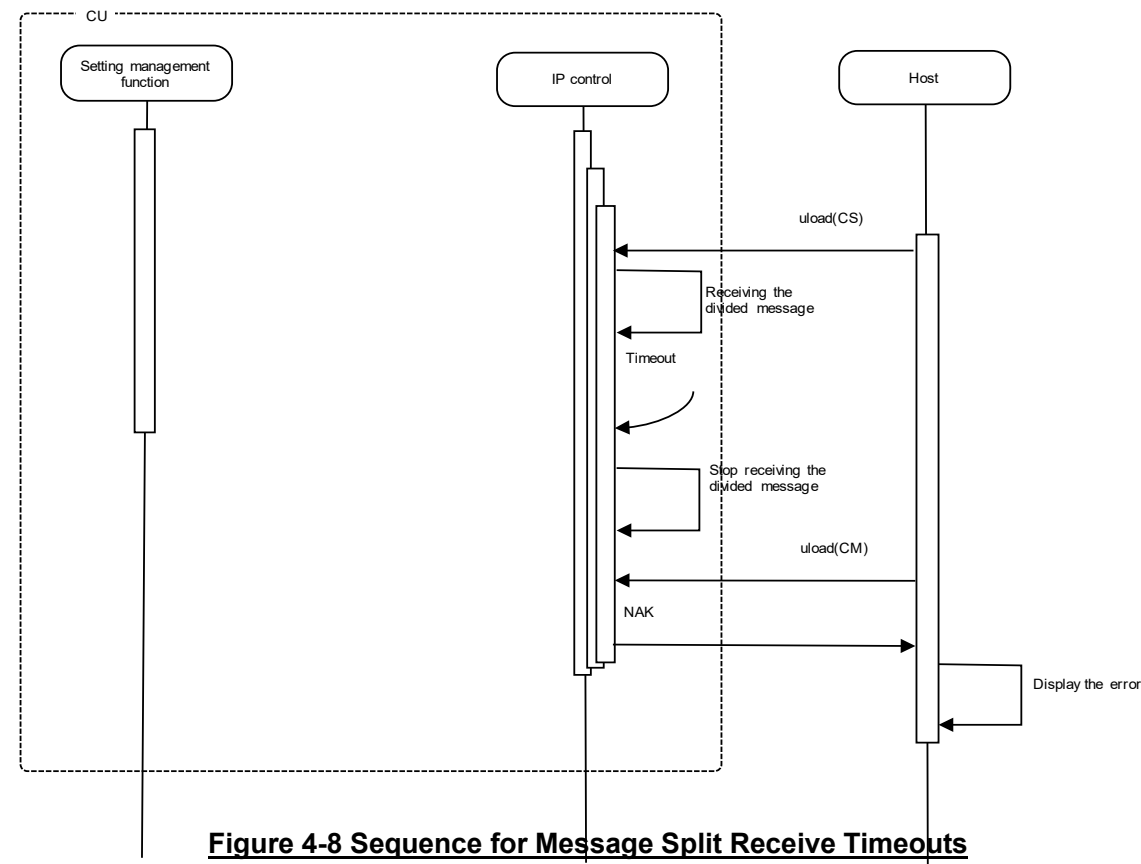


Figure 4-8 Sequence for Message Split Receive Timeouts

4.1.4 Communication End

The host can be disconnected at any timing when communications end.

When it is disconnected, the CU clears the corresponding connection state (Example: File transferring) and enters the connection wait state again. This occurs even if a cable is disconnected.

To communicate again, the host needs to establish connection.

4.2 Command Details

4.2.1 Factory Default Setting Request

After receiving the Factory Default Setting Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Factory Default Setting Request from the host, refer to the command format table below.

factr_S_0000_00_NC_↵

Table 4-2 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	factr		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

factr_ACK_↵

Table 4-3 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	factr		Sets the received Set/Get command
2.	ACK	ACK	string	ACK		
3.	End Character	Message end character	binary	0x0d	CR	

factr_NAK_01_↵

Table 4-4 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	factr		Sets the received Set/Get command
2.	NAK	NAK	string	NAK		
3.	Error Code	Error code	string	00 to 99	Error code	See Chapter 2.2.4.
4.	End Character	Message end character	binary	0x0d	CR	

No	Item	Description	Type	Value	Value Description	Remarks
				1	Enable	
	Operator 2					Same as Operator 1
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.3 Permission Setting Acquisition Request

After receiving the Permission Setting Acquisition Request, the CU sends the permission settings to the host via Answer.

(1) Get Command

In case of the Permission Setting Acquisition Request from the host, refer to the command format table below.

gperm_O_0000_00_NC_↵

Table 4-6 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gperm		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(1) Set Command

In case of the Network Setting Change Request from the host, refer to the command format table below.

snetw_S_0000_00_NC_1,,,,,1,17300,1,1,225.000.000.100,17000,0,,,,,0,,,1,20_↓

Table 4-8 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	snetw		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	IP Setting					
	IP Config Mode	IP address acquisition method	string	0 1	Auto Static	
	IP Address	IP address	string	000.000.000.000~255.255.255.255	IP address	
	Subnet Mask	Subnet mask	string	000.000.000.000~255.255.255.255	Subnet mask	
	Gateway Address	Default gateway	string	000.000.000.000~255.255.255.255	IP address	
	Allow Discovery	UPnP	string	0	Not detect	
				1	Detect	
	IP Control Setting					
	Port Number	TCP/IP port number	string	1~65535	Port number	
	Notification	Information transmission	string	0	Not use	
				1	Use	
	Audio Level Notification	Audio Level Information transmission	string	0	Not use	
				1	Use	
	Multicast Address	Multicast group address	string	000.000.000.000~255.255.255.255	IP address	
	Multicast Port Number	Multicast port number	string	1~65535	Port number	
	NTP Setting					
	Enabled	NTP use	string	0	Not use	
				1	Use	
	NTP Server Address	NTP server address	string	000.000.000.000~255.255.255.255	IP address	
	NTP Port Number	NTP server port number	string	1~65535	Port number	
	Time Zone	Difference from GMT	string	-1200~+1400	±HHMM (Units: 30 minutes)	
	Daylight Saving Time	Daylight saving time	string	0	Not use	
				1	Use	
	Start Date	Start date of daylight saving time	string	01010000~12312300	MMDDHHmm (Units: 1 hour)	
	End Date	End date of daylight saving time	string	01010000~12312300	MMDDHHmm (Units: 1 hour)	
	Auto Mode Change When Network Connection Lost					
	Enabled	Conference mode automatic change	string	0	Not use	
				1	Use	
	Hold Time After Network Error	Judgment time for conference mode automatic change	string	20,30,40	Seconds	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.5 Network Setting Acquisition Request

After receiving the Network Setting Acquisition Request, the CU sends the network settings to the host via Answer.

(1) Get Command

In case of the Network Setting Acquisition Request from the host, refer to the command format table below.

gnetw_O_0000_00_NC_↵

Table 4-9 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gnetw		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gnetw_0000_00_NC_1,,,,,0005CDC102FA,1,17300,1,1,225.000.000.100,17000,0,,,,0,,,1,20_↵

Table 4-10 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gnetw		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	IP Setting					
	IP Config Mode	IP address acquisition method	string	0 1	Auto Static	
	IP Address	IP address	string	000.000.000.000~255.255.255.255	IP address	
	Subnet Mask	Subnet mask	string	000.000.000.000~255.255.255.255	Subnet mask	
	Gateway Address	Default gateway	string	000.000.000.000~255.255.255.255	IP address	
	MAC Address	MAC address	string	XXXXXXXXXXXX	MAC address	
	Allow Discovery	UPnP	string	0 1	Not detect Detect	
	IP Control Setting					
	Port Number	TCP/IP port number	string	1~65535	Port number	
	Notification	Information transmission	string	0 1	Not use Use	
	Audio Level Notification	Audio Level Information transmission	string	0 1	Not use Use	
	Multicast Address	Multicast group address	string	000.000.000.000~255.255.255.255	IP address	
	Multicast Port Number	Multicast port number	string	1~65535	Port number	
	NTP Setting					
	Enabled	NTP use	string	0 1	Not use Use	
	NTP Server Address	NTP server address	string	000.000.000.000~255.255.255.255	IP address	
	NTP Port Number	NTP server port number	string	1~65535	Port number	
	Time Zone	Difference from GMT	string	-1200~+1400	±HHMM (Units: 30 minutes)	
	Daylight Saving Time	Daylight saving time	string	0 1	Not use Use	
	Start Date	Start date of daylight saving time	string	01010000~12312300	MMDDHHmm (Units: 1 hour)	
	End Date	End date of daylight saving time	string	01010000~12312300	MMDDHHmm (Units: 1 hour)	
	Auto Mode Change When Network Connection Lost					
	Enabled	Conference mode automatic change	string	0 1	Not use Use	
	Hold Time After Network Error	Judgment time for conference mode automatic change	string	20,30,40	Seconds	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.6 Dante Setting Change Request

After receiving the Dante Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

If the Dante settings are changed, the CU needs to be rebooted.

(1) Set Command

In case of the Dante Setting Change Request from the host, refer to the command format table below.

sdant_S_0000_00_NC_0,5000,1,192.168.033.102,255.255.000.000,,192.168.033.001,,1,192.168.033.103,255.255.000.000,,192.168.033.0

01_↵

Table 4-11 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sdant		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	Network Configuration					
	Mode	Mode	string	0	Switched	
				1	Redundant Audio	
				2	Split	
	Latency		string	1	250usec	
				2	500usec	
				3	1msec	
				4	2msec	
				5	5msec	
	Port Setting/Primary	Primary settings				
	IP Config Mode	IP address acquisition method	string	0	Auto	
				1	Static	
	IP Address	IP address	string	000.000.000.000~255.255.255.255	IP address	
	Subnet Mask	Subnet mask	string	000.000.000.000~255.255.255.255	Subnet mask	
	Gateway Address	Default gateway	string	000.000.000.000~255.255.255.255	IP address	
	Reserved	Reserved	s			
	Port Setting/Secondary	Secondary settings				Same as Primary
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.7 Dante Setting Acquisition Request

After receiving the Dante Setting Acquisition Request, the CU sends the network settings to the host via Answer.

(1) Get Command

In case of the Dante Setting Acquisition Request from the host, refer to the command format table below.

gdant_O_0000_00_NC_↵

Table 4-12 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gdant		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gdant_0000_00_NC_0,5000,1,192.168.033.102,255.255.000.000,,192.168.033.001,,1,192.168.033.103,255.255.000.000,,192.168.033.001



Table 4-13 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gdant		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Network Configuration					
	Mode	Mode	string	0	Switched	
				1	Redundant Audio	
				2	Split	
	Latency		string	1	250usec	
				2	500usec	
				3	1msec	
				4	2msec	
				5	5msec	
	Port Setting/Primary	Primary settings				
	IP Config Mode	IP address acquisition method	string	0	Auto	
				1	Static	
	IP Address	IP address	string	000.000.000.000~255.255.255.255	IP address	
	Subnet Mask	Subnet mask	string	000.000.000.000~255.255.255.255	Subnet mask	
	Default Gateway	Default gateway	string	000.000.000.000~255.255.255.255	IP address	
	Reserved	Reserved	string			
	Port Setting/Secondary	Secondary settings				Same as Primary
6.	End Character	Message end character	binary	0x0d	CR	

4.2.8 Link Port Setting Change Request

After receiving the Link Port Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Link Port Setting Change Request from the host, refer to the command format table below.

sport_S_0000_00_NC_cu_↵

Table 4-14 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sport		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Link Port Setting	Device to be connected	string	cu du	CU DU	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.9 Link Port Setting Acquisition Request

After receiving the Link Port Setting Acquisition Request, the CU sends the link port settings to the host via Answer.

(1) Get Command

In case of the Link Port Setting Acquisition Request from the host, refer to the command format table below.

gport_O_0000_00_NC_↵

Table 4-15 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gport		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gport_0000_00_NC_cu_↵

Table 4-16 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gport		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter Link Port Setting	Parameter Device to be connected	string	cu	CU	
				du	DU	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.10 OLED Display Setting Change Request

After receiving the OLED Display Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Link Port Setting Change Request from the host, refer to the command format table below.

soled_S_0000_00_NC_0,1,1,1_↵

Table 4-17 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	soled		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Error Notice	Error notice	string	0	Not display	Required
				1	Display	
	Level	Level menu	string	0	Not use	
				1	Use	
Recording	Rec menu				Same as Level	
Preset	Pst menu				Same as Level	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.11 OLED Display Setting Acquisition Request

After receiving the OLED Display Setting Acquisition Request, the CU sends the link port settings to the host via Answer.

(1) Get Command

In case of the Link Port Setting Acquisition Request from the host, refer to the command format table below.

goled_O_0000_00_NC_↵

Table 4-18 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	goled		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

goled_0000_00_NC_0,1,1,1_↵

Table 4-19 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	goled		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Error Notice	Error notice	string	0	Not display	
				1	Display	
	Level	Level menu	string	0	Not use	
				1	Use	
	Recording	Rec menu				Same as Level
Preset	Pst menu				Same as Level	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.12IR Band Setting Change Request

After receiving the IR Band Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the IR Band Setting Change Request from the host, refer to the command format table below.

sband_S_0000_00_NC_50,1,1,1,1,1,1,1,1,1,1,1_↵

Table 4-20 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sband		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	Number of IRDU	Number of IRDUs to be detected at boot	string	0~200	Number of IRDUs	
	Limit NOM	NOM limitation by the number of valid bands	string	0	Not limit	
				1	Limit	
	Band Enable	Band enable/disable				
	Band A	Band A	string	0	Disable	
				1	Enable	
	Band B	Band B				Same as Band A
	Band C	Band C				Same as Band A
	Band D	Band D				Same as Band A
	Band E	Band E				Same as Band A
	Band F	Band F				Same as Band A
	Band G	Band G				Same as Band A
	Band H	Band H				Same as Band A
	Band I	Band I				Same as Band A
	Band J	Band J				Same as Band A
	Band A Type	Device used for Band A				
	Type	Used device	string	0	Used for IRDU	
				1	Used for IR Mic	
	Group 0 Assign	Group 0 assignment	string	0	Not assign	
				1	Assign	
Group 1 Assign	Group 1 assignment				Same as Group 0	
Group 2 Assign	Group 2 assignment				Same as Group 0	
Group 3 Assign	Group 3 assignment				Same as Group 0	
Band B Type	Device used for Band B				Same as Band A	
Band C Type	Device used for Band C				Same as Band A	
Band D Type	Device used for Band D				Same as Band A	
Band E Type	Device used for Band E				Same as Band A	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request②.

4.2.13 IR Band Setting Acquisition Request

After receiving the IR Band Setting Acquisition Request, the CU sends the link port settings to the host via Answer.

(1) Get Command

In case of the IR Band Setting Acquisition Request from the host, refer to the command format table below.

gband_O_0000_00_NC_↵

Table 4-21 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gband		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gband_0000_00_NC_0_↓

Table 4-22 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gband		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Number of IRDU	Number of IRDUs to be detected at boot	string	0~200	Number of IRDUs	
	Limit NOM	NOM limitation by the number of valid bands	string	0	Not limit	
				1	Limit	
	Band Enable	Band enable/disable				
	Band A	Band A	string	0	Disable	
				1	Enable	
	Band B	Band B				Same as Band A
	Band C	Band C				Same as Band A
	Band D	Band D				Same as Band A
	Band E	Band E				Same as Band A
	Band F	Band F				Same as Band A
	Band G	Band G				Same as Band A
	Band H	Band H				Same as Band A
	Band I	Band I				Same as Band A
	Band J	Band J				Same as Band A
	Band A Type	Device used for Band A				
	Type	Used device	string	0	Used for IRDU	
				1	Used for IR Mic	
	Group 0 Assign	Group 0 assignment	string	0	Not assign	
				1	Assign	
Group 1 Assign	Group 1 assignment				Same as Group 0	
Group 2 Assign	Group 2 assignment				Same as Group 0	
Group 3 Assign	Group 3 assignment				Same as Group 0	
Band B Type	Device used for Band B				Same as Band A	
Band C Type	Device used for Band C				Same as Band A	
Band D Type	Device used for Band D				Same as Band A	
Band E Type	Device used for Band E				Same as Band A	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.14 Header Dot Color Setting Change Request

After receiving the Header Dot Color Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Header Dot Color Setting Change Request from the host, refer to the command format table below.

shcol_S_0000_00_NC_FFFFFFFF_↵

Table 4-23 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	shcol		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Header Dot Color	Header Dot Color	string	000000 to FFFFFFFF	RRGGBB	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request(2).

4.2.15 Header Dot Color Setting Acquisition Request

After receiving the Header Dot Color Setting Acquisition Request, the CU sends the Header Dot Color to the host via Answer.

(1) Get Command

In case of the Header Dot Color Setting Acquisition Request from the host, refer to the command format table below.

ghcol_O_0000_00_NC_↵

Table 4-24 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ghcol		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

ghcol_0000_00_NC_0_↵

Table 4-25 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ghcol		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Header Dot Color	Header Dot Color	string	000000 to FFFFFFFF	RRGGBB	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.16 Firmware Version Acquisition Request

After receiving the Firmware Version Acquisition Request, the CU sends the CU firmware version to the host via Answer.

(The firmware version of each DU can be obtained using DU Status Acquisition Request, DU Status Notification, or Connection Status Notification.)

(1) Get Command

In case of the Firmware Version Acquisition Request from the host, refer to the command format table below.

gvers_O_0000_00_NC_↵

Table 4-26 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gvers		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gvers_0000_00_NC_01.00.00_↵

Table 4-27 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gvers		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Version	Version	string	XX.XX.XX	Version	
6.	End Character	Message end character	binary	0x0d	CR	

Table 4-29 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gstat		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Indicator					
	USB	USB Indicator	string	0	Off	
				1	Lit	
				2	Blink	
	Rec	Rec Indicator				Same as USB
	DU Power/IR Link	DU Power Indicator				Same as USB Set to the IR Link state for IRCU
	DU Link	DU Link Indicator				Same as USB
	CU Link	CU Link Indicator				Same as USB
	Remote	Remote Indicator	string	0	Off	
				1	Lit	
	Signal/Peak	Signal/Peak Indicator	string	0	Off	
				1	Lit in Green	
				2	Lit in Amber	
				3	Lit in Red	
	Primary					
	Port A					
	Topology	Connection topology	string	0	Ring	
				1	Daisy-chain	
	Connected(DU)	Number of connected DUs	string	0~50	Number of DUs	
	Connected(Int50)	Number of connected INT50s	string	0~6	Number of Interpretation Units	
	Connected(IU)	Number of connected IUs	string	0~50	Number of IUs	
	Port B	Port B connection information				Same as Port A
	Port C	Port C connection information				Same as Port A
	Port D	Port D connection information				Same as Port A
	Extension 1					
	Port A					
	Topology	Connection topology	string	0	Ring	
				1	Daisy-chain	
	Connected	Number of connected DUs	string	0~50	Number of DUs	
	Connected(IU)	Number of connected IUs	string	0~50	Number of IUs	
	Port B	Port B connection information				Same as Port A
	Extension 2					
	Port A					
	Topology	Connection topology	string	0	Ring	
				1	Daisy-chain	
	Connected	Number of connected DUs	string	0~50	Number of DUs	
	Connected(IU)	Number of connected IUs	string	0~50	Number of IUs	
	Port B	Port B connection information				Same as Port A
	Extension 3					
						Not used

No	Item	Description	Type	Value	Value Description	Remarks
		Port A				
		Topology	string	0 1	Ring Daisy-chain	
		Connected	string	0~50	Number of DUs	
		Connected(IU)	string	0~50	Number of IUs	
		Port B				Same as Port A
		Connected(IRDU)	string	0~200	Number of IRDUs	Fixed to 0 for ATUC-50
		Number of connected DUAs				
		Primary				
		Port A	string	0~50	Number of DUAs	
		Port B	string	0~50	Number of DUAs	
		Port C	string	0~50	Number of DUAs	
		Port D	string	0~50	Number of DUAs	
		Extension1				
		Port A	string	0~50	Number of DUAs	
		Port B	string	0~50	Number of DUAs	
		Extension2				
		Port A	string	0~50	Number of DUAs	
		Port B	string	0~50	Number of DUAs	
6.	End Character	Message end character	binary	0x0d	CR	

Table 4-30 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sminp		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	Mic/Line Input 1	Input 1 setting				Mic/Line Input 1
	Type	Input type	string	0 1 2 3	Mic Line +4dBu Line 0dBV Dante	
	Mix to Floor	Mix to Floor	string	0 1	Off On	
	Mix to Language	Mix to Language	string	0 1	Off On	
	Mic Input					
	Phantom Power	Phantom Power	string	0 1	Off On	
	Gain	Gain	string	0~44	-60dB~-16dB	See 6.1 Fader Table.
	Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	Low Cut Switch	Low Cut Switch	string	0 1	Off On	
	EQ Library Band #1	EQ 1				
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0 1 2	LPF/HPF LSH/HSB PEQ	
	EQ Library Band #2	EQ 2				Same as EQ Library Band #1
	EQ Library Band #3	EQ 3				Same as EQ Library Band #1
	Line Input	Line setting				Same as Mic Input
	Mic/Line Input 2	Input 2 setting				Same as Mic/Line Input 1
	Mute					
	Input 1	Can be Muted setting	string	0 1	Non-mutable Mutable	
	Input 2					Same as Input 1
	Dante					
	Input 1	Dante setting				Same as Mic Input
	Input 2					Same as Mic Input
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request(2).

