

Basic operation procedure

Procedure to execute the setting one by one via 232C terminal

Power ON the main unit (MCA1120 / PCA1120) in advance

Preparation

(1)
Connection

Connect the USB terminal of the PC and 232C terminal of the main unit (Rear panel)



Need to install the driver matching with the 232C converter cable

Example of the cabl USB-232C converter cable



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URS-03

Driver

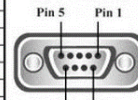
<https://www.aten.com/global/en/supportcenter/downloads/>
Use driver for UC232A

3.5φ 232C cable



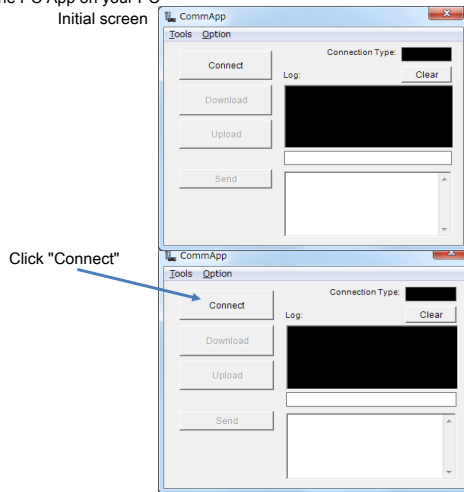
Pin 1	RI
Pin 2	TXD
Pin 3	RXD
Pin 4	DSR
Pin 5	GND
Pin 6	DTR
Pin 7	CTS
Pin 8	RTS
Pin 9	Power Input /DCD

RS232 Pinout
(9 Pin Female)

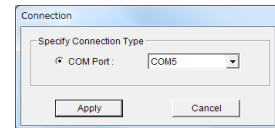


(2)
Establish communication

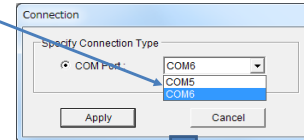
Launch the PC App on your PC
Initial screen



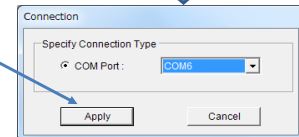
Pop-up window appears



Select the port of the connected USB cable

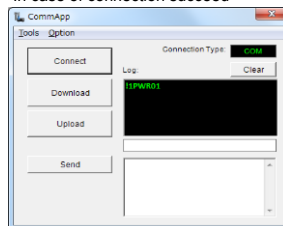


Click "Apply"

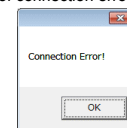


Pop-up window disappears

In case of connection succeed



In case of connection error



After clicking "OK",

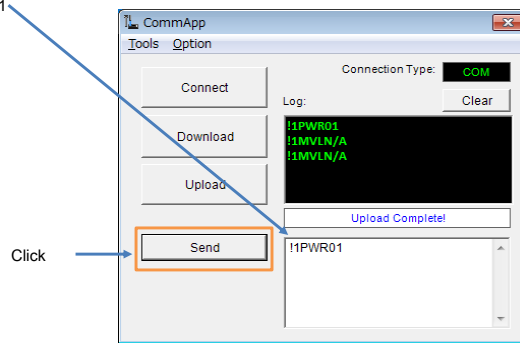
Check cable connection or select another COM port etc. and click on "Apply" again

Command setting

Enter the command code in the window
Copy & paste the command codes from the "Command list" or punch in the command code directly
Click "Send" after you finish entering the command code

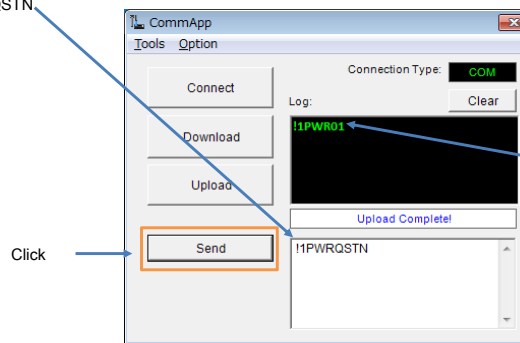
Example) Set "Power ON"

!1PWR01



Example) Confirm current Power status

!1PWRQSTN



PWR01 = Indicates Power On

Extract multiple parameter settings and set to another unit (Collective setting)

By extracting all the 232C parameter settings and saving on to a file,
 * Settings copy to multiple units
 * Settings transfer in the event of fault replacement
 can be done collectively.

When feedback suppressor EQ of the MIC is set by 232C terminal of MCA1120, depending on the firmware version of the unit, setting parameter data might not be reflected even when you execute this collective setting. For details, please refer to the "Caution point when transferring setting parameter data from old firmware version to new" described on the bottom part of this sheet.

Power ON the main unit (MCA1120 / PCA1120) in advance

Preparation

(1) Connect the USB terminal of the PC and 232C terminal of the main unit (Rear panel)



Need to install the driver matching with the 232C converter cable

Example of the cabl USB-232C converter cable



Driver

<https://www.aten.com/global/en/supportcenter/downloads/>
 Use driver for UC232A

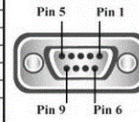
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3.5φ 232C cable



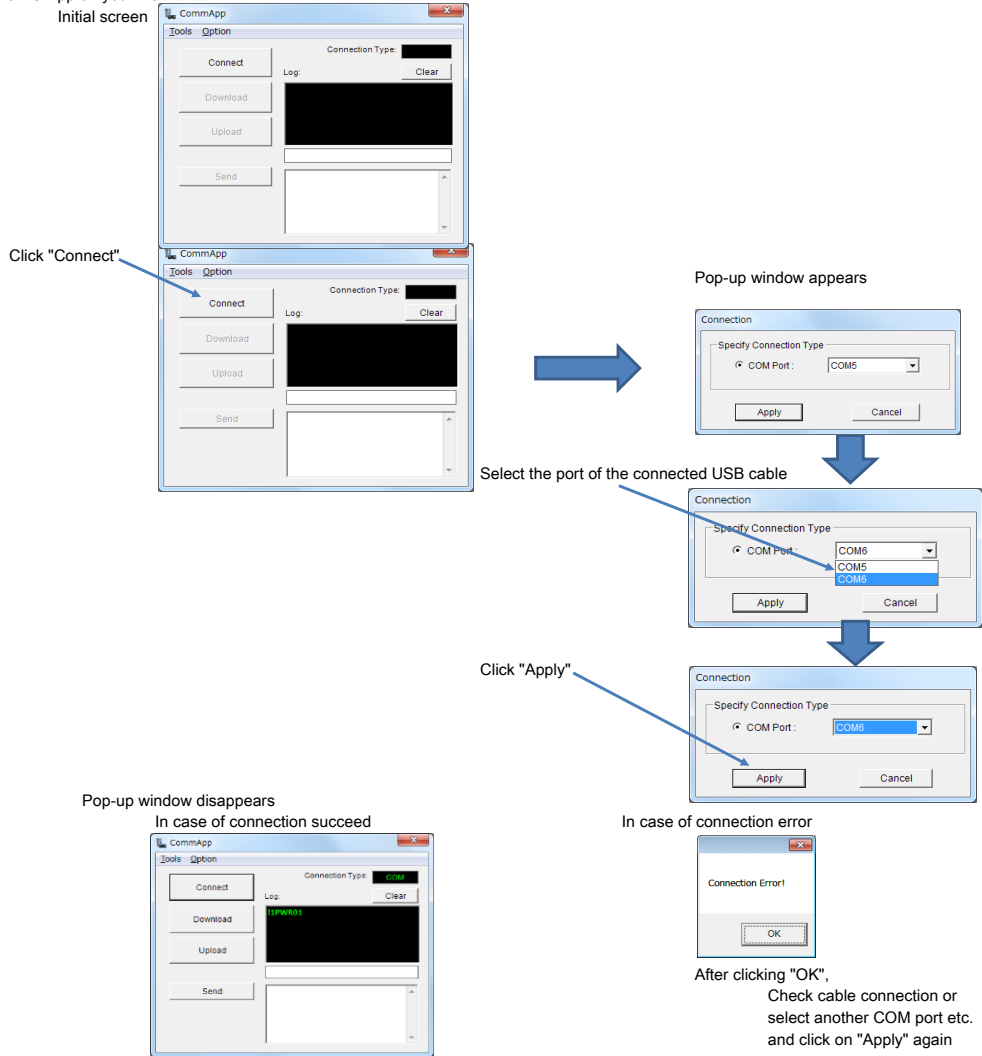
Pin 1	RI
Pin 2	TXD
Pin 3	RXD
Pin 4	DSR
Pin 5	GND
Pin 6	DTR
Pin 7	CTS
Pin 8	RTS
Pin 9	Power Input /DCD