4.2.19 Mic/Line Input Setting Acquisition Request

After receiving the Mic/Line Input Setting Acquisition Request, the CU sends the Mic/Line settings to the host via Answer.

(1) Get Command

In case of the Mic/Line Input Setting Acquisition Request from the host, refer to the command format table below.

gminp_O_0000_00_NC_↓

Table 4-31 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gminp		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gminp_0000_00_NC_0,0,0,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,1,0,0,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,0,0,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,1,44,511,1,480,56,30,2,480,56,30,2,480,56,30,2,↓

Table 4-32 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gminp		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Mic/Line Input 1	Input 1 setting				Mic/Line Input 1
	Type	Input type	string	0 1 2 3	Mic Line +4dBu Line 0dBV Dante	
	Mix to Floor	Mix to Floor	string	0 1	Off On	
	Mix to Language	Mix to Language	string	0 1	Off On	
	Mic Input					
	Phantom Power	Phantom Power	string	0 1	Off On	
	Gain	Gain	string	0~44	-60dB~-16dB	See 6.1 Fader Table.
	Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	Low Cut Switch	Low Cut Switch	string	0 1	Off On	
	EQ Library Band #1	EQ 1				
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0 1 2	LPF/HPF LSH/HSB PEQ	
	EQ Library Band #2	EQ 2				Same as EQ Library Band #1
	EQ Library Band #3	EQ 3				Same as EQ Library Band #1
	Line Input	Line setting				Same as Mic Input
	Mic/Line Input 2	Input 2 setting				Same as Mic/Line Input 1
	Mute					
	Input 1	Can be Muted setting	string	0 1	Non-mutable Mutable	
	Input 2					Same as Input 1
	Dante					
	Input 1	Dante setting				Same as Mic Input
	Input 2					Same as Mic Input
6.	End Character	Message end character	binary	0x0d	CR	

4.2.20 Aux Input Setting Change Request

After receiving the Aux Input Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Aux Input Setting Change Request from the host, refer to the command format table below.

sxinp_S_0000_00_NC_511,2,1,0,0,1,480,56,30,2,480,56,30,2,480,56,30,2_↓

Table 4-33 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sxinp		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	AUX Input					
	Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	Nominal Level	Nominal Level	string	0	0dBV	
1				-10dBV		
2				-20dBV		
	Mix to Floor	Mix to Floor	string	0	Off	
1				On		
	Mix to Language 1	Mix to Language 1	string	0	Off	
1				On		
	Mix to Language 2	Mix to Language 2	string	0	Off	
1				On		
	Low Cut Switch	Low Cut Switch	string	0	Off	
1				On		
	EQ Library Band #1					
	EQ 1					
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0	LPF/HPF	
				1	LSH/HSB	
				2	PEQ	
	EQ Library Band #2					
	EQ 2					
	EQ Library Band #3					
	EQ 3					
	Input Type	Input type	string	0	Analog	Fixed to 0 for ATUC-50
				1	Dante	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request(2).

4.2.21 Aux Input Setting Acquisition Request

After receiving the Aux Input Setting Acquisition Request, the CU sends the Aux Input settings to the host via Answer.

(1) Get Command

In case of the Aux Input Setting Acquisition Request from the host, refer to the command format table below.

gxinp_O_0000_00_NC_↵

Table 4-34 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gxinp		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gxinp_0000_00_NC_511,2,1,0,0,1,480,56,30,2,480,56,30,2,480,56,30,2_↵

Table 4-35 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gxinp		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	AUX Input					
	Level	Level	string	0~511	$-\infty$, -120dB~+10dB	See 6.1 Fader Table.
	Nominal Level	Nominal Level	string	0	0dBV	
1				-10dBV		
2				-20dBV		
	Mix to Floor	Mix to Floor	string	0	Off	
1				On		
	Mix to Language 1	Mix to Language 1	string	0	Off	
1				On		
	Mix to Language 2	Mix to Language 2	string	0	Off	
1				On		
	Low Cut Switch	Low Cut Switch	string	0	Off	
1				On		
	EQ Library Band #1					
	EQ 1					
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0	LPF/HPF	
1				LSH/HSH		
2				PEQ		
	EQ Library Band #2					
	EQ 2					
	EQ Library Band #3					
	EQ 3					
	Input Type	Input type	string	0	Analog	Fixed to 0 for ATUC-50
				1	Dante	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.23 Interpretation Input Setting Acquisition Request

After receiving the Interpretation Input Setting Acquisition Request, the CU sends the Interpretation Return settings to the host via Answer.

(1) Get Command

In case of the Interpretation Input Setting Acquisition Request from the host, refer to the command format table below.

giinp_O_0000_00_NC_↵

Table 4-37 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	giinp		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

giinp_0000_00_NC_511,2,1,1,480,56,30,2,480,56,30,2,480,56,30,2,511,1,1,480,56,30,2,480,56,30,2,480,56,30,2,511,1,1,480,56,30,2,480,56,30,2,480,56,30,2_↵

Table 4-38 Answer Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	giinp		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Interpretation Return 1					
	Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	Nominal Level	Nominal Level	string	0	0dBV	
				1	+4dBV	
	Low Cut Switch	Low Cut Switch	string	0	Off	
				1	On	
	EQ Library Band #1 EQ 1					
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0	LPF/HPF	
				1	LSH/HSB	
				2	PEQ	
	EQ Library Band #2	EQ 2				Same as EQ Library Band #1
	EQ Library Band #3	EQ 3				Same as EQ Library Band #1
	Interpretation Return 2					
						Same as Interpretation Return 1
6.	End Character	Message end character	binary	0x0d	CR	

4.2.24 FBS Common Setting Change Request

After receiving the FBS Common Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the FBS Common Setting Change Request from the host, refer to the command format table below.

scfbs_S_0000_00_NC_2,1_↓

Table 4-39 Command Format

No	Item	Description	Type	Value	Value Description	Remarks						
1.	Command	Command string	string	scfbs								
2.	Handshake Select	Sequence execution system	string	S								
3.	Model ID	Not used	string	0000	Not used							
4.	Unit No	Not used	string	00	Not used							
5.	Continue Select	Divided message system	string	NC	No divided message							
6.	Parameter	Parameter				Some parameters can be omitted.						
							FBS Common	Detection	Detection	string	0	Low
											1	Mid
											2	High
							Response	Response	string	0	Slow	
										1	Fast	
7.	End Character	Message end character	binary	0x0d	CR							

(2) ACK/NAK

See Factory Default Setting Request(2).

4.2.25 FBS Common Setting Acquisition Request

After receiving the **FBS Common Setting Acquisition Request**, the CU sends the FBS common settings to the host via Answer.

(1) Get Command

In case of the **FBS Common Setting Acquisition Request** from the host, refer to the command format table below.

gcfbs_O_0000_00_NC_↵

Table 4-40 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gcfbs		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gcfbs_0000_00_NC_2,1_↵

Table 4-41 Command Format

No	Item	Description	Type	Value	Value Description	Remarks							
1.	Command	Command string	string	gcfbs									
2.	Model ID	Not used	string	0000	Not used								
3.	Unit No	Not used	string	00	Not used								
4.	Continue Select	Divided message system	string	NC	No divided message								
5.	Parameter	Parameter											
							FBS Common	Detection	Detection	string	0	Low	
											1	Mid	
											2	High	
							Response	Response	string	0	Slow		
1	Fast												
6.	End Character	Message end character	binary	0x0d	CR								

4.2.26 FBS Setting Change Request

After receiving the FBS Setting Change Request, the CU resumes the FBS settings and sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the FBS Setting Change Request from the host, refer to the command format table below.

safbs_S_0000_00_NC_3,1,1,0,0,0,0,0,0,0,0,0,0,0_↵

Table 4-42 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	safbs		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters but Group can be omitted.
	Group	Distinction between Group 0~3	string	0 1 2 3	Group 0 Group 1 Group 2 Group 3	Required
	5-Band FBS	FBS settings for the specified group				
	Enable	FBS enable/disable	string	0 1	Off On	
	Band #1	Band #1				
	Static	Static On/Off	string	0 1	Off On	
	Band #2	Band #2	string			Same as 5-Band FBS Band #1
	Band #3	Band #3	string			Same as 5-Band FBS Band #1
	Band #4	Band #4	string			Same as 5-Band FBS Band #1
	Band #5	Band #5	string			Same as 5-Band FBS Band #1
	Band #6	Band #6	string			Same as 5-Band FBS Band #1
	Band #7	Band #7	string			Same as 5-Band FBS Band #1
	Band #8	Band #8	string			Same as 5-Band FBS Band #1
	Band #9	Band #9	string			Same as 5-Band FBS Band #1
	Band #10	Band #10	string			Same as 5-Band FBS Band #1
	Band #11	Band #11	string			Same as 5-Band FBS Band #1
	Band #12	Band #12	string			Same as 5-Band FBS Band #1
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

Table 4-44 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	safbs		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	CS/CM/CE	Divided message	
5.	Parameter	Parameter				
	Group	Distinction between Group 0~3	string	0	Group 0	
				1	Group 1	
				2	Group 2	
				3	Group 3	
	5-Band FBS	FBS settings for the specified group				
	Enable	FBS enable/disable	string	0	Off	
				1	On	
	Band #1	Band #1				
	Static	Static On/Off	string	0	Off	
				1	On	
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Candidate	Temporary operating state	string	0	Off	Set Off when the safbs command is executed.
				1	On	Set On when the ssfbs command is executed.
	Band #2	Band #2	string			Same as 5-Band FBS Band #1
	Band #3	Band #3	string			Same as 5-Band FBS Band #1
	Band #4	Band #4	string			Same as 5-Band FBS Band #1
	Band #5	Band #5	string			Same as 5-Band FBS Band #1
	Band #6	Band #6	string			Same as 5-Band FBS Band #1
Band #7	Band #7	string			Same as 5-Band FBS Band #1	
Band #8	Band #8	string			Same as 5-Band FBS Band #1	
Band #9	Band #9	string			Same as 5-Band FBS Band #1	
Band #10	Band #10	string			Same as 5-Band FBS Band #1	
Band #11	Band #11	string			Same as 5-Band FBS Band #1	
Band #12	Band #12	string			Same as 5-Band FBS Band #1	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.28 FBS Setting Reset Request

After receiving the FBS Setting Reset Request, the CU resets the FBS settings and sends the processing results to the host via ACK or NAK.

Obtain the results about resetting the settings again using FBS Setting Acquisition Request.

(1) Set Command

In case of the FBS Setting Reset Request from the host, refer to the command format table below.

srfbs_S_0000_00_NC_3_↓

Table 4-45 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	srfbs		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Group	Distinction between Group 0~3	string	0	Group 0	Required
				1	Group 1	
				2	Group 2	
3				Group 3		
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.29 FBS Status Update Request

After receiving the FBS Status Update Request, the CU sends the processing results to the host via ACK or NAK.
Obtain the results about changing the Static settings again using FBS Setting Acquisition Request.

(1) Set Command

In case of the FBS Status Update Request from the host, refer to the command format table below.

ssfbs_S_0000_00_NC_3, 12, 1_↵

Table 4-46 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ssfbs		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		All required
	Group	Distinction between Group 0~3	string	0	Group 0	
				1	Group 1	
				2	Group 2	
				3	Group 3	
	Band	Distinction between Band #1~#12	string	1~12	Band #1~#12	
Static (Candidate)	Static On/Off (Temporary operating state)	string	0	Off	The FBS status is updated by setting On/Off this item but not reflected on the resume data. (It is reflected on the resume data by sending safbs again.)	
			1	On		
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request(2).

4.2.30 Audio Output Setting Change Request

After receiving the Audio Output Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Audio Output Setting Change Request from the host, refer to the command format table below.

(Output1)

saout_S_0000_00_NC_

1,511,9,511,1,480,56,30,2,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,2,1,60,60,5,10000,2000,0,0,0,0,0_↓

(Output2)

saout_S_0000_00_NC_2,511,9_↓

(Output3)

saout_S_0000_00_NC_3,511,9_↓

(Output4)

saout_S_0000_00_NC_4,511,9_↓

Table 4-47 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	saout		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		Some parameters but Kind can be omitted.
	Kind	Distinction between Output 1~4	string	1 2 3 4	Output 1 Output 2 Output 3 Output 4	Required
	Output					
	Output Level	Output Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	Source Select	Source Select	string	0 1 2 3 4 5 6 7 8 9 10 11 12	Floor Group 0 Group 1 Group 2 Group 3 Language 1 Language 2 Language 3 Interpretation Return 1 Interpretation Return 2 Mic/Line 1 Mic/Line 2 Mic/Line 1&2 Mix	
	Maximum Volume	Output 1 only	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.
	8-Band PEQ					
	Enable	Enable	string	0 1	Off On	
	Band #1					
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0 1 2	LPF/HPF LSH/HSH PEQ	
	Band #2					
	Frequency	Frequency	string			Same as Band #1 Frequency
	Gain	Gain	string			Same as Band #1 Gain
	Q Value	Q Value	string			Same as Band #1 Q Value
	Band #3					
	Band #4					
	Band #5					
	Band #6					
	Band #7					

No	Item	Description	Type	Value	Value Description	Remarks
	Band #8	Band #8	string			Same as Band #1
	Dynamics	Output 1 only				
	Enable	Enable	string	0 1	Off On	
	Comp Threshold	Comp Threshold	string	0~60	-60dB~0dB	
	Limiter Threshold	Limiter Threshold	string	0~60	-60dB~0dB	
	Ratio	Ratio	string	0 1 2 3 4 5	∞ : 1 10 : 1 6 : 1 4 : 1 2 : 1 1.4 : 1	
	Attack Time	Attack Time	string	0 25 50 100 200 400 800 1600 3200 10000	0msec 0.25msec 0.5msec 1msec 2msec 4msec 8msec 16msec 32msec 100msec	Specify with a value 100 times the milliseconds.
	Release Time	Release Time	string	50 100 200 400 800 1000 2000	50msec 100msec 200msec 400msec 800msec 1000msec 2000msec	Specify in milliseconds.
	Gain	Gain	string	0~20	-10dB~+10dB	
	Mode	Mode	string	0 1	Comp DeEsser	
	Sensitivity	Sensitivity	string	0 1 2	Soft Medium Hard	
	Frequency	Center Frequency	string	0 1 2 3 4 5 6 7 8 9 10 11	4.0kHz 4.5kHz 5.0kHz 5.5kHz 6.0kHz 6.5kHz 7.0kHz 7.5kHz 8.0kHz 8.5kHz 9.0kHz 9.5kHz	

No	Item	Description	Type	Value	Value Description	Remarks
				12	10.0kHz	
		Reduction	string	0	Soft	
				1	Medium	
				2	Hard	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.31 Audio Output Setting Acquisition Request

After receiving the Audio Output Setting Acquisition Request, the CU sends the audio output settings to the host via Answer.

(1) Get Command

In case of the Audio Output Setting Acquisition Request from the host, refer to the command format table below.

gaout_O_0000_00_NC_↵

Table 4-48 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gaout		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

(1st) gaout_0000_00_CS_

1,511,9,511,1,480,56,30,2,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,480,56,30,2,1,60,60,5,10000,2000,0,0,0,0,0_↵

(2nd) gaout_0000_00_CM_2,511,9_↵

(3rd) gaout_0000_00_CM_3,511,9_↵

(last) gaout_0000_00_CE_4,511,9_↵

Table 4-49 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	saout			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	CS/CM/CE	Divided message		
5.	Parameter	Parameter	-	-			
	Kind	Distinction between Output 1~4	string	1	Output 1		
				2	Output 2		
				3	Output 3		
				4	Output 4		
	Output						
	Output Level	Output Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.	
	Source Select	Source Select	string	0	Floor		
				1	Group 0		
				2	Group 1		
				3	Group 2		
				4	Group 3		
				5	Language 1		
				6	Language 2		
				7	Language 3		
				8	Interpretation Return 1		
				9	Interpretation Return 2		
				10	Mic/Line 1		
				11	Mic/Line 2		
	12	Mic/Line 1&2 Mix					
	Maximum Volume	Output 1 only	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.	
	8-Band PEQ						
	Enable	Enable	string	0	Off		
				1	On		
	Band #1						
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.	
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.	
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.	
	Filter Type	Filter Type	string	0	LPF/HPF		
				1	LSH/HSH		
				2	PEQ		
	Band #2						
Frequency	Frequency	string			Same as Band #1 Frequency		
Gain	Gain	string			Same as Band #1 Gain		
Q Value	Q Value	string			Same as Band #1 Q Value		
Band #3	Band #3	string			Same as Band #2		
Band #4	Band #4	string			Same as Band #2		
Band #5	Band #5	string			Same as Band #2		
Band #6	Band #6	string			Same as Band #2		
Band #7	Band #7	string			Same as Band #2		
Band #8	Band #8	string			Same as Band #1		
Dynamics	Output 1 only						

No	Item	Description	Type	Value	Value Description	Remarks	
		Enable	Enable	string	0	Off	
					1	On	
		Comp Threshold	Comp Threshold	string	0~60	-60dB~0dB	
		Limiter Threshold	Limiter Threshold	string	0~60	-60dB~0dB	
		Ratio	Ratio	string	0	∞ : 1	
					1	10 : 1	
					2	6 : 1	
					3	4 : 1	
					4	2 : 1	
					5	1.4 : 1	
		Attack Time	Attack Time	string	0	0msec	Specify with a value 100 times the milliseconds.
					25	0.25msec	
					50	0.5msec	
					100	1msec	
					200	2msec	
					400	4msec	
					800	8msec	
					1600	16msec	
					3200	32msec	
					10000	100msec	
		Release Time	Release Time	string	50	50msec	Specify in milliseconds.
					100	100msec	
					200	200msec	
					400	400msec	
					800	800msec	
					1000	1000msec	
					2000	2000msec	
		Gain	Gain	string	0~20	-10dB~+10dB	
		Mode	Mode	string	0	Comp	
					1	DeEsser	
		Sensitivity	Sensitivity	string	0	Soft	
					1	Medium	
					2	Hard	
		Frequency	Center Frequency	string	0	4.0kHz	
					1	4.5kHz	
					2	5.0kHz	
					3	5.5kHz	
					4	6.0kHz	
					5	6.5kHz	
					6	7.0kHz	
					7	7.5kHz	
8	8.0kHz						
9	8.5kHz						
10	9.0kHz						
11	9.5kHz						
12	10.0kHz						
Reduction	Reduction	string	0	Soft			

No	Item	Description	Type	Value	Value Description	Remarks
				1	Medium	
				2	Hard	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.32 DU Individual Setting Change Request

After receiving the DU Individual Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the DU Individual Setting Change Request from the host, refer to the command format table below.