RS232 Pinout
 (9 Pin Female)



(2)
Establish communication

Launch the PC App on your PC
Initial screen

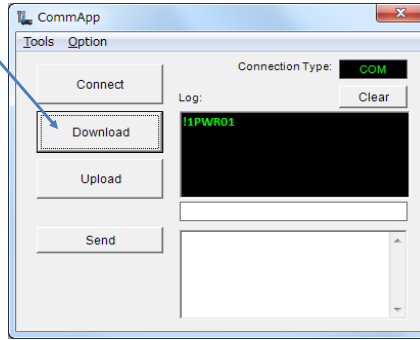


When saving current setting parameter data to PC file

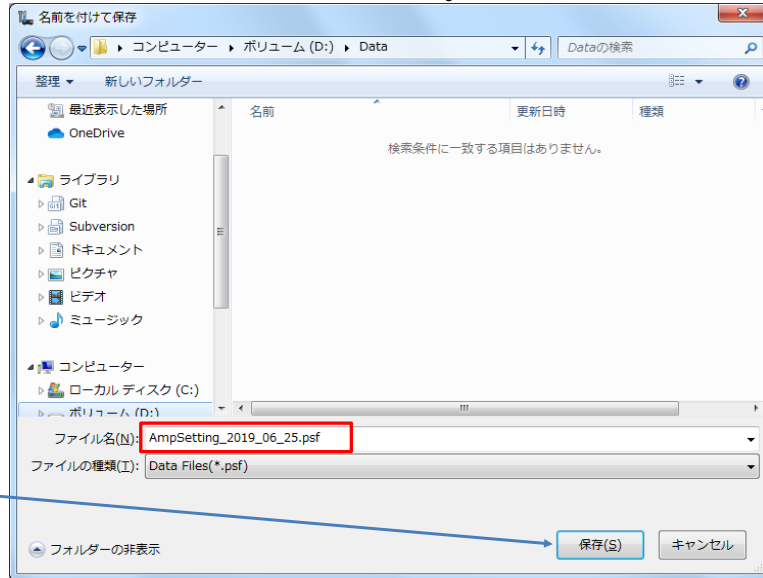
Collective extraction
Download

Important: You must have "QSTNCommandData.csv" file in order to execute Download
Make sure that you have "QSTNCommandData.csv" file together in the same folder as "CommApp.exe"

Click "Download"

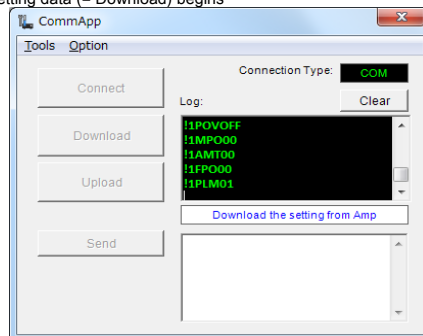


Choose your desired file name and desired location for the saved file of the setting data



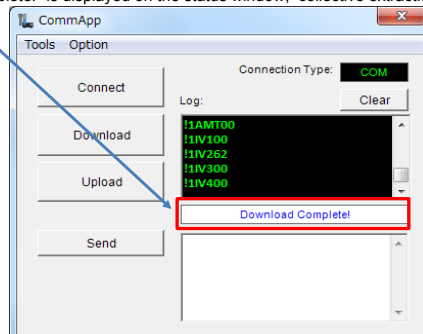
Click "Save"

Extraction of the setting data (= Download) begins



It takes around 5 to 20 seconds to finish downloading

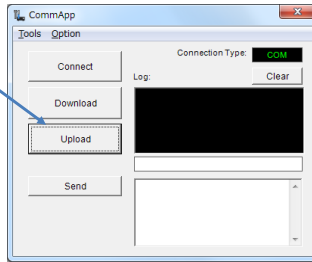
If "Download Complete!" is displayed on the status window, collective extraction is completed