- For DU/INT/IU

sduin_S_0000_00_NC_12345678,"duname1",1,1,1,1,1,1,1,1,40,1,1,1,2,F00000,800000,1,0,0,0,0_↓

- For IRDU

sduin_S_0000_00_NC_00000200,"duname1",1,1,1,1,1,1,1,1,40,1,1,1,2,,,0,0,0,3,1,2,0,"duname2",0,0,0_↓

Table 4-50 Command Format

No	Item	Description	Type	Value		Value Description	Remarks	
					Enabled when all is selected			
1.	Command	Command string	string	sduin				
2.	Handshake Select	Sequence execution system	string	S				
3.	Model ID	Not used	string	0000		Not used		
4.	Unit No	Not used	string	00		Not used		
5.	Continue Select	Divided message system	string	NC		No divided message		
6.	Parameter	Parameter	-	-			Some parameters but Serial can be omitted.	
	Serial	Serial number/device ID	string	00000000~99999999		Serial number	Unit to be changed	
				t001~t100		DU topology number		
				t0-001~t0-100		CU topology number -DU topology number		
				t1-001~t1-100				
				t2-001~t2-100				
				00000001~00000200		Device ID		When Unit Type is 3
	all		All units are the target.					
	Delegate Name	Name	char	"		Beginning of character string		
			string	UTF-8		10 characters	To contain double quotation marks ("), specify them in succession like "".	
			char	"		End of character string		
	Priority							
	Priority	Priority	string	0		Off		
				1		On		
	Can Cut/Mute	Audio mutable	string	0		Off		
				1		On		
	Can be Cut/Muted	Audio mute target	string	0		Off		
				1		On		
	Audio Group Assign							
	Group 0	Group 0 assignment	string	0		Yes	Not assign	
				1		Yes	Assign	
	Group 1	Group 1 assignment	string			Yes	Same as Group 0	
	Group 2	Group 2 assignment	string			Yes	Same as Group 0	
Group 3	Group 3 assignment	string			Yes	Same as Group 0		
Mic Setting								
Mic On Trigger Mode	Mic On Trigger Mode	string	0		Yes	Button		
			1		Yes	Voice		
			2		Yes	Push to Talk		
Phantom Power	Phantom Power	string	0		Yes	Off		
			1		Yes	On		
Gain	Input Gain	string	1~41		Yes	-20dB~20dB		
AGC	AGC	string	0		Yes	Off		
			1		Yes	On		
Interpretation Language Pattern	Interpretation language pattern	string	1			L1 -> L2		
			2			L2 -> L1		
			3			L2 <-> L1		
			4			L1 -> L3		
			5			L3 -> L1		
			6			L3 <-> L1		

No	Item	Description	Type	Value		Value Description	Remarks
					Enabled when all is selected		
				7		L2 -> L3	
				8		L3 -> L2	
				9		L3 <-> L2	
	Speaker Setting						
	Speaker	Speaker enable/disable	string	0	Yes	Off	
				1	Yes	On	
	Mode When Talk On	Speaker output during Talk On	string	0	Yes	Off	
				1	Yes	On	
				2	Yes	Attenuation	
	Rear LED Setting						
							When Unit Type is other than 3
	Talk On/Queuing	Talk On color	string	000000 to FFFFFFFF		RRGGBB	
	Talk On/Queuing (Dimmer)	Dimmer On color	string	000000 to FFFFFFFF		RRGGBB	
	Talk Off	Dimmer enable/disable	string	0		Off	
				1		Dimmer On	
	Monitor Channel	Default monitor channel	string	0	Yes	Floor	
				1	Yes	Language 1	
				2	Yes	Language 2	
				3	Yes	Language 3	
	Enabled	Rear LED Setting Enable/disable	string	0	Yes	Disable	
				1	Yes	Enable	
	Boot Up Talk On	Automatically Talk On at boot	string	0		Off	Priority DU only
				1		On	
	Unit Type	Unit type	string	0		ATUC-50DU	
				1		ATUC-50INT	Required only for INT
				2		ATUC-50IU	
				3		ATUC-IRDU	
				4		ATUC-50DUa	
	IRDU Setting						
							When Unit Type is 3
	Rear LED Setting						
	Talk On/Queuing	Talk On color	string	1~10		Palette index	
	TalkOn/Queuing(Dimmer)	Dimmer On color	string	1~10		Palette index	
	Talk Off	Dimmer enable/disable	string	0		Off	
				1		Dimmer On	
	Delegate Name 2	Name 2	char	"		Beginning of character string	
			string	UTF-8		10 characters	To contain double quotation marks ("), specify them in succession like "".
			char	"		End of character string	
	2 Speaker Mode	2 Speakers Mode	string	0		Off	
				1		On	Can be set On when Priority is Off
	Multi Function(Button)	Multi Function Button (Left) assignment	string	0		Cut/Mute	
				1		Permit Next	
	Multi Function(Voice)	Multi Function Voice (Left) assignment	string	0		Cut/Mute	
				1		Permit Next	
7.	End Character	Message end character	binary	0x0d		CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.32.1 List of Modifiable Parameters for Each Unit Type

No	Parameter	Description	Unit Type			
			ATUC-50DU	ATUC-50INT	ATUC-50IU	ATUC-IRDU
1.	Serial	Serial Number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2.		Topology Number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3.		Device ID				<input type="radio"/>
4.	Delegate Name		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	Priority	Priority	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
6.		Can Cut/Mute	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
7.		Can be Cut/Muted	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
8.	Audio Group Assign	Group 0	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
9.		Group 1	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
10.		Group 2	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
11.		Group 3	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
12.	Mic Setting	Mic On Trigger Mode	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
13.		Phantom Power	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.		Gain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.		AGC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16.	Interpretation Language Pattern			<input type="radio"/>		
17.	Speaker Setting	Speaker	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
18.		Mode When Talk On	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
19.	Rear LED Setting	Talk On/Queuing	<input type="radio"/>			
20.		Talk On/Queuing(Dimmer)	<input type="radio"/>			
21.		Talk Off	<input type="radio"/>			
22.		Enabled	<input type="radio"/>			<input type="radio"/>
23.	Monitor Channel					
24.	Boot Up Talk On		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
25.	IRDU Setting	Rear LED Setting	Talk On/Queuing			<input type="radio"/>
26.			Talk On/Queuing(Dimmer)			<input type="radio"/>
27.			Talk Off			<input type="radio"/>
28.		Delegate Name 2			<input type="radio"/>	
29.		2 Speaker Mode			<input type="radio"/>	
30.		Multi Function(Button)			<input type="radio"/>	
31.		Multi Function(Voice)			<input type="radio"/>	

4.2.33DUMicEQ Setting Change Request

After receiving the DUMicEQ Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the DUMicEQ Setting Change Request from the host, refer to the command format table below.

sdueq_S_0000_00_NC_12345678,480,56,30,2,480,56,30,2,480,56,30,2,0_↓

Table 4-51 Command Format

No	Item	Description	Type	Value		Value Description	Remarks	
					Enabled when all is selected			
1.	Command	Command string	string	sdueq				
2.	Handshake Select	Sequence execution system	string	S				
3.	Model ID	Not used	string	0000		Not used		
4.	Unit No	Not used	string	00		Not used		
5.	Continue Select	Divided message system	string	NC		No divided message		
6.	Parameter	Parameter	-	-			Some parameters but Serial can be omitted.	
	Serial	Serial number	string	00000000~99999999		Serial number	Unit to be changed	
				t001~t100		DU topology number		
				t0-001~t0-100		CU topology number		
				t1-001~t1-100		-DU topology number		
				t2-001~t2-100				
				00000001~00000200		Device ID		When Unit Type is 3
				all		All units are the target.		
	Mic Setting							
	EQ Library Band #1		EQ 1					
	Frequency		Frequency	string	0~480	Yes	20Hz~20kHz	See 6.2 Frequency Table.
	Gain		Gain	string	0~56	Yes	-18dB~+10dB	See 6.1 Fader Table.
	Q Value		Q Value	string	0~30	Yes	0.3~30	See 6.3 Q Value Table.
	Filter Type		Filter Type	string	0	Yes	LPF/HPF	
					1	Yes	LSH/HSB	
					2	Yes	PEQ	
	EQ Library Band #2		EQ 2				Yes	Same as EQ Library Band #1
	EQ Library Band #3		EQ 3				Yes	Same as EQ Library Band #1
	Unit Type		Unit type	string	0		ATUC-50DU	
					1		ATUC-50INT	Required only for INT
					2		ATUC-50IU	
3					ATUC-IRDU			
4					ATUC-50DUa			
7.	End Character	Message end character	binary	0x0d		CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

No	Item	Description	Type	Value	Value Description	Remarks
		GPI 5	GPI 5	string		Same as GPI 0
		GPI 6	GPI 6	string		Same as GPI 0
		GPI 7	GPI 7	string		Same as GPI 0
	GPO					
		GPO 0	GPO 0	string	0	Default action
					1	Self Mute
					2	Preset 1 Recall
					3	Preset 2 Recall
					4	Preset 3 Recall
					5	Preset 4 Recall
					6	Preset 5 Recall
					7	Preset 6 Recall
					8	Preset 7 Recall
					9	Preset 8 Recall
					10	REC Start/Indicator
					11	SFX 1
					12	SFX 2
					13	SFX 3
					18	Cut/Mute
					21	Permit Next Undo
					22	Mic/Line 1 Mute
					23	Mic/Line 2 Mute
		GPO 1	GPO 1	string		Same as GPO 0
		GPO 2	GPO 2	string		Same as GPO 0
		GPO 3	GPO 3	string		Same as GPO 0
		GPO 4	GPO 4	string		Same as GPO 0
		GPO 5	GPO 5	string		Same as GPO 0
		GPO 6	GPO 6	string		Same as GPO 0
		GPO 7	GPO 7	string		Same as GPO 0
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.35 GPIO Setting Acquisition Request

After receiving the GPIO Setting Acquisition Request, the CU sends the DU common settings to the host via Answer.

(1) Get Command

In case of the GPIO Setting Acquisition Request from the host, refer to the command format table below.

ggpio_O_0000_00_NC_00000001_↓

Table 4-53 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ggpio		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number	string	00000000~99999999	Serial number of IU	Required
				t001~t100	DU topology number	
				t0-001~t0-100	CU topology number	
				t1-001~t1-100	-DU topology number	
			t2-001~t2-100			
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

ggpio_0000_00_NC_00000001,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0_↵

Table 4-54 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	ggpio			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter					
	Serial	Serial number	string	00000000~99999999	Serial number of IU		
	GPI						
	GPI 0	GPI 0	string	0	Default action	The gcgpo command is used to report.	
				1	Self Mute		
				2	Preset 1 Recall		
				3	Preset 2 Recall		
				4	Preset 3 Recall		
				5	Preset 4 Recall		
				6	Preset 5 Recall		
				7	Preset 6 Recall		
				8	Preset 7 Recall		
				9	Preset 8 Recall		
				10	REC Start/Indicator		
				11	SFX 1		
				12	SFX 2		
				13	SFX 3		
				14	Permit Next		
				15	Master Vol Up		
				16	Master Vol Down		
				17	REC Stop		
				21	Permit Next Undo		
				22	Mic/Line1 Mute		
				23	Mic/Line2 Mute		
	GPI 1	GPI 1	string			Same as GPI 0	
	GPI 2	GPI 2	string			Same as GPI 0	
	GPI 3	GPI 3	string			Same as GPI 0	
GPI 4	GPI 4	string			Same as GPI 0		
GPI 5	GPI 5	string			Same as GPI 0		
GPI 6	GPI 6	string			Same as GPI 0		
GPI 7	GPI 7	string			Same as GPI 0		
GPO							
GPO 0	GPO 0	string	0	Default action	The scgpo command is used to control.		
			1	Self Mute			
			2	Preset 1 Recall			
			3	Preset 2 Recall			
			4	Preset 3 Recall			

No	Item	Description	Type	Value	Value Description	Remarks
				5	Preset 4 Recall	
				6	Preset 5 Recall	
				7	Preset 6 Recall	
				8	Preset 7 Recall	
				9	Preset 8 Recall	
				10	REC Start/Indicator	
				11	SFX 1	
				12	SFX 2	
				13	SFX 3	
				18	Cut/Mute	
				21	Permit Next Undo	
				22	Mic/Line 1 Mute	
				23	Mic/Line 2 Mute	
		GPO 1	string			Same as GPO 0
		GPO 2	string			Same as GPO 0
		GPO 3	string			Same as GPO 0
		GPO 4	string			Same as GPO 0
		GPO 5	string			Same as GPO 0
		GPO 6	string			Same as GPO 0
		GPO 7	string			Same as GPO 0
6.	End Character	Message end character	binary	0x0d	CR	

4.2.36 GPO Control Request

After receiving the GPO Control Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the GPO Control Request from the host, refer to the command format table below.

scgpo_S_0000_00_NC_00000001,0,0,0,0,0,0,0,0,0_↵

Table 4-55 Command Format

No	Item	Description	Type	Value	Value Description	Remarks		
1.	Command	Command string	string	scgpo				
2.	Handshake Select	Sequence execution system	string	S				
3.	Model ID	Not used	string	0000	Not used			
4.	Unit No	Not used	string	00	Not used			
5.	Continue Select	Divided message system	string	NC	No divided message			
6.	Parameter	Parameter	-	-		Some parameters but Serial can be omitted.		
		Serial	Serial number	string	00000000~99999999	Serial number of IU	Required	
					t001~t100	DU topology number		
					t0-001~t0-100	CU topology number		
					t1-001~t1-100	-DU topology number		
					t2-001~t2-100			
		GPO	GPO 0	GPO 0	string	0	OFF	
						1	ON	
						2	Flash	
						3	Blink	
			GPO 1	GPO 1	string			Same as GPO 0
			GPO 2	GPO 2	string			Same as GPO 0
			GPO 3	GPO 3	string			Same as GPO 0
			GPO 4	GPO 4	string			Same as GPO 0
GPO 5	GPO 5	string			Same as GPO 0			
GPO 6	GPO 6	string			Same as GPO 0			
GPO 7	GPO 7	string			Same as GPO 0			
7.	End Character	Message end character	binary	0x0d	CR			

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.37 GPIO Status Acquisition Request

After receiving the GPIO Status Acquisition Request, the CU sends the GPIO status of the specified DU to the host via Answer.

(1) Get Command

In case of the GPIO Status Acquisition Request from the host, refer to the command format table below.

ggpst_O_0000_00_NC_00000001_↓

Table 4-56 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ggpst		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number	string	00000000~99999999	Serial number of IU	Required
				t001~t100	DU topology number	
				t0-001~t0-100	CU topology number	
				t1-001~t1-100	-DU topology number	
				t2-001~t2-100		
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

ggpst_0000_00_NC_00000001,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0_↵

Table 4-57 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	ggpst			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter					
	Serial	Serial number	string	00000000~99999999	Serial number of IU	Required	
	GPI						
	GPI 0	GPI 0		string	0	Release	
					1	Push	
	GPI 1	GPI 1		string			Same as GPI 0
	GPI 2	GPI 2		string			Same as GPI 0
	GPI 3	GPI 3		string			Same as GPI 0
	GPI 4	GPI 4		string			Same as GPI 0
	GPI 5	GPI 5		string			Same as GPI 0
	GPI 6	GPI 6		string			Same as GPI 0
	GPI 7	GPI 7		string			Same as GPI 0
	GPO						
	GPO 0	GPO 0		string	0	OFF	
					1	ON	
					2	Flash	
					3	Blink	
	GPO 1	GPO 1		string			Same as GPO 0
	GPO 2	GPO 2		string			Same as GPO 0
	GPO 3	GPO 3		string			Same as GPO 0
	GPO 4	GPO 4		string			Same as GPO 0
GPO 5	GPO 5		string			Same as GPO 0	
GPO 6	GPO 6		string			Same as GPO 0	
GPO 7	GPO 7		string			Same as GPO 0	
6.	End Character	Message end character	binary	0x0d	CR		

4.2.38VU NFC Setting Request

After receiving the VU NFC Setting Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the VU NFC Setting Request from the host, refer to the command format table below.

svnfc_S_0000_00_NC_00000001,0_↵

Table 4-58 Command Format

No	item	Description	type	value	value Description		remarks				
1.	Command	Command string	string	svnfc							
2.	Handshake Select	Sequence execution system	string	S							
3.	Model ID	Not used	string	0000	Not used						
4.	Unit No	Not used	string	00	Not used						
5.	Continue Select	Divided message system	string	NC	No divided message						
6.	Parameter	Parameter	-	-			Some parameters but Serial can be omitted.				
					Serial	Serial number		string	00000000~99999999	Serial number of DUa	DUa Serial Number
									t001~t100	DU topology number	DU Topology
									t0-001~t0-100	CU topology number	CU Topology -DU Topology
									t1-001~t1-100		
									t2-001~t2-100	-DU topology number	
	all	All DUas	All Units								
NFC Power	NFC Power	string	0	Power Off							
			1	Power On							
7.	End Character	Message end character	binary	0x0d	CR						

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.39VU Setting Change Request

After receiving the VU Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the VU Setting Change Request from the host, refer to the command format table below.

svuio_S_0000_00_NC_99999999,0,0,0,0,0_↵

Table 4-59 Command Format

No	item	Description	type	value	value Description	remarks	
1.	Command	Command string	string	svuio			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter	-	-		Some parameters but Serial can be omitted.	
	Serial	Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number	
				t001~t100	DU topology number	DU Topology	
				t0-001~t0-100	CU topology number	CU Topology	
				t1-001~t1-100	-DU topology number	-DU Topology	
				t2-001~t2-100			
	VU LED						
	VU LED 0	VU LED 0	string	0	Default action		The gcvui command is used to report.
				2	Preset 1 Recall		
				3	Preset 2 Recall		
				4	Preset 3 Recall		
				5	Preset 4 Recall		
				6	Preset 5 Recall		
				7	Preset 6 Recall		
				8	Preset 7 Recall		
				9	Preset 8 Recall		
				11	SFX 1		
				12	SFX 2		
				13	SFX 3		
				14	Permit Next		
15				Master Vol Up			
16				Master Vol Down			
21	Permit Next undo						
VU LED 1	VU LED 1	string				Same as VU LED 0	
VU LED 2	VU LED 2	string				Same as VU LED 0	
VU LED 3	VU LED 3	string				Same as VU LED 0	
VU LED 4	VU LED 4	string				Same as VU LED 0	
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.40VU Setting Acquisition Request

After receiving the VU Setting Acquisition Request, the CU sends the VU settings to the host via Answer.

(1) Get Command

In case of the VU Setting Acquisition Request from the host, refer to the command format table below.

gvuio_O_0000_00_NC_99999999_↵

Table 4-60 Command Format

No	item	Description	type	value	value Description		remarks
1.	Command	Command string	string	gvuio			
2.	Handshake Select	Sequence execution system	string	0			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter Serial	Parameter Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number	
				t001~t100	DU topology number	DU Topology	
				t0-001~t0-100	CU topology number	CU Topology	
				t1-001~t1-100	-DU topology number	-DU Topology	
				t2-001~t2-100			
7.	End Character	Message end character	binary	0x0d	CR		

(2) Answer

Refer to the table below for Answer Command format from the CU.

gvuio_0000_00_NC_99999999,0,0,0,0,0_↓

Table 4-61 Command Format

No	item	Description	type	value	value Description	remarks	
1.	Command	Command string	string	gvuio			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter					
	Serial	Serial number/device ID	string	00000000~ 99999999	Serial number of DUa DUa Serial Number		
	VU						
		VULED 0	VULED 0	string	0	Default action	The gcvui command is used to report.
					2	Preset 1 Recall	
					3	Preset 2 Recall	
					4	Preset 3 Recall	
					5	Preset 4 Recall	
					6	Preset 5 Recall	
					7	Preset 6 Recall	
					8	Preset 7 Recall	
					9	Preset 8 Recall	
					11	SFX 1	
					12	SFX 2	
					13	SFX 3	
					14	Permit Next	
					15	Master Vol Up	
				16	Master Vol Down		
				21	Permit Next undo		
		VULED 1	VULED 1	string			Same as VULED 0
	VULED 2	VULED 2	string			Same as VULED 0	
	VULED 3	VULED 3	string			Same as VULED 0	
	VULED 4	VULED 4	string			Same as VULED 0	
6.	End Character	Message end character	binary	0x0d	CR		

4.2.41 VU Control Request

After receiving the VU Control Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the VU Control Request from the host, refer to the command format table below.

scvuo_S_0000_00_NC_00000001,1,0,0,0,0,0_↵

Table 4-62 Command Format

No	item	Description	type	value	value Description	remarks	
1.	Command	Command string	string	scvuo			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter	-	-		Some parameters but Serial can be omitted.	
	Serial	Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number	
				t001~t100	DU topology number	DU Topology	
				t0-001~t0-100	CU topology number	CU Topology -DU Topology	
				t1-001~t1-100			
				t2-001~t2-100			-DU topology number
	LED						
	LED 0	VULED 0	string	0	OFF		
				1	ON		
				2	Flash1		
				5	Blink1		
	LED 1	VULED 1	string			Same as LED 0	
	LED 2	VULED 2	string			Same as LED 0	
	LED 3	VULED 3	string			Same as LED 0	
LED 4	VULED 4	string			Same as LED 0		
NFC LED	VU NFC LED	string			Same as LED 0		
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.42VU Status Acquisition Request

After receiving the VU Status Acquisition Request, the CU sends the VU status of the specified DUa to the host via Answer.

(1) Get Command

In case of the VU Status Acquisition Request from the host, refer to the command format table below.

gvust_O_0000_00_NC_00000001_↵

Table 4-63 Command Format

No	item	Description	type	value	value Description	remarks
1.	Command	Command string	string	gvust		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	string	00000000~99999999	Serial number of DUa	DUa Serial Number
				t001~t100	DU topology number	DU Topology
				t0-001~t0-100	CU topology number -DU topology number	CU Topology -DU Topology
				t1-001~t1-100		
				t2-001~t2-100		
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gvust_0000_00_NC_00000001,1,0,0,0,0,0,0,0,0,0,0,0_↓

Table 4-64 Command Format

No	item	Description	type	value	value Description	remarks
1.	Command	Command string	string	gvust		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Serial	Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number
	Connect	VU Connect Status	string	0	Not connected	
				1	Connected	
	Button					
	Button 0	Button 0	string	0	Release	
				1	Push	
	Button 1	Button 1	string			Same as Button 0
	Button 2	Button 2	string			Same as Button 0
	Button 3	Button 3	string			Same as Button 0
	Button 4	Button 4	string			Same as Button 0
	LED					
	LED 0	LED 0	string	0	OFF	
				1	ON	
				2	Flash1	
				5	Blink1	
	LED 1	LED 1	string			Same as LED 0
	LED 2	LED 2	string			Same as LED 0
	LED 3	LED 3	string			Same as LED 0
	LED 4	LED 4	string			Same as LED 0
	NFC Power		string			
Power	NFC Power Status	string	0	Power Off		
			1	Power On		
LED	NFC LED Status	string			Same as LED 0	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.43DU Common Setting Change Request

After receiving the DU Common Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the DU Common Setting Change Request from the host, refer to the command format table below.

sduco_S_0000_00_NC_FF0000,FF0000,0,0,0_↓

Table 4-65 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sduco		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		Some parameters can be omitted.
	Talk LED Color					
	Talk On	Talk On color	string	000000 to FFFFFFFF	RRGGBB	
	Queuing	Queuing color	string	000000 to FFFFFFFF	RRGGBB	
	Monitor Channel Select Lock	DU monitor select button lock status	string	0 1	Not lock Lock	
	IU Self Mute	Self Mute for non-Priority IU	string	0 1	Not mute Mute	
	BNE	BNE	string	0 1 2	OFF BNE Talk ON BNE Talk ON/OFF	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.44DU Common Setting Acquisition Request

After receiving the **DU Common Setting Acquisition Request**, the CU sends the DU common settings to the host via Answer.

(1) Get Command

In case of the **DU Common Setting Acquisition Request** from the host, refer to the command format table below.

gduco_O_0000_00_NC_↵

Table 4-66 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gduco		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gduco_0000_00_NC_20,1,FF0000,FF0000,0,0,0,0_↓

Table 4-67 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gduco		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Speaker Level	Speaker level	string	0~20		
	Voice Detection Threshold	Voice detection threshold	string	1	-5	
				2	-4	
				3	-3	
				4	-2	
				5	-1	
				6	0	
				7	1	
				8	2	
				9	3	
				10	4	
				11	5	
	Talk LED Color					
	Talk On	Talk On color	string	000000 to FFFFFFFF	RRGGBB	
	Queuing	Queuing color	string	000000 to FFFFFFFF	RRGGBB	
	Monitor Channel Select Lock	DU monitor select button lock status	string	0	Not lock	
				1	Lock	
	Auto Relative to Mic 2 Input	Auto Relative to Mic 2 Input	string	0	OFF	
				1	ON	
IU Self Mute	Self mute for non-Priority IU	string	0	Not mute		
			1	Mute		
BNE	BNE	string	0	OFF		
			1	BNE Talk ON		
			2	BNE Talk ON/OFF		
6.	End Character	Message end character	binary	0x0d	CR	

4.2.45 Voice Detection Threshold Setting Change Request

After receiving the Voice Detection Threshold Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Voice Detection Threshold Setting Change Request from the host, refer to the command format table below.

svdet_S_0000_00_NC_1,0_↵

Table 4-68 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	svdet		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters can be omitted.
	Voice Detection Threshold	Voice detection threshold	string	1	-5	
				2	-4	
				3	-3	
				4	-2	
				5	-1	
				6	0	
				7	1	
				8	2	
				9	3	
				10	4	
				11	5	
	Auto Relative to Mic 2 Input	Auto Relative to Mic 2 Input	string	0	OFF	
				1	ON	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.46 Speaker Level Setting Change Request

After receiving the Speaker Level Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Speaker Level Setting Change Request from the host, refer to the command format table below.

sspkv_S_0000_00_NC_20_↵

Table 4-69 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sspkv		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Speaker Level	Speaker level	string	0~20		Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.47INT50 Common Setting Change Request

After receiving the INT50 Common Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the INT50 Common Setting Change Request from the host, refer to the command format table below.

sintc_S_0000_00_NC_0,1,"Language1","Language2","Language3",0_↵

Table 4-70 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	sintc			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter	-	-		Some parameters can be omitted.	
	Interpretation Mode	Interpretation mode	string	0	2-language standard interpretation		
				1	3-language standard interpretation		
	Interlock	Interlock setting	string	0	No Interlock		
				1	Interlock		
				2	Combine		
	Language Name						
	Group 1	Language name 1	char	"	Beginning of character string		
				string	ASCII	15 characters	To contain double quotation marks ("), specify them in succession like "".
				char	"	End of character string	
	Group 2	Language name 2	string			Same as Group 1	
Group 3	Language name 3	string			Same as Group 1		
Easy Mode	Easy Mode	string	0	Off			
			1	On			
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.48 INT50 Common Setting Acquisition Request

After receiving the INT50 Common Setting Acquisition Request, the CU sends the DU common settings to the host via Answer.

(1) Get Command

In case of the INT50 Common Setting Acquisition Request from the host, refer to the command format table below.

gintc_O_0000_00_NC_↵

Table 4-71 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gintc		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gintc_0000_00_NC_0,1,"Language1","Language2","Language3",0_↵

Table 4-72 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gintc			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter	-	-		Some parameters can be omitted.	
		Interpretation Mode	Interpretation mode	string	0	2-language standard interpretation	
					1	3-language standard interpretation	
	Interlock	Interlock setting	string	0	No Interlock		
				1	Interlock		
				2	Combine		
	Language Name						
	Group 1	Language name 1	char	"	Beginning of character string		
				string	ASCII	15 characters	To contain double quotation marks ("), specify them in succession like "".
				char	"	End of character string	
	Group 2	Language name 2	string			Same as Group 1	
Group 3	Language name 3	string			Same as Group 1		
Easy Mode	Easy Mode	string	0	Off			
			1	On			
6.	End Character	Message end character	binary	0x0d	CR		

4.2.49 IRDU Common Setting Change Request

After receiving the IRDU Common Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the IRDU Common Setting Change Request from the host, refer to the command format table below.

sirco_S_0000_00_NC_FF0000,FF0000,FF0000,FF0000,0,0_↵

Table 4-73 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sirco		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		Some parameters can be omitted.
	Multi Function LED Color					
	Talk On	Talk On color	string	1~10	Palette index	
	Queuing	Queuing color	string	1~10	Palette index	
	Cut/Mute	Cut/Mute color	string	1~10	Palette index	
	Permit Next	Permit Next color	string	1~10	Palette index	
	Battery Low LED Blink 1	Battery 1 Low LED Blink	string	0	Not blink	
				1	Blink	
	Battery Low LED Blink 2	Battery 2 Low LED Blink	string	0	Not blink	
				1	Blink	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.50 IRDU Common Setting Acquisition Request

After receiving the **IRDU Common Setting Acquisition Request**, the CU sends the DU common settings to the host via Answer.

(1) Get Command

In case of the **IRDU Common Setting Acquisition Request** from the host, refer to the command format table below.

girco_O_0000_00_NC_↵

Table 4-74 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	girco		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

girco_0000_00_NC_FF0000,FF0000,FF0000,FF0000,0,0_↵

Table 4-75 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gduco			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter					
		Multi Function LED Color					
		Talk On	Talk On color	string	1~10	Palette index	
		Queuing	Queuing color	string	1~10	Palette index	
		Cut/Mute	Cut/Mute color	string	1~10	Palette index	
		Permit Next	Permit Next color	string	1~10	Palette index	
		Battery Low LED Blink 1	Battery 1 Low LED Blink	string	0	Not blink	
					1	Blink	
		Battery Low LED Blink 2	Battery 2 Low LED Blink	string	0	Not blink	
					1	Blink	
6.	End Character	Message end character	binary	0x0d	CR		

4.2.51 Recording Setting Change Request

After receiving the Recording Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Recording Setting Change Request from the host, refer to the command format table below.

sreco_S_0000_00_NC_0,192,4,2,1,2,3,4,"atuc-50"120,1_↓

Table 4-76 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	sreco			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter	-	-		Some parameters can be omitted.	
	Record File Format	Recording format	string	0	WAVE format		
				1	MP3 format		
	Recording Quality (MP3)	Bit rate	string	64	64kbps		
				128	128kbps		
				192	192kbps		
				256	256kbps		
				320	320kbps		
	Recording Channels						
	WAVE	Number of channels (WAVE)	string	1~4			
	MP3	Number of channels (MP3)	string	1~2			
	Rec Source						
	Track 1	Selection source 1	string	0	Floor		
				1	Group 0		
				2	Group 1		
				3	Group 2		
				4	Group 3		
				5	Language 1		
				6	Language 2		
				7	Language 3		
8				Interpretation Return 1			
9				Interpretation Return 2			
10				Mic/Line 1			
11				Mic/Line 2			
12	Mic/Line 1&2 Mix						
Track 2	Selection source 2	string				Same as Track 1	
Track 3	Selection source 3	string				Same as Track 1	
Track 4	Selection source 4	string				Same as Track 1	
Rec File Name Prefix	File name prefix	char	"	Beginning of character string			
			string	ASCII code		Non-allowed file name characters are unacceptable. To contain double quotation marks ("), specify them in	

No	Item	Description	Type	Value	Value Description	Remarks
						succession like "".
			char	"	End of character string	
	Auto Track	Automatic division	string	0,15,30,60,120	Minutes	
	Reserved			0	Reserved	
				1	Reserved	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.52 Recording Setting Acquisition Request

After receiving the Recording Setting Acquisition Request, the CU sends the DU common settings to the host via Answer.

(1) Get Command

In case of the Recording Setting Acquisition Request from the host, refer to the command format table below.

greco_O_0000_00_NC_↵

Table 4-77 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	greco		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

greco_0000_00_NC_0,192,4,2,1,2,3,4,"atuc-50"120,1_↵

Table 4-78 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	greco			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter	-	-			
	Record File Format	Recording format	string	0	WAVE format		
				1	MP3 format		
	Recording Quality (MP3)	Bit rate	string	64	64kbps		
				128	128kbps		
				192	192kbps		
				256	256kbps		
				320	320kbps		
	Recording Channels						
	WAVE	Number of channels (WAVE)	string	1~4			
	MP3	Number of channels (MP3)	string	1~2			
	Rec Source						
	Track 1	Selection source 1	string	0	Floor		
				1	Group 0		
				2	Group 1		
				3	Group 2		
				4	Group 3		
				5	Language 1		
				6	Language 2		
				7	Language 3		
				8	Interpretation Return 1		
				9	Interpretation Return 2		
				10	Mic/Line 1		
				11	Mic/Line 2		
	12	Mic/Line 1&2 Mix					
	Track 2	Selection source 2	string				Same as Track 1
	Track 3	Selection source 3	string				Same as Track 1
Track 4	Selection source 4	string				Same as Track 1	
Rec File Name Prefix	File name prefix	char	"	Beginning of character string			
		string	ASCII code			Non-allowed file name characters are unacceptable. To contain double quotation marks ("), specify them in succession like "".	
		char	"	End of character string			
Auto Track	Automatic division	string	0,15,30,60,120	Minutes			
Reserved			0	Reserved			
			1	Reserved			
6.	End Character	Message end character	binary	0x0d	CR		

4.2.53 Talk Off Audio Setting Change Request

After receiving the Talk Off Audio Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Talk Off Audio Setting Change Request from the host, refer to the command format table below.

sflor_S_0000_00_NC_0,0_↵

Table 4-79 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sflor		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		Some parameters can be omitted.
	Sound		string	0	Off	
				1	Mic/Line 2	
				2	Chime	Available only for IRCU. An error occurs in the 50CU as this sound cannot be used.
				3	Pink Noise	
Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.54 Talk Off Audio Setting Acquisition Request

After receiving the Talk Off Audio Setting Acquisition Request, the CU sends the Talk Off audio settings to the host via Answer.

(1) Get Command

In case of the Talk Off Audio Setting Acquisition Request from the host, refer to the command format table below.

gflor_O_0000_00_NC_↓

Table 4-80 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gflor		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gflor_0000_00_NC_0,0_↓

Table 4-81 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gflor			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter	-	-			
				Sound	0	Off	
					1	Mic/Line 2	
					2	Chime	IRCU only
	3	Pink Noise					
Level	Level	string	0~511	-∞, -120dB~+10dB	See 6.1 Fader Table.		
6.	End Character	Message end character	binary	0x0d	CR		

4.2.55 Conference Setting Change Request

After receiving the Conference Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Conference Setting Change Request from the host, refer to the command format table below.

sconf_S_0000_00_NC_2,60,10,150,1,2,2,2,6000_↓

Table 4-82 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	sconf			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter	-	-		Some parameters can be omitted.	
	Conference Mode	Conference mode	string	0	Free Talk		
				1	Request Talk		
				2	Full Remote		
	Auto Mic Off	Auto Mic Off	string	0,5,10,15,20,25,30,35,40,45,50,55,60	Seconds		
	Number of Open Mics	Number of open microphones	string	1~10	Number of microphones		
	Maximum in Queue	Maximum number of requests that can be accepted	string	0~150	Number of DUs		
	Priority Cut/Mute	Priority Cut/Mute	string	0	Cut		
				1	Mute		
	Override Mode						
	Free Talk	Free talk mode	string	0	No Override		
				1	FIFO		
				2	LIFO		
	Request Talk	Request talk mode	string	1	FIFO		
2				LIFO			
Full Remote	Full remote mode	string			Same as Request Talk		
Mic on Hold Time	Mic on Hold Time	string	500,1000,1500,2000,2500,3000,3500,4000,4500,5000,5500,6000	msec			
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.56 Conference Setting Acquisition Request

After receiving the Conference Setting Acquisition Request, the CU sends the conference settings to the host via Answer.

(1) Get Command

In case of the Conference Setting Acquisition Request from the host, refer to the command format table below.

gconf_O_0000_00_NC_↵

Table 4-83 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gconf		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gconf_0000_00_NC_2,60,10,150,1,2,2,2,6000_↵

Table 4-84 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gconf			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC	No divided message		
5.	Parameter	Parameter	-	-			
	Conference Mode	Conference mode	string	0	Free Talk		
				1	Request Talk		
				2	Full Remote		
	Auto Mic Off	Auto Mic Off	string	0,5,10,15,20,25,30,35,40,45,50,55,60	Seconds		
	Number of Open Mics	Number of open microphones	string	1~10	Number of microphones		
	Maximum in Queue	Maximum number of requests that can be accepted	string	0~150	Number of DUs		
	Priority Cut/Mute	Priority Cut/Mute	string	0	Cut		
				1	Mute		
	Override Mode						
	Free Talk	Free talk mode	string	0	No Override		
				1	FIFO		
				2	LIFO		
	Request Talk	Request talk mode	string	1	FIFO		
2				LIFO			
Full Remote	Full remote mode	string			Same as Request Talk		
Mic On Hold Time	Mic On Hold Time	string	500,1000,1500,2000,2500,3000,3500,4000,4500,5000,5500,6000	msec			
6.	End Character	Message end character	binary	0x0d	CR		

4.2.57DU Status Acquisition Request

After receiving the DU Status Acquisition Request, the CU sends the DU information to the host via Answer.

(1) Get Command

In case of the DU Status Acquisition Request from the host, refer to the command format table below.