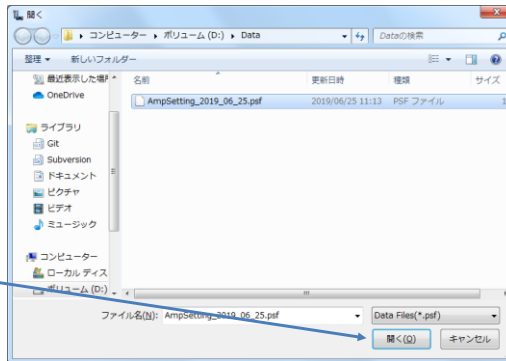
When transferring saved settings to the unit

Collective setting
Upload

Click "Upload"

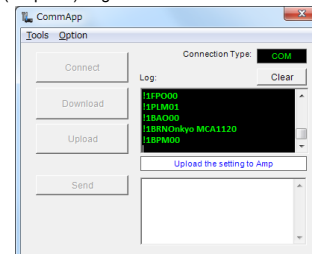


Select the file saved from the "Download" procedure

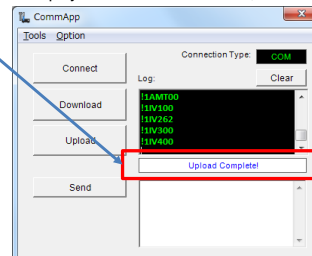


Click "Open"

Setting data transfer (= Upload) begins



If "Upload Complete!" is displayed on the status window, collective setting is completed



*** Caution point when transferring setting parameter data from old firmware version to new**

For MCA1120, when extracting setting data from the old firmware version (Main ver.1.00) unit and copying it to a newer firmware version (Main ver.1.01 or later) unit, feedback suppressor EQ settings of MIC 1 / 2 Input will not be reflected. (Not applicable for PCA1120)
Please refer to the command list, and reconfigure the settings. (Command code: "MQ1" / "MQ2")

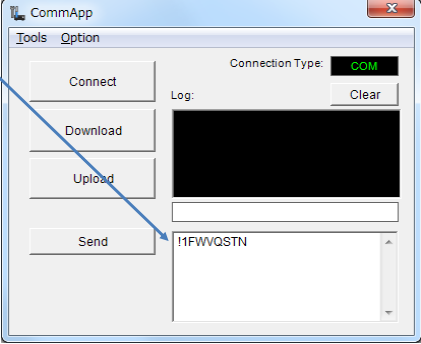
Please refer to below and confirm on the firmware version of the unit.

How to check the firmware version

Checking on the firmware version of the unit.

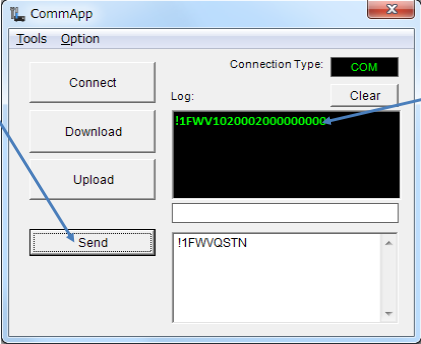
After communication is established, please execute the following operation

Please punch in the command code in the window next to the "Send" button



!1FWVQSTN

Click "Send"



!1FWV1020002000000000

In this case, the firmware version is as follows,
First 3 digits 102:Main version 1.02 (100:Ver1.00, 101:Ver1.01)
Next 2 digits 00:Bluetooth version 1.00 (01:Ver1.01, 02:Ver1.02)
Next 2 digits 02:DSP version 1.02(00:Ver1.00, 01:Ver1.01)

PC to 232C Various settings

***CAUTION** * For functions that can be configured both from the main unit DIP switch or 232C (BGM Mode / Keylock), PC settings will be the priority when 232C cable is inserted, and DIP switch settings will be valid when 232C cable is unplugged.

* In order to have the Keylock setting of the DIP switch valid, please make the main unit AC OFF and ON after you unplug the 232C cable.

* Settings can be configured when the Power of the Amplifier is ON.

Yes	For all firmware versions
Yes(1)	For firmware version "OI_MCA1120_PCA1120_Firmware_190118" or later

Category	Function	Function details	Command code	MCA1120	PCA1120
Setup	Front Panel Lock Mode	Panel Lock OFF (default)	!1PLM00	Yes	Yes
		Panel Partial Lock(lock all except Power key and Master Volume)	!1PLM01	Yes	Yes
		Panel ALL lock	!1PLM02	Yes	Yes
		Status confirmation of Front Panel Lock Mode	!1PLMQSTN	Yes	Yes
	Bluetooth function Valid / Invalid	BT Valid (default)	!1BAO00	Yes(1)	No
		BT Invalid	!1BAO01	Yes(1)	No
		Status confirmation of Bluetooth function	!1BAOQSTN	Yes(1)	No
	Forced Power On mode at AC ON	Sets Off (= same status as when AC turned OFF)(default)	!1FPO00	Yes(1)	Yes(1)
		Forced ON (= do not follow status of when AC turned OFF)	!1FPO01	Yes(1)	Yes(1)
		Status confirmation of Forced Power On mode	!1FPOQSTN	Yes(1)	Yes(1)
	Power On Volume store the Master Volume and Input level(s) when the unit is Powered On	Sets to the current Volume level	!1POVSET	Yes(1)	Yes(1)
		Sets to OFF (= follow Volume knob position)(default)	!1POVOFF	Yes(1)	Yes(1)
		Sets Power On Volume level (set each volume in hexadecimal numbers) aa:Master Volume "00" to "64" bb:BT/LINE1 Volume "00" to "64" cc:LINE2 Volume "00" to "64" dd:MIC1 Volume "00" to "64" ee:MIC2 Volume "00" to "64" *If set to "FF", Power On Volume will be OFF (= follow each Volume knob position)	!1POVaabccdde	Yes(1)	No
		Sets Power On Volume level (set each volume in hexadecimal numbers) aa:Master Volume "00" to "64"	!1POVaa	No	Yes(1)
		Status confirmation of Power On Volume mode	!1POVQSTN	Yes(1)	Yes(1)
		PRE OUT Fixed Level enabled when SET UP DIP Switch #10 is "Fixed" (Default is -1dB)	Sets PRE OUT Fixed Level +1 to +18dB (+***: +001 to +018) 0dB (0000) -128 to -1dB (-***: -128 to -001) *Input desired amount to *** in 1dB step (in decimal numbers)	!1PFL+*** !1PFL0000 !1PFL-***	Yes(1)
	Sets PRE OUT Fixed Level Up (1dB step)		!1PFLUP	Yes(1)	No
	Sets PRE OUT Fixed Level Down (1dB step)		!1PFLDOWN	Yes(1)	No
	Status confirmation of PRE OUT Fixed Level		!1PFLQSTN	Yes(1)	No