- (all)

gdust_O_0000_00_NC_␣

gdust_O_0000_00_NC_,,,1_␣

- (single)

gdust_O_0000_00_NC_12345678,0,,␣

Table 4-85 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gdust		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Serial number/device ID	string	Not specified	All units are obtained. *Spaces before and after are required even when not specified.	
				00000000~99999999	Serial number	When Unit Type is other than 3
				t001~t100	DU topology number	
				t0-001~t0-100	CU topology number	
				t1-001~t1-100	-DU topology number	
				t2-001~t2-100		
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	Required only for INT
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
	2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3
				1	Second talker	First talker when omitted
	Battery	Battery status acquisition	string	0	Does not add the battery status to Answer.	Available only when Unit Type is 3 and 2 Speaker is 0 (First talker)
1				Add the battery status to Answer.	Does not add when omitted	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

- (all)

gdust_0000_00_CS_00000001,"duname1",1,1,1,1,1,1,1,1,1,40,1,1,480,56,30,2,480,56,30,2,480,56,30,2,1,2,F00000,800000,1,01.00.00,1,0,1,0,0,0,0,0,0,0_↵

gdust_0000_00_CM_00000002,"duname2",0,1,1,1,1,1,1,1,1,40,1,1,480,56,30,2,480,56,30,2,480,56,30,2,1,2,F00000,800000,1,01.00.00,1,0,2,0,0,0,0,0,0,0_↵

⋮

gdust_0000_00_CM_00000149,"duname49",0,1,1,1,1,1,1,1,1,40,1,1,480,56,30,2,480,56,30,2,480,56,30,2,1,2,F00000,800000,1,01.00.00,1,2,49,0,0,0,0,0,0,0_↵

gdust_0000_00_CE_00000150,"duname50",0,1,1,1,1,1,1,1,1,40,1,1,480,56,30,2,480,56,30,2,480,56,30,2,1,2,F00000,800000,1,01.00.00,1,2,50,0,0,0,0,0,0,0_↵

- (single)

gdust_0000_00_NC_12345678,"duname50",0,1,1,1,1,1,1,1,1,40,1,1,480,56,30,2,480,56,30,2,480,56,30,2,1,2,F00000,800000,1,01.00.00,1,2,50,0,0,0,0,0,0,0_↵

Table 4-86 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gdust			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message		
5.	Parameter	Parameter	-	-			
	Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3	
				00000001~00000200	Device ID	Available when Unit Type is 3	
	Delegate Name	Name	char	"	Beginning of character string		
				string	UTF-8	10 characters	To contain double quotation marks ("), specify them in succession like "".
				char	"	End of character string	
	Priority						
	Priority	Priority	string	0	Off		
				1	On		
	Can Cut/Mute	Audio mutable	string	0	Off		
				1	On		
	Can be Cut/Muted	Audio mute target	string	0	Off		
				1	On		
	Audio Group Assign						
	Group 0	Group 0 assignment	string	0	Not assign		
				1	Assign		
	Group 1	Group 1 assignment	string			Same as Group 0	
	Group 2	Group 2 assignment	string			Same as Group 0	
	Group 3	Group 3 assignment	string			Same as Group 0	
	Mic Setting						
	Mic On Trigger Mode	Mic On Trigger Mode	string	0	Button		
				1	Voice		
				2	Push to Talk		
	Phantom Power	Phantom Power	string	0	Off		
				1	On		
	Gain	Input Gain	string	1~41	-20dB~20dB		
	AGC	AGC	string	0	Off		
1				On			
Interpretation Language Pattern	Interpretation language pattern	string	1	L1 -> L2			
			2	L2 -> L1			
			3	L2 <-> L1			
			4	L1 -> L3			
			5	L3 -> L1			
			6	L3 <-> L1			
			7	L2 -> L3			
			8	L3 -> L2			
			9	L3 <-> L2			
Mic Setting(EQ Library)							
EQ Library No	EQ Library No	string	0~9	0 to 14: WR setting value 15: EQ library #1~#3 setting value			
EQ Library Band #1	EQ 1						
Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.		

No	Item	Description	Type	Value	Value Description	Remarks
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0	LPF/HPF	
				1	LSH/HSH	
				2	PEQ	
	EQ Library Band #2	EQ 2				Same as EQ Library Band #1
	EQ Library Band #3	EQ 3				Same as EQ Library Band #1
Speaker Setting						
	Speaker	Speaker enable/disable	string	0	Off	
				1	On	
	Mode When Talk On	Speaker output during Talk On	string	0	Off	
				1	On	
				2	Attenuation	
Rear LED Setting When Unit Type is other than 3						
	Talk On/Queuing	Talk On color	string	000000 to FFFFFFFF	RRGGBB	
	Talk On/Queuing (Dimmer)	Dimmer On color	string	000000 to FFFFFFFF	RRGGBB	
	Talk Off	Dimmer enable/disable	string	0	Off	
				1	Dimmer On	
	Version	Version	string	XX.XX.XX	Version	
	Connect Status	Connection status	string	0	Disconnected	
				1	Connected	
Topology When Unit Type is other than 3						
	CU Number	CU topology number	string	0~2	Topology number of CU connected from DU	Disabled for unconnected DU topology
	DU Number	DU topology number	string	1~150	DU topology number	Disabled for unconnected DU topology
Status						
	Talk	Talking	string	0	Off	
				1	On	
	Wait	Waiting	string	0	Off	
				1	On	
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
	Monitor Channel	Default monitor channel	string	0	Floor	
				1	Language 1	
				2	Language 2	
				3	Language 3	
	Slot	Slot number used during Talk On	string	0	No slot number	When Talk is 0
				1~10	Slot number	When Talk is 1
	Enabled	Rear LED Setting Enable/disable	string	0	Disable	
				1	Enable	
	Boot Up Talk On	Automatically Talk On at boot	string	0	Off	Priority DU only
				1	On	
IRDU Setting When Unit Type is 3						
	Rear LED Setting					
	Talk On/Queuing	Talk On color	string	1~10	Palette index	

No	Item	Description	Type	Value	Value Description	Remarks
	Talk On/Queuing(Dimmer)	Dimmer On color	string	1~10	Palette index	
		Dimmer enable/disable	string	0 1	Off Dimmer On	
	Delegate Name 2	Name 2	char	"	Beginning of character string	
			string	UTF-8	10 characters	To contain double quotation marks ("), specify them in succession like "".
			char	"	End of character string	
	2 Speaker Mode	2 Speakers Mode	string	0	Off	
				1	On	Can be set On when Priority is Off
	Multi Function(Button)	Multi Function Button (Left) assignment	string	0	Cut/Mute	
				1	Permit Next	
	Multi Function(Voice)	Multi Function Voice (Left) assignment	string	0	Cut/Mute	
				1	Permit Next	
	Serial	Serial number	string	00000000~99999999	Serial number	
	2 Speaker	Second talker	string	0	First talker	
				1	Second talker	
	Battery1	Battery1 status	string	0	Enough	Only when Get Command Battery is 1
1				Low		
2				No battery		
Battery2	Battery2 status				Same as Battery1	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.57.1 List of Valid Parameters for Each Unit Type

See 5.2.3.

4.2.58DU Talk Status Acquisition Request

After receiving the DU Talk Status Acquisition Request, the CU sends the DU Talk status to the host via Answer.

(1) Get Command

In case of the DU Talk Status Acquisition Request from the host, refer to the command format table below.

- (all)

gtalk_O_0000_00_NC_↓

- (single)

gtalk_O_0000_00_NC_12345678,0,↓

Table 4-87 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gtalk		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number/device ID	string	Not specified	All units are obtained. *Spaces before and after are required even when not specified.	
				00000000~99999999	Serial number	When Unit Type is other than 3
				t001~t100	DU topology number	
				t0-001~t0-100	CU topology number	
				t1-001~t1-100	-DU topology number	
				t2-001~t2-100		
				00000001~00000200	Device ID	When Unit Type is 3
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	Required only for INT
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
	2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3
				1	Second talker	First talker when omitted
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

● (all)

gtalk_0000_00_CS_00000001,0,0,0,0,↵

gtalk_0000_00_CM_00000002,0,0,0,0,↵

⋮

gtalk_0000_00_CM_00000149,0,0,0,0,↵

gtalk_0000_00_CE_00000150,0,0,0,0,↵

● (single)

gtalk_0000_00_NC_12345678,0,0,0,0,↵

Table 4-88 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	gtalk			
2.	Model ID	Not used	string	0000	Not used		
3.	Unit No	Not used	string	00	Not used		
4.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message		
5.	Parameter	Parameter					
	Serial	Serial number/device ID	string	00000000~99999999	Serial number of DU	When Unit Type is other than 3	
				00000001~00000200	Device ID	When Unit Type is 3	
	Status						
	Talk	Talking	string	0	Off		
				1	On		
	Wait	Waiting	string	0	Off		
				1	On		
	Slot	Slot number used during Talk On	string	0	No slot number	When Talk is 0	
				1~10	Slot number	When Talk is 1	
	Unit Type	Unit type	string	0	ATUC-50DU		
				1	ATUC-50INT		
				2	ATUC-50IU		
				3	ATUC-IRDU		
4				ATUC-50DUa			
2 Speaker	Second talker	string	0	First talker	When Unit Type is 3		
			1	Second talker			
6.	End Character	Message end character	binary	0x0d	CR		

4.2.59DU Individual Setting Deletion Request

After receiving the DU Individual Setting Deletion Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the DU Individual Setting Deletion Request from the host, refer to the command format table below.

deldu_S_0000_00_NC_12345678,0_↵

Table 4-89 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	deldu		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3
				00000001~00000200	Device ID	When Unit Type is 3
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	Required only for INT
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.60DU Identify Request

After receiving the DU Identify Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the DU Identify Request from the host, refer to the command format table below.

srcdu_S_0000_00_NC_12345678,1,0_↵

Table 4-90 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	srcdu		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3
				t001~t100	DU topology number	
				t0-001~t0-100	CU topology number	
				t1-001~t1-100	-DU topology number	
				t2-001~t2-100		
				00000001~00000200	Device ID	When Unit Type is 3
	Start	Start/stop	string	0	Stop blinking	Required
				1	Start blinking	
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	Required only for INT
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.61CU Identify Request

After receiving the CU Identify Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the CU Identify Request from the host, refer to the command format table below.

srccu_S_0000_00_NC_↓

Table 4-91 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	srccu		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.62Talk Off Request

After receiving the Talk Off Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Talk Off Request from the host, refer to the command format table below.

takof_S_0000_00_NC_0,␣

takof_S_0000_00_NC_1,12345678,0,␣

Table 4-92 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	takof			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
	Mode	Select/Next	string	0	All	Required	
				1	Selected		
	Serial	Serial number/device ID	string	Not specified	When Mode is 0		
				00000000~99999999	Serial number		When Unit Type is other than 3
				t001~t100	DU topology number		
				t0-001~t0-100	CU topology number		
				t1-001~t1-100	-DU topology number		
	t2-001~t2-100						
				00000001~00000200	Device ID	When Unit Type is 3	
Unit Type	Unit type	string	0	ATUC-50DU			
			1	ATUC-50INT		Required only for INT	
			2	ATUC-50IU			
			3	ATUC-IRDU			
			4	ATUC-50DUa			
2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3		
			1	Second talker	First talker when omitted		
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.63 Request Talk Request

After receiving the Request Talk Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Request Talk Request from the host, refer to the command format table below.

reqon_S_0000_00_NC_1,12345678,0,↵

Table 4-93 Command Format

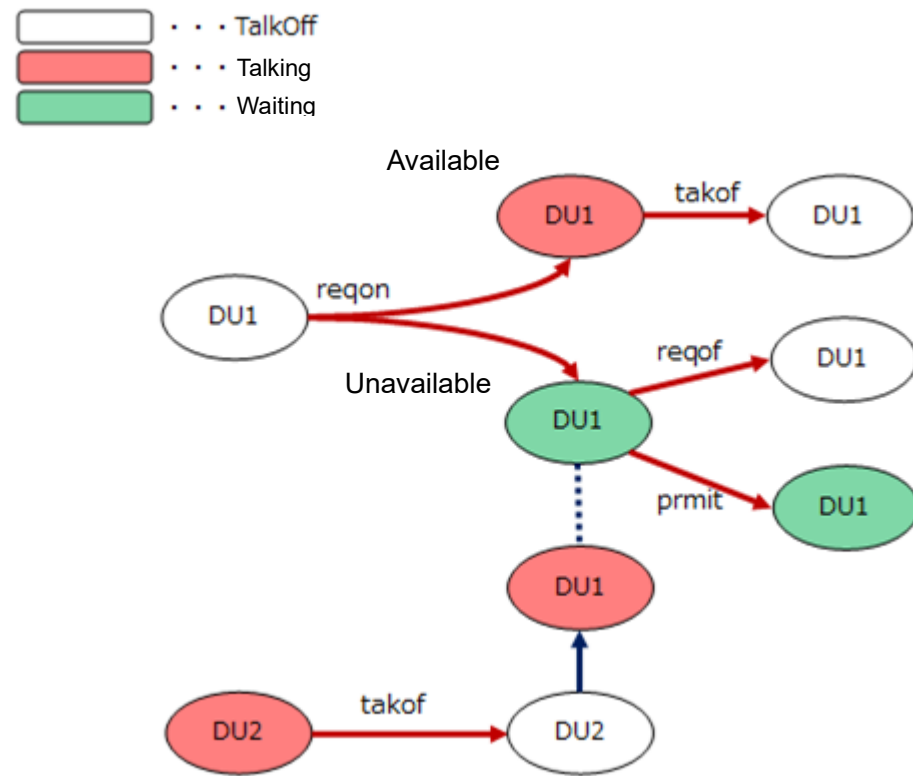
No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	reqon			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
		Mode	Select/Next	string	1	Selected	Required
		Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3
					t001~t100	DU topology number	
					t0-001~t0-100	CU topology number	
					t1-001~t1-100	-DU topology number	
					t2-001~t2-100	-DU topology number	
			00000001~00000200	Device ID	When Unit Type is 3		
		Unit Type	Unit type	string	0	ATUC-50DU	
					1	ATUC-50INT	Required only for INT
					2	ATUC-50IU	
					3	ATUC-IRDU	
					4	ATUC-50DUa	
2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3		
			1	Second talker	First talker when omitted		
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.63.1 Talk Status Transition

The following figure shows the DU status transition when each of the Talk Off Request, Request Talk Request, and Request Talk Deletion Request (described in the next section) commands is executed.



A DU in the Waiting mode due to its unavailability cannot be changed to the Talking mode with prmit.

Figure 4-9 Talk Status Transition Diagram

4.2.64 Request Talk Deletion Request

After receiving the Request Talk Deletion Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Request Talk Deletion Request from the host, refer to the command format table below.

reqof_S_0000_00_NC_0,␣

reqof_S_0000_00_NC_1,12345678,0,␣

Table 4-94 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	reqof			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
	Mode	Select/Next	string	0	All	Required	
				1	Selected		
	Serial	Serial number/device ID	string	Not specified	When Mode is 0		
				00000000~99999999	Serial number		When Unit Type is other than 3
				t001~t100	DU topology number		
				t0-001~t0-100	CU topology number		
				t1-001~t1-100	-DU topology number		
				t2-001~t2-100			
				00000001~00000200	Device ID	When Unit Type is 3	
	Unit Type	Unit type	string	0	ATUC-50DU		
				1	ATUC-50INT	Required only for INT	
2				ATUC-50IU			
3				ATUC-IRDU			
4				ATUC-50DUa			
2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3		
			1	Second talker	First talker when omitted		
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.65 Talk Permission Request

After receiving the Talk Permission Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Talk Permission Request from the host, refer to the command format table below.

prmit_S_0000_00_NC_1,12345678,0_↵

Table 4-95 Command Format

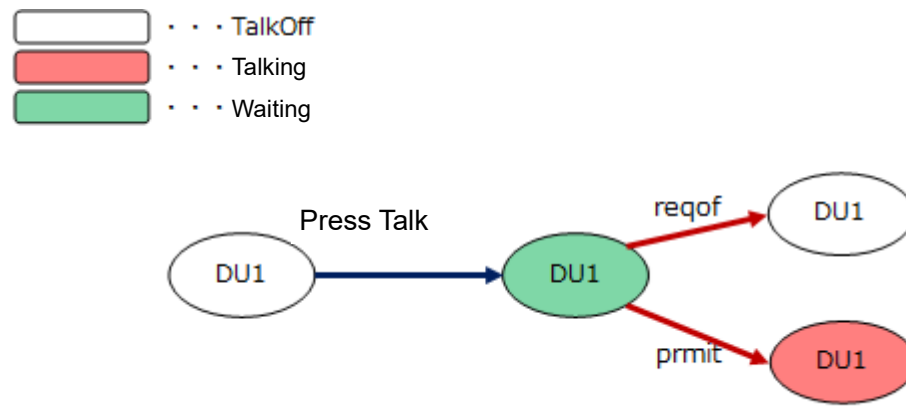
No	Item	Description	Type	Value	Value Description	Remarks		
1.	Command	Command string	string	prmit				
2.	Handshake Select	Sequence execution system	string	S				
3.	Model ID	Not used	string	0000	Not used			
4.	Unit No	Not used	string	00	Not used			
5.	Continue Select	Divided message system	string	NC	No divided message			
6.	Parameter	Parameter						
		Mode	Select/Next	string	0	Next	Required	
					1	Selected		
		Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3	
					t001~t100	DU topology number		
					t0-001~t0-100	CU topology number		
					t1-001~t1-100	-DU topology number		
					t2-001~t2-100			
		Unit Type	Unit type	string	00000001~00000200	Device ID	When Unit Type is 3	
					0	ATUC-50DU		
					1	ATUC-50INT		Required only for INT
					2	ATUC-50IU		
3	ATUC-IRDU							
2 Speaker	Second talker	string	0	First talker	Available only when Unit Type is 3 First talker when omitted			
			1	Second talker				
7.	End Character	Message end character	binary	0x0d	CR			

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.65.1 Talk Status Transition

The following figure shows the DU status transition when the Talk Permission Request command is executed.



In the Request Talk mode, a DU in the Waiting mode set by pressing the Talk button can be changed to the Talking mode with prmit.

Figure 4-10 Talk Status Transition Diagram

4.2.66Talk Cancel Request

After receiving the Talk Cancel Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Talk Cancel Request from the host, refer to the command format table below.

pundo_S_0000_00_NC_↵

Table 4-96 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	pundo		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.67 SFX Setting Change Request

After receiving the SFX Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the SFX Setting Change Request from the host, refer to the command format table below.

sseff_S_0000_00_NC_3,"sfx01.wav","SFX01"↵

Table 4-97 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Command	Command string	string	sseff			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter				Some parameters but Kind can be omitted.	
	Kind	SFX 1~3	string	1~3	Distinction between SFX 1~3	Required	
	SFX Information						
	Source	Audio file name	char	"	Beginning of character string		
			string	ASCII	File name		Up to 100 characters
			char	"	End of character string		
	Name	Name	char	"	Beginning of character string		
string			UTF-8	Name		To contain double quotation marks ("), specify them in succession like "".	
char			"	End of character string			
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.68 SFX Setting Acquisition Request

After receiving the SFX Setting Acquisition Request, the CU sends the SE settings to the host via Answer.

(1) Get Command

In case of the SFX Setting Acquisition Request from the host, refer to the command format table below.

gseff_O_0000_00_NC_↵

Table 4-98 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gseff		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gseff_0000_00_CS_1,"sfx01.wav","SFX01"↵

gseff_0000_00_CM_2,"sfx02.wav","SFX02"↵

gseff_0000_00_CE_3,"sfx03.wav","SFX03"↵

Table 4-99 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gseff		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Kind	SFX 1~3	string	1~3	Distinction between SFX 1~3	
	SFX Information					
	Source	Audio file name	char	"	Beginning of character string	
			string	ASCII	File name	Up to 100 characters
			char	"	End of character string	
	Name	Name	char	"	Beginning of character string	
string			UTF-8	Name	To contain double quotation marks ("), specify them in succession like "".	
char			"	End of character string		
6.	End Character	Message end character	binary	0x0d	CR	

4.2.69 SFX List Acquisition Request

After receiving the SFX List Acquisition Request, the CU sends the names of audio files (up to 30 files) in the USB to the host via Answer.