Category	Function	Function details	Command code	MCA1120	PCA1120
Sound Settings	Tone control BASS / TREBLE	BASS adjustment from -10 to +10 in hexadecimal numbers (**: -0A to +0A)	!1TFRB**	Yes	Yes
		TREBLE adjustment from -10 to +10 in hexadecimal numbers (**: -0A to +0A)	!1TFRT**	Yes	Yes
		Sets BASS level Up (1dB step)	!1TFRBUP	Yes	Yes
		Sets BASS level Down (1dB step)	!1TFRBDOWN	Yes	Yes
		Sets TREBLE level Up (1dB step)	!1TFRTUP	Yes	Yes
		Sets TREBLE level Down (1dB step)	!1TFRTDOWN	Yes	Yes
		Status confirmation of Tone control ("BxxTxx")	!1TFRQSTN	Yes	Yes
	BGM Mode	Sets Off	!1OSM00	Yes	Yes
		Sets to Mode1: Lively	!1OSM01	Yes	Yes
		Sets to Mode2: Natural	!1OSM02	Yes	Yes
		Sets to Mode3: Calm	!1OSM03	Yes	Yes
		Switch BGM Mode (1 mode step in ascending order)	!1OSMUP	Yes	Yes
		Switch BGM Mode (1 mode step in descending order)	!1OSMDOWN	Yes	Yes
		Status confirmation of BGM Mode	!1OSMQSTN	Yes	Yes
	HPF for Subwoofer when using PCA1120 to drive Subwoofer (to avoid ultra low frequency noise)	Sets to 10Hz	!1HSW00	No	Yes
		Sets to 20Hz	!1HSW01	No	Yes
		Sets to 30Hz	!1HSW02	No	Yes
		Status confirmation of HPF for Subwoofer	!1HSWQSTN	No	Yes
	FIR filter of HPF/LPF sharp cut filter for HPF to enforce Bass sound (this causes 80ms latency(excluding MIC input of MCA))	Sets Off (default)	!1FIR00	Yes(1)	Yes(1)
		Sets On	!1FIR01	Yes(1)	Yes(1)
		Status confirmation of FIR filter of HPF	!1FIRQSTN	Yes(1)	Yes(1)
	SPEAKER Out Delay sound delay for SPEAKER output In 1ms step from 0 to 500msec(default:0)	In 1ms step from 0 to 500msec (**: 000 to 500)	!1SOD***	Yes(1)	Yes(1)
		Sets SPEAKER Out Delay Up (1msec step)	!1SODUP	Yes(1)	Yes(1)
		Sets SPEAKER Out Delay Down (1msec step)	!1SODDOWN	Yes(1)	Yes(1)
		Status confirmation of SPEAKER Out Delay	!1SODQSTN	Yes(1)	Yes(1)
	PRE OUT Delay sound delay for PRE OUT output In 1ms step from 0 to 500msec(default:0)	In 1ms step from 0 to 500msec (**: 000 to 500)	!1POD***	Yes(1)	No
		Sets PRE OUT Delay Up (1msec step)	!1PODUP	Yes(1)	No
		Set PRE OUT Delay Down (1msec step)	!1PODDOWN	Yes(1)	No
		Status confirmation of PRE OUT Delay	!1PODQSTN	Yes(1)	No
	Full custom EQ Preset 1 enabled when SOUND MODE DIP Switch #8 to #10 is set to upside (= Preset EQ for Loud speaker is Off)	t: Type of Filter 0: Parametric EQ 1: Low shelving filter 2: High shelving filter 3: Low Pass Filter 4: High Pass Filter	!1FQ1 ffffqqgggg	Yes	Yes
		fff: Cut off / Center Frequency "0001", "0002" to "4E20" (1Hz, 2Hz - 20kHz: 1Hz step) (in hexadecimal numbers)			
		qq: Q "01", "02" to "64"(0.1, 0.2 - 10.0: 0.1 step) (x10 value in hexadecimal numbers)			
		gggg: Gain "0000", "0001" to "0078" (0.0dB, +0.1dB to +12.0dB: 0.1dB step), "FF88", "FF89" to "FFFF"(-12.0dB, -11.9dB to -0.1dB: 0.1dB step) (x10 value in hexadecimal numbers)			
		Status confirmation of Full custom EQ Preset 1 (EQ Parameter)	!1FQ1QSTN		
		Parameter specifications are same with Full custom EQ Preset 1	!1FQ2ffffqqgggg		
		Status confirmation of Full custom EQ Preset 2 (EQ Parameter)	!1FQ2QSTN		
		Parameter specifications are same with Full custom EQ Preset 1	!1FQ3ffffqqgggg		
		Status confirmation of Full custom EQ Preset 3 (EQ Parameter)	!1FQ3QSTN		
		Parameter specifications are same with Full custom EQ Preset 1	!1FQ4ffffqqgggg		
		Status confirmation of Full custom EQ Preset 4 (EQ Parameter)	!1FQ4QSTN		
		Parameter specifications are same with Full custom EQ Preset 1	!1FQ5ffffqqgggg		
	Status confirmation of Full custom EQ Preset 5 (EQ Parameter)	!1FQ5QSTN			
	Parameter specifications are same with Full custom EQ Preset 1	!1FQ6ffffqqgggg			
	Status confirmation of Full custom EQ Preset 6 (EQ Parameter)	!1FQ6QSTN			
	Parameter specifications are same with Full custom EQ Preset 1	!1FQ7ffffqqgggg			
	Status confirmation of Full custom EQ Preset 7 (EQ Parameter)	!1FQ7QSTN			
	Parameter specifications are same with Full custom EQ Preset 1	!1FQ8ffffqqgggg			
Status confirmation of Full custom EQ Preset 8 (EQ Parameter)	!1FQ8QSTN				
Parameter specifications are same with Full custom EQ Preset 1	!1FQ9ffffqqgggg				
Status confirmation of Full custom EQ Preset 9 (EQ Parameter)	!1FQ9QSTN				
Parameter specifications are same with Full custom EQ Preset 1	!1FQAffffqqgggg				
Status confirmation of Full custom EQ Preset 10 (EQ Parameter)	!1FQAQSTN				
Parameter specifications are same with Full custom EQ Preset 1	!1FQBffffqqgggg				
Status confirmation of Full custom EQ Preset 11 (EQ Parameter)	!1FQBQSTN				
Parameter specifications are same with Full custom EQ Preset 1	!1FQCffffqqgggg				
Status confirmation of Full custom EQ Preset 12 (EQ Parameter)	!1FQCQSTN				
Preset EQ for Headroom setting need to set it when having voice distortion with EQ On	Sets Headroom information Input amount to ** In 0.5dB step from 00 to 18 (in hexadecimal numbers)	!1FHD**	Yes	Yes	
	Status confirmation of Field Preset EQ for Headroom setting	!1FHDQSTN	Yes	Yes	