(1) Get Command

In case of the SFX List Acquisition Request from the host, refer to the command format table below.

gsels_O_0000_00_NC_↓

Table 4-100 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gsels		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

- Number of files = 0

gsels_0000_00_NC_0_↵

- Number of files = 1

gsels_0000_00_NC_1,"sfx01.wav"↵

- Number of files = 2

gsels_0000_00_CS_1,"sfx01.wav"↵

gsels_0000_00_CE_1,"sfx02.wav"↵

- Number of files = 3 or more

gsels_0000_00_CS_1,"sfx01.wav"↵

gsels_0000_00_CM_1,"sfx02.wav"↵

⋮

gsels_0000_00_CE_1,"sfx03.wav"↵

Table 4-101 Command Format

No	Item	Description	Type	Value	Value Description	Remarks			
1.	Command	Command string	string	gsels					
2.	Model ID	Not used	string	0000	Not used				
3.	Unit No	Not used	string	00	Not used				
4.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message				
5.	Parameter	Parameter							
							Count	Number of valid file names	string
				1	Valid file name	If at least one file exists, be sure to set 1 and send (Continue Select = NC/CS/CM/CE).			
	File	File name	char	"	Beginning of character string				
							string	ASCII	File name
char							"	End of character string	
6.	End Character	Message end character	binary	0x0d	CR				

4.2.70 SFX Play/Stop Request

After receiving the SFX Play/Stop Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the SFX Play/Stop Request from the host, refer to the command format table below.

- Starting playing SFX3

splay_S_0000_00_NC_3,1_↵

- Stopping playing

splay_S_0000_00_NC_,0_↵

For stopping, it stops playing no matter which SFX (1, 2, 3) is currently playing. If you try to stop it although it is not playing, ACK is returned instead of NAK.

Table 4-102 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	splay		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				Some parameters but Kind can be omitted.
	Kind	SFX 1~3	string	1~3	Distinction between SFX 1~3	Required when Action = 1 Disabled (Not required) when Action = 0
	Action	Action	string	0 1	Stop Start	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.71 SFX Playing Level Change Request

After receiving the SFX Playing Level Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the SFX Playing Level Change Request from the host, refer to the command format table below.

spllv_S_0000_00_NC_20_↓

Table 4-103 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	spllv		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Level	Level	string	0~511	-∞, -120dB~+10dB	Required See 6.1 Fader Table.
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.72 Recording Request

After receiving the Recording Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Recording Request from the host, refer to the command format table below.

recmd_S_0000_00_NC_2_↵

Table 4-104 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	recmd		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Action	Action	string	0	Stop	Required
				1	Pause	
				2	Start	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.73 Recording Status Acquisition Request

After receiving the Recording Status Acquisition Request, the CU sends the recording status to the host via Answer.

(1) Get Command

In case of the Recording Status Acquisition Request from the host, refer to the command format table below.

recst_O_0000_00_NC_↵

Table 4-105 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	recst		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

recst_0000_00_NC_2,995959,995959_↵

Table 4-106 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	recst		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Status	Recording status	string	0	Stop	
				1	Pause	
				2	Start	
	Rec Time	Recording elapsed time	string	000000~995959	HHMMSS	Always "000000" when Status is 0
Remain Time	Recording remaining time	string	000000~995959	HHMMSS		
6.	End Character	Message end character	binary	0x0d	CR	

4.2.74 Recording Level Change Request

After receiving the Recording Level Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Recording Level Change Request from the host, refer to the command format table below.

reclv_S_0000_00_NC_20_↵

Table 4-107 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	reclv		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Level	Level	string	0~511	-∞, -120dB~+10dB	Required See 6.1 Fader Table.
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.75 Log Setting Change Request

After receiving the Log Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Log Setting Change Request from the host, refer to the command format table below.

slogg_S_0000_00_NC_1,1_↓

Table 4-108 Command Format

No	Item	Description	Type	Value	Value Description	Remarks					
1.	Command	Command string	string	slogg							
2.	Handshake Select	Sequence execution system	string	S							
3.	Model ID	Not used	string	0000	Not used						
4.	Unit No	Not used	string	00	Not used						
5.	Continue Select	Divided message system	string	NC	No divided message						
6.	Parameter	Parameter				Some parameters can be omitted.					
							Enabled	Log output	string	0	Off
										1	On
							Output Destination	Output destination	string	0	Internal
					1	USB					
7.	End Character	Message end character	binary	0x0d	CR						

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.76 Log Setting Acquisition Request

After receiving the Log Setting Acquisition Request, the CU sends the log settings to the host via Answer.

(1) Get Command

In case of the Log Setting Acquisition Request from the host, refer to the command format table below.

glogg_O_0000_00_NC_↵

Table 4-109 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	glogg		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

glogg_0000_00_NC_1,1_↵

Table 4-110 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	glogg		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter		0	Off	
				1	On	
	Output Destination	Output destination	string	0	Internal	
				1	USB	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.77Preset Call Request

After receiving the Preset Call Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Preset Call Request from the host, refer to the command format table below.

callp_S_0000_00_NC_8_↓

Table 4-111 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	callp		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Bank Number	Bank number	string	1~8	Bank 1~8	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.78Preset Save Request

After receiving the Preset Save Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Preset Save Request from the host, refer to the command format table below.

savep_S_0000_00_NC_8_↵

Table 4-112 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	savep		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Bank Number	Bank number	string	1~8	Bank 1~8	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.79Preset Bank Name Change Request

After receiving the Preset Bank Name Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Preset Bank Name Change Request from the host, refer to the command format table below.

snamb_S_0000_00_NC_8,"BANK08"↵

Table 4-113 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	snamb		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Bank Number	Bank number	string	1~8	Bank 1~8	Required
	Bank Name	Bank name	char	"	Beginning of character string	Required
			string	UTF-8	10 characters	To contain double quotation marks ("), specify them in succession like "".
char	"	End of character string	Required			
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.80Preset Bank Name Acquisition Request

After receiving the Preset Bank Name Acquisition Request, the CU sends the log settings to the host via Answer.

(1) Get Command

In case of the Preset Bank Name Acquisition Request from the host, refer to the command format table below.

gnamb_O_0000_00_NC_↵

Table 4-114 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gnamb		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gnamb_0000_00_CS_1,"BANK01"↵

gnamb_0000_00_CM_2,"BANK02"↵

gnamb_0000_00_CM_3,"BANK03"↵

gnamb_0000_00_CM_4,"BANK04"↵

gnamb_0000_00_CM_5,"BANK05"↵

gnamb_0000_00_CM_6,"BANK06"↵

gnamb_0000_00_CM_7,"BANK07"↵

gnamb_0000_00_CE_8,"BANK08"↵

Table 4-115 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gnamb		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter				
	Bank Number	Bank number	string	1~8	Bank 1~8	Required
	Bank Name	Bank name	char	"	Beginning of character string	Required
			string	UTF-8	10 characters	To contain double quotation marks ("), specify them in succession like "".
char	"	End of character string	Required			
6.	End Character	Message end character	binary	0x0d	CR	

4.2.81 Boot Up Preset Setting Change Request

After receiving the Boot Up Preset Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Boot Up Preset Setting Change Request from the host, refer to the command format table below.

sbtp_r_S_0000_00_NC_0_↵

Table 4-116 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sbtp _r		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	string	0	Not select	Some parameters can be omitted.
				1~8	Bank 1~8	
				Bank Number	Bank number	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.82 Boot Up Preset Setting Acquisition Request

After receiving the Boot Up Preset Setting Acquisition Request, the CU sends the log settings to the host via Answer.

(1) Get Command

In case of the Boot Up Preset Setting Acquisition Request from the host, refer to the command format table below.

gbtpr_O_0000_00_NC_↓

Table 4-117 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gbtpr		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(3) Answer

Refer to the table below for Answer Command format from the CU.

gbtpr_0000_00_NC_1,1_↓

Table 4-118 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gbtpr		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter		0	Not select	
				1~8	Bank 1~8	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.83Preset Call Setting Change Request

After receiving the Preset Call Setting Change Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Preset Call Setting Change Request from the host, refer to the command format table below.

scals_S_0000_00_NC_0_↵

Table 4-119 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	scals		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Mode	Mode	string	0	Topology	Required
				1	Serial number	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.84Preset Call Setting Acquisition Request

After receiving the Preset Call Setting Acquisition Request, the CU sends the preset call settings to the host via Answer.

(1) Get Command

In case of the Preset Call Setting Acquisition Request from the host, refer to the command format table below.

gcals_O_0000_00_NC_↵

Table 4-120 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gcals		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

gcals_0000_00_NC_0_↵

Table 4-121 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	gcals		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC	No divided message	
5.	Parameter	Parameter	-	-		
	Mode	Mode	string	0	Topology	Required
				1	Serial number	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.85 Level Meter Setting Request

After receiving the Level Meter Setting Request, the CU sends the processing results to the host via ACK or NAK.

(1) Get Command

In case of the Level Meter Setting Request from the host, refer to the command format table below.

slvmt_S_0000_00_NC_100_↓

Table 4-122 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	slvmt		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Interval	Notification interval	string	100~	msec	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.86 Level Meter Acquisition Request

After receiving the Level Meter Acquisition Request, the CU sends the log settings to the host via Answer.

(1) Get Command

In case of the Level Meter Acquisition Request from the host, refer to the command format table below.

glvmt_O_0000_00_NC_0_↓

Table 4-123 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	glvmt		
2.	Handshake Select	Sequence execution system	string	0		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Monitor Point	Monitor point	string	0	Mic/Line 1(Pre)	Required
				1	Mic/Line 2(Pre)	
				2	Aux L	
				3	Aux R	
				4	Aux L/R	
				5	Interpretation Return 1	
				6	Interpretation Return 2	
				7	Mic/Line 1(Post)	
				8	Mic/Line 2(Post)	
				9	Audio Slot 1	
				10	Audio Slot 2	
				11	Audio Slot 3	
				12	Audio Slot 4	
				13	Audio Slot 5	
				14	Audio Slot 6	
				15	Audio Slot 7	
				16	Audio Slot 8	
				17	Audio Slot 9	
				18	Audio Slot 10	
				19	Output 1	
				20	Output 2	
				21	Output 3	
				22	Output 4	
				23	Floor	
				24	Rec	
				25	Gain Reduction	
				26	Interpretation Unit 1	
				27	Interpretation Unit 2	
				28	Interpretation Unit 3	
				29	Interpretation Unit 4	
				30	Interpretation Unit 5	
31	Interpretation Unit 6					
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

glvmt_0000_00_NC_0,10_↵

Table 4-124 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	glvmt		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Monitor Point	Monitor point	string	0~31	Meter number	
	Level	Level	string	0~10	Level	
7.	End Character	Message end character	binary	0x0d	CR	

4.2.87 Date Setting Request

After receiving the Date Setting Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Date Setting Request from the host, refer to the command format table below.

sdate_S_0000_00_NC_20160121000000_↵

Table 4-125 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	sdate		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Date	Timestamp	string	YYYYMMDDHHMMSS	Date (four-digit year)	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.88 File Transfer Request

After receiving the File Transfer Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the File Transfer Request from the host, refer to the command format table below.

upload_S_0000_00_CS_p1_00000400_1024_[binary data]_↵

upload_S_0000_00_CM_p1_00000800_1024_[binary data]_↵

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upload_S_0000_00_CM_p1_00001000_1024_[binary data]_↵

upload_S_0000_00_CE_p1_00001400_256_[binary data]_↵

Table 4-126 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	upload		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message	
6.	Parameter	Parameter				
	Kind	Transfer data type	string	p1~p8	Preset 1~8	Required
				l1~l2	Language file 1~2	
	File Offset	Offset	string	00000000~FFFFFFFF	Specify the offset in the update file with a hexadecimal number. Do not add "0x". A value obtained with ftell (FILE*)	Required
	Size	Size	string	0001~1024	Specify the number of bytes of transfer data with a decimal number.	Required
Data	Transfer data	binary	-	Specify the transfer data with a binary number.	Required	
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.89 File Transfer Cancel Request

After receiving the File Transfer Cancel Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the File Transfer Cancel Request from the host, refer to the command format table below.

ulcan_S_0000_00_NC_p1_↵

Table 4-127 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	ulcan		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Kind	Transfer data type	string	p1~p8 l1~l2	Preset 1~8 Language file 1~2	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.90 Export Request

After receiving the Export Request, the CU sends the processing results to the host via ACK or NAK.

(1) Get Command

In case of the Export Request from the host, refer to the command format table below.

exprt_S_0000_00_NC_p1_↵

Table 4-128 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	exprt		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Kind	Transfer data type	string	p1~p8 l1~l2	Preset 1~8 Language file 1~2	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

exprt_0000_00_CS_p1_00000400_1024_[binary data]_↓

exprt_0000_00_CM_p1_00000800_1024_[binary data]_↓

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·
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exprt_0000_00_CM_p1_00001000_1024_[binary data]_↓

exprt_0000_00_CE_p1_00001400_256_[binary data]_↓

Table 4-129 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	exprt		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message	
6.	Parameter	Parameter				
	Kind	Transfer data type	string	p1~p8	Preset 1~8	Required
				l1~l2	Language file 1~2	
	File Offset	Offset	string	00000000~FFFFFFFF	Specify the offset in the update file with a hexadecimal number. Do not add "0x". A value obtained with ftell (FILE*)	Required
	Size	Size	string	0001~1024	Specify the number of bytes of transfer data with a decimal number.	Required
Data	Transfer data	binary	-	Specify the transfer data with a binary number.	Required	
7.	End Character	Message end character	binary	0x0d	CR	

4.2.91 Import Request

After receiving the Import Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Import Request from the host, refer to the command format table below.

imprt_S_0000_00_NC_p1_↵

Table 4-130 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Command	Command string	string	imprt		
2.	Handshake Select	Sequence execution system	string	S		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Kind	Transfer data type	string	p1~p8 l1~l2	Preset 1~8 Language file 1~2	Required
7.	End Character	Message end character	binary	0x0d	CR	

(2) ACK/NAK

See Factory Default Setting Request (2).

4.2.92 Status Confirmation Notification

The CU sends it to the client. (SOS function)

(1) Request

The command format is shown below.

RQ confm_0000_00_NC_↵

Table 4-131 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Request	RQ	string	RQ		
2.	Command	Command string	string	confm		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-	No parameter	
7.	End Character	Message end character	binary	0x0d	CR	

4.2.93 Battery Status Acquisition Request

After receiving the Battery Status Acquisition Request, the CU sends the IRDU battery level status to the host via Answer.

(1) Get Command

In case of the Battery Status Acquisition Request from the host, refer to the command format table below.

gbatt _ O _ 0000 _ 00 _ NC _ 200 _ ↵

Table 4-132 Command Format

No	item	Description	type	value	value Description	remarks
1.	Command	Command string	string	gbatt		
2.	Handshake Select	Sequence execution system	string	O		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Serial	Serial number/device ID	string	Not specified	The status of all connected IRDUs is obtained. *Spaces before and after are required even when not specified.	
				1~200	Device ID	
7.	End Character	Message end character	binary	0x0d	CR	

(2) Answer

Refer to the table below for Answer Command format from the CU.

- (all)

gbatt_0000_00_CS_3,1,0,0_↵

gbatt_0000_00_CM_3,2,0,0_↵

⋮

gbatt_0000_00_CM_3,199,0,0_↵

gbatt_0000_00_CE_3,200,0,0_↵

- (single)

gbatt_0000_00_NC_3,200,0,0_↵

Table 4-133 Command Format

No	item	Description	type	value	value Description	remarks
1.	Command	Command string	string	gbatt		
2.	Model ID	Not used	string	0000	Not used	
3.	Unit No	Not used	string	00	Not used	
4.	Continue Select	Divided message system	string	NC/CS/CM/CE	Divided message	
5.	Parameter	Parameter				
	Unit Type	Unit type	string	3	ATUC-IRDU	
	Serial	Serial number/device ID	string	1~200	Device ID	
	Battery1	Battery1 status	string	0	Enough	
				1	Low	
2				No battery		
Battery2	Battery2 status				Same as Battery1	
6.	End Character	Message end character	binary	0x0d	CR	

4.2.94 Floor Filter Setting Request

After receiving the Floor Filter Setting Request, the CU sends the processing results to the host via ACK or NAK.

(1) Set Command

In case of the Floor Filter Setting Request from the host, refer to the command format table below.

sfltr_S_0000_00_NC_1_↵

Table 4-134 Command Format

No	item	Description	type	value	value Description	remarks	
1.	Command	Command string	string	sfltr			
2.	Handshake Select	Sequence execution system	string	S			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter				Some parameters can be omitted.	
		Enabled	Filter	string	0		Off
					1		On
7.	End Character	Message end character	binary	0x0d	CR		

(2) ACK/NAK

See Factory Default Setting Request (2).

5 UDP Communications

The information (status change notification) from the CU is sent via UDP protocol.

5.1 Communication Control

For details on the communication control flow, see Chapter 4.1.

5.1.1 Communication Start

The host registers groups to the multicast address.

Table 5-1 Communication Control Parameters

No	Name	Default Setting	Remarks
1.	IP Address	225.000.000.100	Multicast Address
2.	Port No	17000	

5.1.2 Control Sequence

5.1.2.1 Information

If the CU status changes, a status change notification is sent.

<Example> The sequence of conference status notification is shown below.

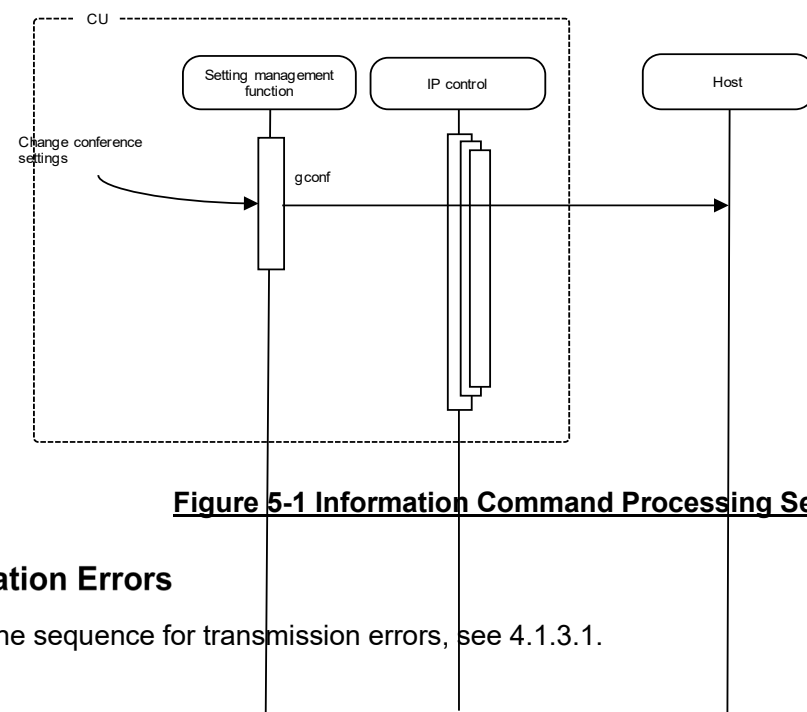


Figure 5-1 Information Command Processing Sequence

5.1.3 Communication Errors

For details on the sequence for transmission errors, see 4.1.3.1.

5.1.4 Communication End

The host can unregister groups at any timing.

No	Item	Description	Type	Value	Value Description	Remarks	
		Port A	Number of units connected to Port A	string	0~50	Number of DUAs	
		Port B	Number of units connected to Port B	string	0~50	Number of DUAs	
		Port C	Number of units connected to Port C	string	0~50	Number of DUAs	
		Port D	Number of units connected to Port D	string	0~50	Number of DUAs	
		Extension1					
		Port A	Number of units connected to Port A	string	0~50	Number of DUAs	
		Port B	Number of units connected to Port B	string	0~50	Number of DUAs	
		Extension2					
		Port A	Number of units connected to Port A	string	0~50	Number of DUAs	
		Port B	Number of units connected to Port B	string	0~50	Number of DUAs	
7.	End Character	Message end character	binary	0x0d	CR		

5.2.2 Conference Status Notification

When the conference status changes, the CU sends a notification.

When IP Control Setting - Notification is set to 0 (Not used) in the network settings (4.2.4), this is not sent.

MD_gconf_0000_00_NC_2,60,10,150,1,2,2,2,6000_↵

Table 5-3 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Modify	MD	string	MD	MD		
2.	Command	Command string	string	gconf			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
	Conference Mode	Conference mode	string	0	Free Talk		
				1	Request Talk		
				2	Full Remote		
	Auto Mic Off	Auto Mic Off	string	0,5,10,15,20,25,30,35,40,45,50,55,60	Seconds		
	Number of Open Mics	Number of open microphones	string	1~10	Number of microphones		
	Maximum in Queue	Maximum number of requests that can be accepted	string	0~150	Number of DUs		
	Priority Cut/Mute	Priority Cut/Mute	string	0	Cut		
				1	Mute		
	Override Mode						
	Free Talk	Free talk mode	string	0	No Override		
				1	FIFO		
				2	LIFO		
	Request Talk	Request talk mode	string	1	FIFO		
				2	LIFO		
Full Remote	Full remote mode	string			Same as Request Talk		
Mic On Hold Time	Mic On Hold Time	string	500,1000,1500,2000,2500,3000,3500,4000,4500,5000,5500,6000	msec			
7.	End Character	Message end character	binary	0x0d	CR		

No	Item	Description	Type	Value	Value Description	Remarks
				3	L2 <-> L1	
				4	L1 -> L3	
				5	L3 -> L1	
				6	L3 <-> L1	
				7	L2 -> L3	
				8	L3 -> L2	
				9	L3 <-> L2	
Mic Setting(EQ Library)						
	EQ Library No	EQ Library No	string	0~9	0 to 14: WR setting value 15: EQ library #1~#3 setting value	
	EQ Library Band #1	EQ 1				
	Frequency	Frequency	string	0~480	20Hz~20kHz	See 6.2 Frequency Table.
	Gain	Gain	string	0~56	-18dB~+10dB	See 6.1 Fader Table.
	Q Value	Q Value	string	0~30	0.3~30	See 6.3 Q Value Table.
	Filter Type	Filter Type	string	0	LPF/HPF	
				1	LSH/HSB	
				2	PEQ	
	EQ Library Band #2	EQ 2				Same as EQ Library Band #1
	EQ Library Band #3	EQ 3				Same as EQ Library Band #1
Speaker Setting						
	Speaker	Speaker enable/disable	string	0	Off	
				1	On	
	Mode When Talk On	Speaker output during Talk On	string	0	Off	
				1	On	
				2	Attenuation	
Rear LED Setting When Unit Type is other than 3						
	Talk On/Queuing	Talk On color	string	000000 to FFFFFFFF	RRGGBB	
	Talk On/Queuing(Dimmer)	Dimmer On color	string	000000 to FFFFFFFF	RRGGBB	
	Talk Off	Dimmer enable/disable	string	0	Off	
				1	Dimmer On	
	Version	Version	string	XX.XX.XX	Version	
	Connect Status	Connection status	string	0	Disconnected	
				1	Connected	
				2	Deleted	Set when DU information is deleted
Topology When Unit Type is other than 3						
	CU Number	CU topology number	string	0~2	Topology number of CU connected from DU	Disabled for unconnected DU topology
	DU Number	DU topology number	string	1~150	DU topology number	Disabled for unconnected DU topology
Status						
	Talk	Talking	string	0	Off	
				1	On	
	Wait	Waiting	string	0	Off	
				1	On	
	Unit Type	Unit type	string	0	ATUC-50DU	
				1	ATUC-50INT	Required only for INT
				2	ATUC-50IU	
				3	ATUC-IRDU	
				4	ATUC-50DUa	
	Monitor Channel	Default monitor channel	string	0	Floor	

No	Item	Description	Type	Value	Value Description	Remarks
				1	Language 1	
				2	Language 2	
				3	Language 3	
	GPI/VU LED					Available when Unit Type is 2 or 4
	GPI 0/VU LED0	GPI 0/VU LED0	string	0~		See Chapter 4.2.34 / 4.2.39.
	GPI 1/VU LED1	GPI 1/VU LED1	string	0~		Same as GPI 0/VU LED0
	GPI 2/VU LED2	GPI 2/VU LED2	string	0~		Same as GPI 0/VU LED0
	GPI 3/VU LED3	GPI 3/VU LED3	string	0~		Same as GPI 0/VU LED0
	GPI 4/VU LED4	GPI 4/VU LED4	string	0~		Same as GPI 0/VU LED0
	GPI 5	GPI 5	string	0~		Same as GPI 0
	GPI 6	GPI 6	string	0~		Same as GPI 0
	GPI 7	GPI 7	string	0~		Same as GPI 0
	GPO					Available when Unit Type is 2
	GPO 0	GPO 0	string	0~		See Chapter 4.2.34.
	GPO 1	GPO 1	string	0~		Same as GPO 0
	GPO 2	GPO 2	string	0~		Same as GPO 0
	GPO 3	GPO 3	string	0~		Same as GPO 0
	GPO 4	GPO 4	string	0~		Same as GPO 0
	GPO 5	GPO 5	string	0~		Same as GPO 0
	GPO 6	GPO 6	string	0~		Same as GPO 0
	GPO 7	GPO 7	string	0~		Same as GPO 0
	Slot	Slot number used during Talk On	string	0	No slot number	When Talk is 0
				1~10	Slot number	Available only when Talk is 1
	Enabled	Rear LED Setting Enable/disable	string	0	Disable	
				1	Enable	
	Boot Up Talk On	Automatically Talk On at boot	string	0	Off	Priority DU only
				1	On	
	IRDU Setting					Available when Unit Type is 3
	Rear LED Setting					
	Talk On/Queuing	Talk On color	string	1~10	Palette index	
	Talk On/Queuing(Dimmer)	Dimmer On color	string	1~10	Palette index	
	Talk Off	Dimmer enable/disable	string	0	Off	
				1	Dimmer On	
	Delegate Name 2	Name 2	char	"	Beginning of character string	
			string	UTF-8	10 characters	To contain double quotation marks ("), specify them in succession like "".
			char	"	End of character string	
	2 Speaker Mode	2 Speakers Mode	string	0	Off	
				1	On	Can be set On when Priority is Off
	Multi Function(Button)	Multi Function Button (Left) assignment	string	0	Cut/Mute	
				1	Permit Next	
	Multi Function(Voice)	Multi Function Voice (Left) assignment	string	0	Cut/Mute	
				1	Permit Next	
	Serial	Serial number	string	00000000~99999999	Serial number	
	2 Speaker	Second talker	string	0	First talker	
				1	Second talker	
7.	End Character	Message end character	binary	0x0d	CR	

List of Valid Parameters for Each Unit Type

No	Parameter	Description	Unit Type			
			ATUC-50DU	ATUC-50INT	ATUC-50IU	ATUC-IRDU
1.	Serial	Serial Number	o	o	o	
2.		Device ID				o
3.	Delegate Name		o	o	o	o
4.	Priority	Priority	o		o	o
5.		Can Cut/Mute	o		o	o
6.		Can be Cut/Muted	o		o	o
7.	Audio Group Assign	Group 0	o		o	o
8.		Group 1	o		o	o
9.		Group 2	o		o	o
10.		Group 3	o		o	o
11.	Mic Setting	Mic On Trigger Mode	o		o	o
12.		Phantom Power	o	o	o	o
13.		Gain	o	o	o	o
14.		AGC	o	o	o	o
15.		EQ Library	o	o	o	o
16.	Interpretation Language Pattern			o		
17.	Speaker Setting	Speaker	o		o	o
18.		Mode When Talk On	o		o	o
19.	Rear LED Setting	Talk On/Queuing	o			
20.		Talk On/Queuing(Dimmer)	o			
21.		Talk Off	o			
22.		Enabled	o			o
23.	Version		o	o	o	o
24.	Connect Status		o	o	o	o
25.	Topology	CU Number	o	o	o	
26.		DU Number	o	o	o	
27.	Status	Talk	o	o	o	o
28.		Wait	o	o	o	o
29.	Monitor Channel					
30.	GPI/VU LED	GPI 0/VU LED0			o	
31.		GPI 1/VU LED1			o	
32.		GPI 2/VU LED2			o	
33.		GPI 3/VU LED3			o	
34.		GPI 4/VU LED4			o	
35.		GPI 5			o	
36.		GPI 6			o	
37.		GPI 7			o	
38.	GPO	GPO 0			o	
39.		GPO 1			o	
40.		GPO 2			o	
41.		GPO 3			o	
42.		GPO 4			o	
43.		GPO 5			o	
44.		GPO 6			o	
45.		GPO 7			o	

No	Parameter	Description	Unit Type			
			ATUC-50DU	ATUC-50INT	ATUC-50IU	ATUC-IRDU
46.	Slot		o	o	o	o
47.	Boot Up Talk On		o		o	o
48.	IRDU Setting	Rear LED Setting	Talk On/Queuing			o
49.			Talk On/Queuing(Dimmer)			o
50.			Talk Off			o
51.		Delegate Name 2			o	
52.		2 Speaker Mode			o	
53.		Multi Function(Button)			o	
54.		Multi Function(Voice)			o	
55.		Serial			o	
56.		2 Speaker			o	

5.2.4 DU Talk Status Notification

When the DU talk status changes, the CU sends a notification.

When IP Control Setting - Notification is set to 0 (Not used) in the network settings (4.2.4), this is not sent.

MD_gtalk_0000_00_NC_12345678,0,0,0,0,0,0,1,0_↵

Table 5-5 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Modify	MD	string	MD	MD		
2.	Command	Command string	string	Talk			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
	Serial	Serial number/device ID	string	00000000~99999999	Serial number	When Unit Type is other than 3	
				00000001~00000200	Device ID	When Unit Type is 3	
	Status						
	Talk	Talking	string	0	Off		
				1	On		
	Wait	Waiting	string	0	Off		
				1	On		
	Cut	Cut state	string	0	Off		
				1	On		
	Mute	Mute state	string	0	Off		
				1	On		
	Slot	Slot number used during Talk On	string	0	No slot number	When Talk is 0	
				1~10	Slot number	When Talk is 1	
	Topology						When Unit Type is other than 3
	CU Number	CU topology number	string	0~2	Topology number of CU connected from DU		
	DU Number	DU topology number	string	1~100	DU topology number		
	Unit Type	Unit type	string	0	ATUC-50DU		
				1	ATUC-50INT	Required only for INT	
				2	ATUC-50IU		
				3	ATUC-IRDU		
4				ATUC-50DUa			
2 Speaker	Second talker	string	0	First talker	When Unit Type is 3		
			1	Second talker			
7.	End Character	Message end character	binary	0x0d	CR		

5.2.5 Connection Status Notification

When the DU connection status changes, the CU sends a notification.

When IP Control Setting - Notification is set to 0 (Not used) in the network settings (4.2.4), this is not sent.

MD_gconn_0000_00_NC_12345678,01.00.00,0,0,1,0_↓

Table 5-6 Command Format

No	Item	Description	Type	Value	Value Description	Remarks	
1.	Modify	MD	string	MD	MD		
2.	Command	Command string	string	gconn			
3.	Model ID	Not used	string	0000	Not used		
4.	Unit No	Not used	string	00	Not used		
5.	Continue Select	Divided message system	string	NC	No divided message		
6.	Parameter	Parameter					
	Serial	Serial number	string	00000000~99999999	Serial number of DU		
	Version	Version	string	XX.XX.XX	Version		
	Connect Status	Connection status	string	0	Disconnected		
				1	Connected		
				2	Deleted	Set when DU information is deleted	
	Topology						
	CU Number	CU topology number	string	0~2	Topology number of CU connected from DU	Disabled for unconnected DU topology	
	DU Number	DU topology number	string	1~150	DU topology number	Disabled for unconnected DU topology	
	Unit Type	Unit type	string	0	ATUC-50DU		
				1	ATUC-50INT	Required only for INT	
				2	ATUC-50IU		
				4	ATUC-50DUa		
7.	End Character	Message end character	binary	0x0d	CR		

5.2.6 Recording Status Notification

When the recording status changes, the CU sends a notification.

When IP Control Setting - Notification is set to 0 (Not used) in the network settings (4.2.4), this is not sent.

MD_recst_0000_00_NC_2,995959,995959_↓

Table 5-7 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	recst		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter				
	Status	Recording status	string	0	Stop	
				1	Pause	
				2	Start	
	Rec Time	Recording elapsed time	string	000000~995959	HHMMSS	Always "000000" when Status is 0
Remain Time	Recording remaining time	string	000000~995959	HHMMSS		
7.	End Character	Message end character	binary	0x0d	CR	

5.2.8 GPI Input Notification

The GPI Input Notification reports GPI 0 to 7 input on any IU.

MD_gcgpi_0000_00_NC_12345678,0,0,0,0,0,0,0,0_↵

Table 5-9 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	gcgpi		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Serial	Serial number	string	00000000~99999999	Serial number of IU	
	GPI					
	GPI 0	GPI 0	string	0	Push	No change when omitted
				1	Release (short hold)	
	GPI 1	GPI 1	string			Same as GPI 0
	GPI 2	GPI 2	string			Same as GPI 0
	GPI 3	GPI 3	string			Same as GPI 0
	GPI 4	GPI 4	string			Same as GPI 0
	GPI 5	GPI 5	string			Same as GPI 0
GPI 6	GPI 6	string			Same as GPI 0	
GPI 7	GPI 7	string			Same as GPI 0	
7.	End Character	Message end character	binary	0x0d	CR	

5.2.9 VU Input Notification

The VU Input Notification reports VU Button 0 to 4 input on any VU.

MD_gcvui_0000_00_NC_12345678,1,1,,,,,↵

Table 5-10 Command Format

No	item	Description	type	value	value Description	remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	gcvui		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Serial	Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number
	Connect	VU Connect Status	string	0	Not connected	
				1	Connected	
	Button					
	Button 0	Button 0	string	1	Push	No change when omitted
				0	Release	Not used
	Button 1	Button 1	string			Same as Button 0
	Button 2	Button 2	string			Same as Button 0
Button 3	Button 3	string			Same as Button 0	
Button 4	Button 4	string			Same as Button 0	
7.	End Character	Message end character	binary	0x0d	CR	

5.2.10 VU NFC Input Notification

The VU NFC Input Notification reports NFCID input on any VU.

MD_gvnfc_0000_00_NC_12345678,0A0B0C0D0E0F1011_↓

Table 5-11 Command Format

No	item	Description	type	value	value Description	remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	gvnfc		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Serial	Serial number	string	00000000~99999999	Serial number of DUa	DUa Serial Number
	NFC ID	NFC ID	string	Optional	NFC ID	Hexadecimal string
7.	End Character	Message end character	binary	0x0d	CR	

5.2.11 Battery Level Alert Notification

The Battery Level Alert Notification reports the battery level of any IRDU.

MD_gbatt_0000_00_NC_3,200,0,0_↓

Table 5-12 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	gbatt		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Unit Type	Unit type	string	3	ATUC-IRDU	
	Serial	Serial number/device ID	string	1~200	Device ID	When Unit Type is 3
	Battery 1	Battery 1 status	string	0	Enough	
				1	Low	
2				No battery		
Battery 2	Battery 2 status				Same as Battery 1	
7.	End Character	Message end character	binary	0x0d	CR	

5.2.12 Error Notification

The Error Notification reports an error that occurs in the CU.
(Currently, IRDU communication errors only)

MD_error_0000_00_NC_A0E,1,3,00000200_↵

Table 5-13 Command Format

No	Item	Description	Type	Value	Value Description	Remarks
1.	Modify	MD	string	MD	MD	
2.	Command	Command string	string	Error		
3.	Model ID	Not used	string	0000	Not used	
4.	Unit No	Not used	string	00	Not used	
5.	Continue Select	Divided message system	string	NC	No divided message	
6.	Parameter	Parameter	-	-		
	Error Code	Error code	string	001~FFF	Error code	A0E: IRDU communication error
	Status	Status	string	0	Error reset	
				1	Error occurrence	
Unit Type	Unit type	string	Omitted	ATUC-50CU		
			2	ATUC-50IU		
			3	ATUC-IRDU		
Serial	Serial number/device ID	string	00000001~00000200	Serial number/device ID		
7.	End Character	Message end character	binary	0x0d	CR	