Category	Function	Function details	Command code	MCA1120	PCA1120
MIC Settings	HPF for MIC input cutoff low freq. sound to reduce wind and pop noise	Sets to 100Hz (100Hz)	!1HMC00	Yes	No
		Sets to 200Hz	!1HMC01	Yes	No
		Sets to 250Hz	!1HMC02	Yes	No
		Status confirmation of HPF for MIC input	!1HMCQSTN	Yes	No
	Mic Ducker Level background sound level adjustments during Mic Ducker On (Mic Ducker can be set On with SOUND MODE Dip Switch #1)	Sets to -40dB	!1DLV00	Yes	No
		Sets to -24dB (default)	!1DLV01	Yes	No
		mute	!1DLV02	Yes	No
		Status confirmation of MIC Ducker Level	!1DLVQSTN	Yes	No
	Proximity Correction MIC1 automatically reduces low freq. sound when the microphone user's mouth comes too close to MIC1	Sets Off (default)	!1PM100	Yes	No
		Sets On	!1PM101	Yes	No
		Status confirmation of Proximity Correction MIC1	!1PM1QSTN	Yes	No
	Proximity Correction MIC2 automatically reduces low freq. sound when the microphone user's mouth comes too close to MIC2	Sets Off (default)	!1PM200	Yes	No
		Sets On	!1PM201	Yes	No
		Status confirmation of Proximity Correction MIC2	!1PM2QSTN	Yes	No
	Distortion Detection for Howling MUTE avoids loud distortion sound when howling	Sets Off (default)	!1DDH00	Yes	No
		Sets On	!1DDH01	Yes	No
		Status confirmation of Distortion Detection for Howling MUTE	!1DDHQSTN	Yes	No
	Noise Gate Level automatically mutes MIC input signal when the signal becomes weaker than certain level	Sets Off	!1NGL00	Yes	No
		Sets to High Level (noisy environment)	!1NGL01	Yes	No
		Sets to Middle Level (default)	!1NGL02	Yes	No
		Sets to Low Level (quiet environment)	!1NGL03	Yes	No
	Manual EQ for MIC1 Preset EQ to reduce howling	Sets the Gain for each BAND (in 3dB steps) Q factor is fixed to 3 0: Off, 1: -3dB, 2: -6dB, 3: -9dB, 4: -12dB, 5: -15dB, 6: -18dB a: BAND1 = 125Hz b: BAND2 = 157Hz c: BAND3 = 198Hz d: BAND4 = 250Hz e: BAND5 = 315Hz f: BAND6 = 397Hz g: BAND7 = 500Hz h: BAND8 = 630Hz i: BAND9 = 794Hz j: BAND10 = 1kHz k: BAND11 = 1.26kHz l: BAND12 = 1.587kHz m: BAND13 = 2kHz n: BAND14 = 2.52kHz o: BAND15 = 3.175kHz p: BAND16 = 4kHz q: BAND17 = 5.04kHz r: BAND18 = 6.35kHz s: BAND19 = 8kHz t: BAND20 = 10.079kHz	!1MQ1 abcdefghijklmnop qrst	Yes(1)	No
		Status confirmation of Manual EQ for MIC1	!1MQ1QSTN	Yes(1)	No
	Manual EQ for MIC2 Preset EQ to reduce howling	Parameter specifications are same with Manual EQ for MIC1	!1MQ2 abcdefghijklmnop qrst	Yes(1)	No
		Status confirmation of Manual EQ for MIC2	!1MQ2QSTN	Yes(1)	No

PC to 232C Real-time control

Category	Function	Function details	Command Code	MCA1120	PCA1120
Real-time control	Power On / Off	Sets System Off (= System Standby)	!1PWR00	Yes	Yes
		Sets System On	!1PWR01	Yes	Yes
		Status confirmation of Power On / Off	!1PWRQSTN	Yes	Yes
	Audio Muting	Sets Audio Muting Off (= have sound)	!1AMT00	Yes	Yes
		Sets Audio Muting On (= no sound)	!1AMT01	Yes	Yes
		Alternately switch between Audio Muting On and Off	!1AMTTG	Yes	Yes
		Status confirmation of Audio Muting	!1AMTQSTN	Yes	Yes
	Master Volume Level adjustment	Master Volume Level: input amount from 0 to 64 (in hexadecimal) to **	!1MVL**	Yes	Yes
		Sets Master Volume Level Up (1dB step)	!1MVLUP	Yes	Yes
		Sets Master Volume Level Down (1dB step)	!1MVLDOWN	Yes	Yes
		Status confirmation of Master Volume Level adjustment	!1MVLQSTN	Yes	Yes
	Bluetooth / LINE1 Volume Level adjustment	BT / LINE1 Volume Level: input amount from 0 to 64 (in hexadecimal) to **	!1IV1**	Yes	No
		Sets BT / LINE1 Volume Level Up (1dB step)	!1IV1UP	Yes	No
		Sets BT / LINE1 Volume Level Down (1dB step)	!1IV1DOWN	Yes	No
		Status confirmation of Bluetooth / LINE1 Volume Level adjustment	!1IV1QSTN	Yes	No
	LINE2 Volume Level adjustment	LINE2 Volume Level: input amount from 0 to 64 (in hexadecimal) to **	!1IV2**	Yes	No
		Sets LINE2 Volume Level Up (1dB step)	!1IV2UP	Yes	No
		Sets LINE2 Volume Level Down (1dB step)	!1IV2DOWN	Yes	No
		Status confirmation of LINE2 Volume Level adjustment	!1IV2QSTN	Yes	No
	MIC1 Volume Level adjustment	MIC1 Volume Level: input amount from 0 to 64 (in hexadecimal) to **	!1IV3**	Yes	No
		Sets MIC1 Volume Level Up (1dB step)	!1IV3UP	Yes	No
		Sets MIC1 Volume Level Down (1dB step)	!1IV3DOWN	Yes	No
		Status confirmation of MIC1 Volume Level adjustment	!1IV3QSTN	Yes	No
	MIC2 / LINE3 Volume Level adjustment	MIC2 / LINE3 Volume Level: input amount from 0 to 64 (in hexadecimal) to **	!1IV4**	Yes	No
		Sets MIC2 / LINE3 Volume Level Up (1dB step)	!1IV4UP	Yes	No
		Sets MIC2 / LINE3 Volume Level Down (1dB step)	!1IV4DOWN	Yes	No
		Status confirmation of MIC2 / LINE3 Volume Level adjustment	!1IV4QSTN	Yes	No
Reset (when unit Freezes)	Reset All (setting parameters will be kept)	!1RSTALL	Yes	Yes	

Category	Function	Function details	Command Code	MCA1120	PCA1120
Various confirmation	Firmware Version	Check Firmware Version Command return = "abcefhi0000000000" "a.bc": Main unit Firmware Version "1.ef": Bluetooth Firmware Version "1.hi": DSP Firmware Version ignore the rest of "000000000000"	!1FWVQSTN	Yes	Yes
	Cumulative Operation Time	Check Cumulative Operation Hours of Power On (excludes standby time) Command return = "hhhhhh:mm" hhhhhh: Hours (000000-065535) mm: Minutes (00-59)	!1COTQSTN	Yes	Yes