6 Appendix

6.1 Fader Table

Value	Data[dB]	Value	Data[dB]	Value	Data[dB]	Value	Data[dB]	Value	Data[dB]	Value	Data[dB]	Value	Data[dB]	Value	Data[dB]
0	-Infinity	64	-63.5	128	-36.6	192	-23.8	256	-15.5	320	-9.1	384	-2.7	448	3.7
1	-120.0	65	-63.0	129	-36.4	193	-23.6	257	-15.4	321	-9.0	385	-2.6	449	3.8
2	-118.0	66	-62.5	130	-36.2	194	-23.4	258	-15.3	322	-8.9	386	-2.5	450	3.9
3	-116.0	67	-62.0	131	-36.0	195	-23.2	259	-15.2	323	-8.8	387	-2.4	451	4.0
4	-114.0	68	-61.5	132	-35.8	196	-23.0	260	-15.1	324	-8.7	388	-2.3	452	4.1
5	-112.0	69	-61.0	133	-35.6	197	-22.8	261	-15.0	325	-8.6	389	-2.2	453	4.2
6	-110.0	70	-60.5	134	-35.4	198	-22.6	262	-14.9	326	-8.5	390	-2.1	454	4.3
7	-108.0	71	-60.0	135	-35.2	199	-22.4	263	-14.8	327	-8.4	391	-2.0	455	4.4
8	-106.0	72	-59.5	136	-35.0	200	-22.2	264	-14.7	328	-8.3	392	-1.9	456	4.5
9	-104.0	73	-59.0	137	-34.8	201	-22.0	265	-14.6	329	-8.2	393	-1.8	457	4.6
10	-102.0	74	-58.5	138	-34.6	202	-21.8	266	-14.5	330	-8.1	394	-1.7	458	4.7
11	-100.0	75	-58.0	139	-34.4	203	-21.6	267	-14.4	331	-8.0	395	-1.6	459	4.8
12	-99.0	76	-57.5	140	-34.2	204	-21.4	268	-14.3	332	-7.9	396	-1.5	460	4.9
13	-98.0	77	-57.0	141	-34.0	205	-21.2	269	-14.2	333	-7.8	397	-1.4	461	5.0
14	-97.0	78	-56.5	142	-33.8	206	-21.0	270	-14.1	334	-7.7	398	-1.3	462	5.1
15	-96.0	79	-56.0	143	-33.6	207	-20.8	271	-14.0	335	-7.6	399	-1.2	463	5.2
16	-95.0	80	-55.5	144	-33.4	208	-20.6	272	-13.9	336	-7.5	400	-1.1	464	5.3
17	-94.0	81	-55.0	145	-33.2	209	-20.4	273	-13.8	337	-7.4	401	-1.0	465	5.4
18	-93.0	82	-54.5	146	-33.0	210	-20.2	274	-13.7	338	-7.3	402	-0.9	466	5.5
19	-92.0	83	-54.0	147	-32.8	211	-20.0	275	-13.6	339	-7.2	403	-0.8	467	5.6
20	-91.0	84	-53.5	148	-32.6	212	-19.9	276	-13.5	340	-7.1	404	-0.7	468	5.7
21	-90.0	85	-53.0	149	-32.4	213	-19.8	277	-13.4	341	-7.0	405	-0.6	469	5.8
22	-89.0	86	-52.5	150	-32.2	214	-19.7	278	-13.3	342	-6.9	406	-0.5	470	5.9
23	-88.0	87	-52.0	151	-32.0	215	-19.6	279	-13.2	343	-6.8	407	-0.4	471	6.0
24	-87.0	88	-51.5	152	-31.8	216	-19.5	280	-13.1	344	-6.7	408	-0.3	472	6.1
25	-86.0	89	-51.0	153	-31.6	217	-19.4	281	-13.0	345	-6.6	409	-0.2	473	6.2
26	-85.0	90	-50.5	154	-31.4	218	-19.3	282	-12.9	346	-6.5	410	-0.1	474	6.3
27	-84.0	91	-50.0	155	-31.2	219	-19.2	283	-12.8	347	-6.4	411	0.0	475	6.4
28	-83.0	92	-49.5	156	-31.0	220	-19.1	284	-12.7	348	-6.3	412	0.1	476	6.5
29	-82.0	93	-49.0	157	-30.8	221	-19.0	285	-12.6	349	-6.2	413	0.2	477	6.6
30	-81.0	94	-48.5	158	-30.6	222	-18.9	286	-12.5	350	-6.1	414	0.3	478	6.7
31	-80.0	95	-48.0	159	-30.4	223	-18.8	287	-12.4	351	-6.0	415	0.4	479	6.8
32	-79.5	96	-47.5	160	-30.2	224	-18.7	288	-12.3	352	-5.9	416	0.5	480	6.9
33	-79.0	97	-47.0	161	-30.0	225	-18.6	289	-12.2	353	-5.8	417	0.6	481	7.0
34	-78.5	98	-46.5	162	-29.8	226	-18.5	290	-12.1	354	-5.7	418	0.7	482	7.1
35	-78.0	99	-46.0	163	-29.6	227	-18.4	291	-12.0	355	-5.6	419	0.8	483	7.2
36	-77.5	100	-45.5	164	-29.4	228	-18.3	292	-11.9	356	-5.5	420	0.9	484	7.3
37	-77.0	101	-45.0	165	-29.2	229	-18.2	293	-11.8	357	-5.4	421	1.0	485	7.4
38	-76.5	102	-44.5	166	-29.0	230	-18.1	294	-11.7	358	-5.3	422	1.1	486	7.5
39	-76.0	103	-44.0	167	-28.8	231	-18.0	295	-11.6	359	-5.2	423	1.2	487	7.6
40	-75.5	104	-43.5	168	-28.6	232	-17.9	296	-11.5	360	-5.1	424	1.3	488	7.7
41	-75.0	105	-43.0	169	-28.4	233	-17.8	297	-11.4	361	-5.0	425	1.4	489	7.8
42	-74.5	106	-42.5	170	-28.2	234	-17.7	298	-11.3	362	-4.9	426	1.5	490	7.9
43	-74.0	107	-42.0	171	-28.0	235	-17.6	299	-11.2	363	-4.8	427	1.6	491	8.0
44	-73.5	108	-41.5	172	-27.8	236	-17.5	300	-11.1	364	-4.7	428	1.7	492	8.1
45	-73.0	109	-41.0	173	-27.6	237	-17.4	301	-11.0	365	-4.6	429	1.8	493	8.2
46	-72.5	110	-40.5	174	-27.4	238	-17.3	302	-10.9	366	-4.5	430	1.9	494	8.3
47	-72.0	111	-40.0	175	-27.2	239	-17.2	303	-10.8	367	-4.4	431	2.0	495	8.4
48	-71.5	112	-39.8	176	-27.0	240	-17.1	304	-10.7	368	-4.3	432	2.1	496	8.5
49	-71.0	113	-39.6	177	-26.8	241	-17.0	305	-10.6	369	-4.2	433	2.2	497	8.6
50	-70.5	114	-39.4	178	-26.6	242	-16.9	306	-10.5	370	-4.1	434	2.3	498	8.7
51	-70.0	115	-39.2	179	-26.4	243	-16.8	307	-10.4	371	-4.0	435	2.4	499	8.8
52	-69.5	116	-39.0	180	-26.2	244	-16.7	308	-10.3	372	-3.9	436	2.5	500	8.9
53	-69.0	117	-38.8	181	-26.0	245	-16.6	309	-10.2	373	-3.8	437	2.6	501	9.0
54	-68.5	118	-38.6	182	-25.8	246	-16.5	310	-10.1	374	-3.7	438	2.7	502	9.1
55	-68.0	119	-38.4	183	-25.6	247	-16.4	311	-10.0	375	-3.6	439	2.8	503	9.2
56	-67.5	120	-38.2	184	-25.4	248	-16.3	312	-9.9	376	-3.5	440	2.9	504	9.3
57	-67.0	121	-38.0	185	-25.2	249	-16.2	313	-9.8	377	-3.4	441	3.0	505	9.4
58	-66.5	122	-37.8	186	-25.0	250	-16.1	314	-9.7	378	-3.3	442	3.1	506	9.5
59	-66.0	123	-37.6	187	-24.8	251	-16.0	315	-9.6	379	-3.2	443	3.2	507	9.6
60	-65.5	124	-37.4	188	-24.6	252	-15.9	316	-9.5	380	-3.1	444	3.3	508	9.7
61	-65.0	125	-37.2	189	-24.4	253	-15.8	317	-9.4	381	-3.0	445	3.4	509	9.8
62	-64.5	126	-37.0	190	-24.2	254	-15.7	318	-9.3	382	-2.9	446	3.5	510	9.9
63	-64.0	127	-36.8	191	-24.0	255	-15.6	319	-9.2	383	-2.8	447	3.6	511	10.0

6.2 Frequency Table

value	Frequency [Hz]	Display	value	Frequency	Display	value	Frequency	Display	value	Frequency	Display	value	Frequency	Display	value	Frequency	Display
0	20	20.0 Hz	80	63	63.0 Hz	160	200	200 Hz	240	630	630 Hz	320	2000	2.00 kHz	400	6300	6.30 kHz
1	20.3	20.3 Hz	81	64	64.0 Hz	161	203	203 Hz	241	642	642 Hz	321	2030	2.03 kHz	401	6420	6.42 kHz
2	20.5	20.5 Hz	82	65	65.0 Hz	162	205	205 Hz	242	655	655 Hz	322	2050	2.05 kHz	402	6550	6.55 kHz
3	20.7	20.7 Hz	83	67	67.0 Hz	163	207	207 Hz	243	667	667 Hz	323	2080	2.08 kHz	403	6670	6.67 kHz
4	21	21.0 Hz	84	68	68.0 Hz	164	210	210 Hz	244	680	680 Hz	324	2100	2.10 kHz	404	6800	6.80 kHz
5	21.3	21.3 Hz	85	68.5	68.5 Hz	165	213	213 Hz	245	687	687 Hz	325	2140	2.14 kHz	405	6880	6.88 kHz
6	21.5	21.5 Hz	86	69	69.0 Hz	166	217	217 Hz	246	695	695 Hz	326	2170	2.17 kHz	406	6950	6.95 kHz
7	21.7	21.7 Hz	87	70	70.0 Hz	167	220	220 Hz	247	703	703 Hz	327	2200	2.20 kHz	407	7030	7.03 kHz
8	22	22.0 Hz	88	71	71.0 Hz	168	224	224 Hz	248	710	710 Hz	328	2240	2.24 kHz	408	7100	7.10 kHz
9	22.5	22.5 Hz	89	72	72.0 Hz	169	228	228 Hz	249	722	722 Hz	329	2280	2.28 kHz	409	7220	7.22 kHz
10	23	23.0 Hz	90	73	73.0 Hz	170	232	232 Hz	250	735	735 Hz	330	2320	2.32 kHz	410	7350	7.35 kHz
11	23.5	23.5 Hz	91	75	75.0 Hz	171	236	236 Hz	251	747	747 Hz	331	2360	2.36 kHz	411	7470	7.47 kHz
12	24	24.0 Hz	92	76	76.0 Hz	172	240	240 Hz	252	760	760 Hz	332	2400	2.40 kHz	412	7600	7.60 kHz
13	24.2	24.2 Hz	93	77	77.0 Hz	173	242	242 Hz	253	770	770 Hz	333	2430	2.43 kHz	413	7700	7.70 kHz
14	24.5	24.5 Hz	94	78	78.0 Hz	174	245	245 Hz	254	780	780 Hz	334	2450	2.45 kHz	414	7800	7.80 kHz
15	24.7	24.7 Hz	95	79	79.0 Hz	175	247	247 Hz	255	790	790 Hz	335	2470	2.47 kHz	415	7900	7.90 kHz
16	25	25.0 Hz	96	80	80.0 Hz	176	250	250 Hz	256	800	800 Hz	336	2500	2.50 kHz	416	8000	8.00 kHz
17	25.5	25.5 Hz	97	81	81.0 Hz	177	255	255 Hz	257	812	812 Hz	337	2550	2.55 kHz	417	8120	8.12 kHz
18	26	26.0 Hz	98	82	82.0 Hz	178	260	260 Hz	258	825	825 Hz	338	2600	2.60 kHz	418	8250	8.25 kHz
19	26.5	26.5 Hz	99	83	83.0 Hz	179	265	265 Hz	259	837	837 Hz	339	2650	2.65 kHz	419	8370	8.37 kHz
20	27	27.0 Hz	100	85	85.0 Hz	180	270	270 Hz	260	850	850 Hz	340	2700	2.70 kHz	420	8500	8.50 kHz
21	27.2	27.2 Hz	101	86	86.0 Hz	181	272	272 Hz	261	862	862 Hz	341	2730	2.73 kHz	421	8620	8.62 kHz
22	27.5	27.5 Hz	102	87	87.0 Hz	182	275	275 Hz	262	875	875 Hz	342	2750	2.75 kHz	422	8750	8.75 kHz
23	27.7	27.7 Hz	103	89	89.0 Hz	183	278	278 Hz	263	887	887 Hz	343	2770	2.77 kHz	423	8870	8.87 kHz
24	28	28.0 Hz	104	90	90.0 Hz	184	280	280 Hz	264	900	900 Hz	344	2800	2.80 kHz	424	9000	9.00 kHz
25	28.5	28.5 Hz	105	92	92.0 Hz	185	285	285 Hz	265	915	915 Hz	345	2850	2.85 kHz	425	9150	9.15 kHz
26	29	29.0 Hz	106	93	93.0 Hz	186	290	290 Hz	266	930	930 Hz	346	2900	2.90 kHz	426	9300	9.30 kHz
27	29.5	29.5 Hz	107	95	95.0 Hz	187	295	295 Hz	267	945	945 Hz	347	2950	2.95 kHz	427	9450	9.45 kHz
28	30	30.0 Hz	108	96	96.0 Hz	188	300	300 Hz	268	960	960 Hz	348	3000	3.00 kHz	428	9600	9.60 kHz
29	30.5	30.5 Hz	109	97	97.0 Hz	189	304	304 Hz	269	970	970 Hz	349	3040	3.04 kHz	429	9700	9.70 kHz
30	31	31.0 Hz	110	98	98.0 Hz	190	307	307 Hz	270	980	980 Hz	350	3070	3.07 kHz	430	9800	9.80 kHz
31	31.2	31.2 Hz	111	99	99.0 Hz	191	311	311 Hz	271	990	990 Hz	351	3110	3.11 kHz	431	9900	9.90 kHz
32	31.5	31.5 Hz	112	100	100 Hz	192	315	315 Hz	272	1000	1.00 kHz	352	3150	3.15 kHz	432	10000	10.0 kHz
33	32	32.0 Hz	113	101	101 Hz	193	321	321 Hz	273	1010	1.01 kHz	353	3210	3.21 kHz	433	10100	10.1 kHz
34	33	33.0 Hz	114	102	102 Hz	194	327	327 Hz	274	1020	1.02 kHz	354	3270	3.27 kHz	434	10300	10.3 kHz
35	33.5	33.5 Hz	115	103	103 Hz	195	333	333 Hz	275	1030	1.03 kHz	355	3340	3.34 kHz	435	10400	10.4 kHz
36	34	34.0 Hz	116	105	105 Hz	196	340	340 Hz	276	1050	1.05 kHz	356	3400	3.40 kHz	436	10500	10.5 kHz
37	34.5	34.5 Hz	117	106	106 Hz	197	344	344 Hz	277	1070	1.07 kHz	357	3440	3.44 kHz	437	10700	10.7 kHz
38	35	35.0 Hz	118	107	107 Hz	198	347	347 Hz	278	1080	1.08 kHz	358	3470	3.47 kHz	438	10900	10.9 kHz
39	35.5	35.5 Hz	119	108	108 Hz	199	351	351 Hz	279	1100	1.10 kHz	359	3510	3.51 kHz	439	11100	11.1 kHz
40	36	36.0 Hz	120	110	110 Hz	200	355	355 Hz	280	1120	1.12 kHz	360	3550	3.55 kHz	440	11200	11.2 kHz
41	36.5	36.5 Hz	121	112	112 Hz	201	361	361 Hz	281	1140	1.14 kHz	361	3610	3.61 kHz	441	11400	11.4 kHz
42	37	37.0 Hz	122	115	115 Hz	202	367	367 Hz	282	1160	1.16 kHz	362	3670	3.67 kHz	442	11600	11.6 kHz
43	37.5	37.5 Hz	123	118	118 Hz	203	374	374 Hz	283	1180	1.18 kHz	363	3750	3.75 kHz	443	11800	11.8 kHz
44	38	38.0 Hz	124	120	120 Hz	204	380	380 Hz	284	1200	1.20 kHz	364	3800	3.80 kHz	444	12000	12.0 kHz
45	38.5	38.5 Hz	125	121	121 Hz	205	385	385 Hz	285	1210	1.21 kHz	365	3850	3.85 kHz	445	12200	12.2 kHz
46	39	39.0 Hz	126	122	122 Hz	206	390	390 Hz	286	1220	1.22 kHz	366	3900	3.90 kHz	446	12300	12.3 kHz
47	39.5	39.5 Hz	127	123	123 Hz	207	395	395 Hz	287	1240	1.24 kHz	367	3950	3.95 kHz	447	12400	12.4 kHz
48	40	40.0 Hz	128	125	125 Hz	208	400	400 Hz	288	1250	1.25 kHz	368	4000	4.00 kHz	448	12500	12.5 kHz
49	40.5	40.5 Hz	129	127	127 Hz	209	408	408 Hz	289	1280	1.28 kHz	369	4070	4.07 kHz	449	12800	12.8 kHz
50	41	41.0 Hz	130	130	130 Hz	210	415	415 Hz	290	1300	1.30 kHz	370	4150	4.15 kHz	450	13000	13.0 kHz
51	42	42.0 Hz	131	133	133 Hz	211	422	422 Hz	291	1330	1.33 kHz	371	4220	4.22 kHz	451	13300	13.3 kHz
52	43	43.0 Hz	132	136	136 Hz	212	430	430 Hz	292	1360	1.36 kHz	372	4300	4.30 kHz	452	13600	13.6 kHz
53	43.5	43.5 Hz	133	137	137 Hz	213	435	435 Hz	293	1370	1.37 kHz	373	4350	4.35 kHz	453	13700	13.7 kHz
54	44	44.0 Hz	134	138	138 Hz	214	440	440 Hz	294	1380	1.38 kHz	374	4400	4.40 kHz	454	13800	13.8 kHz
55	44.5	44.5 Hz	135	139	139 Hz	215	445	445 Hz	295	1390	1.39 kHz	375	4450	4.45 kHz	455	13900	13.9 kHz
56	45	45.0 Hz	136	140	140 Hz	216	450	450 Hz	296	1400	1.40 kHz	376	4500	4.50 kHz	456	14000	14.0 kHz
57	45.5	45.5 Hz	137	143	143 Hz	217	457	457 Hz	297	1430	1.43 kHz	377	4570	4.57 kHz	457	14300	14.3 kHz
58	46	46.0 Hz	138	146	146 Hz	218	465	465 Hz	298	1460	1.46 kHz	378	4650	4.65 kHz	458	14600	14.6 kHz
59	47	47.0 Hz	139	149	149 Hz	219	472	472 Hz	299	1490	1.49 kHz	379	4730	4.73 kHz	459	14900	14.9 kHz
60	48	48.0 Hz	140	152	152 Hz	220	480	480 Hz	300	1520	1.52 kHz	380	4800	4.80 kHz	460	15200	15.2 kHz
61	48.5	48.5 Hz	141	154	154 Hz	221	485	485 Hz	301	1540	1.54 kHz	381	4850	4.85 kHz	461	15400	15.4 kHz
62	49	49.0 Hz	142	156	156 Hz	222	490	490 Hz	302	1560	1.56 kHz	382	4900	4.90 kHz	462	15600	15.6 kHz
63	49.5	49.5 Hz	143	158	158 Hz	223	495	495 Hz	303	1580	1.58 kHz	383	4950	4.95 kHz	463	15800	15.8 kHz
64	50	50.0 Hz	144	160	160 Hz	224	500	500 Hz	304	1600	1.60 kHz	384	5000	5.00 kHz	464	16000	16.0 kHz
65	50.5	50.5 Hz	145	162	162 Hz	225	507	507 Hz	305	1630	1.63 kHz	385	5080	5.08 kHz	465	16300	16.3 kHz
66	51	51.0 Hz	146	165	165 Hz	226	515	515 Hz	306	1650	1.65 kHz	386	5150	5.15 kHz	466	16500	16.5 kHz
67	52	52.0 Hz	147	167	167 Hz	227	522	522 Hz	307	1680	1.68 kHz	387	5220	5.22 kHz	467	16800	16.8 kHz
68	53	53.0 Hz	148	170	170 Hz	228	530	530 Hz	308	1700	1.70 kHz	388	5300	5.30 kHz	468	17000	17.0 kHz
69	53.5	53.5 Hz	149	172	172 Hz	229	538	538 Hz	309	1730	1.73 kHz	389	5380	5.38 kHz	469	17300	17.3 kHz
70	54	54.0 Hz	150	175	175 Hz	230	545	545 Hz	310	1750	1.75 kHz	390	5450	5.45 kHz	470	17500	17.5 kHz
71	55	55.0 Hz	151	177	177 Hz	231	552	552 Hz	311	1780	1.78 kHz	391	5530	5.53 kHz	471	17800	17.8 kHz
72	56	56.0 Hz	152	180	180 Hz	232	560	560 Hz	312	1800	1.80 kHz	392	5600	5.60 kHz	472	18000	18.0 kHz
73	57	57.0 Hz	153	183	183 Hz	233	570	570 Hz	313	1830	1.83 kHz	393	5700	5.70 kHz	473	18300	18.3 kHz
74	58	58.0 Hz	154	186	186 Hz	234	580	580 Hz	314	1860	1.86 kHz	394	5800	5.80 kHz	474	18600	18.6 kHz
75	59	59.0 Hz	155	189	189 Hz	235	590	590 Hz	315	1890	1.89 kHz	395	5900	5.90 kHz	475	18900	18.9 kHz

6.3 Q Value Table

value	Quality
0	0.3
1	0.35
2	0.41
3	0.47
4	0.55
5	0.64
6	0.75
7	0.87
8	1
9	1.2
10	1.4
11	1.6
12	1.9
13	2.2
14	2.5
15	3
16	3.5
17	4
18	4.5
19	5
20	6
21	7
22	8.4
23	10
24	12
25	14
26	16
27	19
28	22
29	25
30	30

6.4 Version Cross-reference Table

Document name	Doc. ver.	50CU FW version											IRCU FW version							Modification			
		1.0.0	1.5.0	1.6.0	1.6.1	1.6.3	1.6.4	1.6.5	2.0.0	2.1.0	2.1.1	2.1.2	3.0.0	1.0.0	1.0.6	1.1.0	1.1.1	1.1.2	1.1.3		2.0.0		
50CU	1.0.0																						---
	1.5.0																						Added INT50
	1.6.0																						Added IU
	1.6.1																						Added BNE function
	1.6.4																						Changed to support batch changes, etc.
	2.0.0																						Supported IRCU, various corrections
IRCU	1.0.0																						---
	1.0.1																						
50CU/IRCU	1.0.5																						Renamed document 50CU+IRCU
	1.0.6																						Added notes
	1.0.7																						Added DUa
	1.0.8																						Added battery commands
	1.0.9																						Added Floor Filter Setting Request command