

# Lync 6 & Lync 12

## Serial Commands/Protocol

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## Hardware/Serial Port Info

### Serial Port Info :

Baud rate : 38400 bps  
 Data Bit : 8 Bits  
 Stop Bit : 1 Bit  
 Parity : None  
 Flow Control : No

### Connector & Pin Info :

NX16P Connector : 9-pin female DB  
 PC Connector : 9-pin male DB

PC                      Lync6 and Lync12 Audio Controller

Pin 2 RxD	<-----	TxD Pin 2
Pin 3 TxD	----->	RxD Pin 3
Pin 5 Gnd	-----	Gnd Pin 5

## Commands/Protocol Information

### Commands Sent from PC to Lync (aka Commands)

Protocol :

**Head + Reserved Byte + Zone Address + Command + Data + Checksum**

**Checksum = Head + Reserved Byte + Zone Address + Command + Data**

**Head Code** : 1 byte    0x02

**Reserved Byte** : 1 byte    0x00

**Zone Address** : 1 byte

Broadcast : 0

Zone 1 : 1

Zone 2 : 2

Zone 3 : 3

Zone 4 : 4

Zone 5 : 5

Zone 6 : 6

Zone 7 : 7

Zone 8 : 8

Zone 9 : 9

Zone 10 : 10

Zone 11 : 11

Zone 12 : 12

Lync6 zone address range : 1 ~ 6

Lync12 zone address range : 1 ~ 12

**Command** : 1 byte

MP3 Repeat Loop Setting Command : 0x01

Common Command : 0x04

Query All Zone Status : 0x05

Zone Name Setting : 0x06

Source Name Setting : 0x07

Query ID Code : 0x08

Recall File : 0x0A

Save File : 0x0B

Query All Zone Status : 0x0C

Query Zone Name : 0x0D

Query Zone Source Name : 0x0E

Volume Setting Control : 0x15

Balance Setting Control : 0x16

Treble Setting Control : 0x17

Bass Setting Control : 0x18

Set Audio To Default : 0x1C

Set Name To Default : 0x1E

Data : 1 byte

Checksum :

Checksum = Head Code + Reserved Byte + Zone Address + Command + Data\_X +

### MP3 Repeat Loop On/Off

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0  
  
Command(1 byte) : 0x01  
Data (1 byte) : 0xFF (On) 0x00(Off)

Example:

MP3 Repeat Loop On : 0x02 + 0x00 + 0x00 + 0x01 + 0xFF + Checksum  
MP3 Repeat Loop Off : 0x02 + 0x00 + 0x00 + 0x01 + 0x00 + Checksum

### MP3 Play Function

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0  
Command(1 byte) : 0x01  
Data (1 byte) : FF (0x0A), PP(0x0B) , FB(0x0C) , STOP(0x0D)

Example:

MP3 FF : 0x02 + 0x00 + 0x00 + 0x04 + 0x0A + Checksum  
MP3 PP : 0x02 + 0x00 + 0x00 + 0x04 + 0x0B + Checksum  
MP3 FB : 0x02 + 0x00 + 0x00 + 0x04 + 0x0C + Checksum  
MP3 STOP : 0x02 + 0x00 + 0x00 + 0x04 + 0x0D + Checksum

### Power ALL On/Off

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x04  
Data (1 byte) : 0x55 (On) 0x56(Off)

Example:

Power ALL On : 0x02 + 0x00 + 0x00 + 0x04 + 0x55 + Checksum  
Power ALL Off : 0x02 + 0x00 + 0x00 + 0x04 + 0x56 + Checksum

### Power On/Off

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x04  
Data (1 byte) : 0x57 (On) 0x58(Off)

Example:

Zone1 Power On : 0x02 + 0x00 + 0x01 + 0x04 + 0x57 + Checksum

Zone1 Power Off : 0x02 + 0x00 + 0x01 + 0x04 + 0x58 + Checksum

Note: If zone address is 0 for broadcast, this command turns all on/off and response is same as "Power All On/Off" above

- If zone address is specific, response is just cmd 0x05 for that zone (14 bytes)
- there is NO response if the value is already at the desired value

### Mute On/Off

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x04  
Data (1 byte) : 0x1E(On) , 0x1F(Off)

Example:

Zone1 Mute On : 0x02 + 0x00 + 0x01 + 0x04 + 0x1E + Checksum

Zone1 Mute Off : 0x02 + 0x00 + 0x01 + 0x04 + 0x1F + Checksum

### DND On/Off

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x04  
Data (1 byte) : 0x59(On) , 0x5A(Off)

Example:

Zone1 DND On : 0x02 + 0x00 + 0x01 + 0x04 + 0x59 + Checksum

Zone1 DND Off : 0x02 + 0x00 + 0x01 + 0x04 + 0x5A + Checksum

### Input Source Select

Note: In addition to setting the input source for a specific zone, sending an Input Source Select command to the Lync will also result in the selected zone getting turned on.

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x04  
Data (1 byte) : 0x10 ~ 0x1B, 0x63 ~ 0x68

Input Source Table :

Data	Input #	Remark
0x10	Input 1	Lync 6 & Lync 12
0x11	Input 2	Lync 6 & Lync 12
0x12	Input 3	Lync 6 & Lync 12
0x13	Input 4	Lync 6 & Lync 12
0x14	Input 5	Lync 6 & Lync 12
0x15	Input 6	Lync 6 & Lync 12
0x16	Input 7	Lync 6 & Lync 12
0x17	Input 8	Lync 6 & Lync 12
0x18	Input 9	Lync 6 & Lync 12
0x19	Input 10	Lync 6 & Lync 12
0x1A	Input 11	Lync 6 & Lync 12
0x1B	Input 12	Lync 6 & Lync 12
0x63	Input 13	Lync 12
0x64	Input 14	Lync 12
0x65	Input 15	Lync 12
0x66	Input 16	Lync 12
0x67	Input 17	Lync 12
0x68	Input 18	Lync 12

Example:

Zone1 Source 1 : 0x02 + 0x00 + 0x01 + 0x04 + 0x10 + Checksum  
 Zone2 Source 2 : 0x02 + 0x00 + 0x02 + 0x04 + 0x11 + Checksum  
 Zone3 Source 3 : 0x02 + 0x00 + 0x03 + 0x04 + 0x12 + Checksum  
 Zone4 Source 4 : 0x02 + 0x00 + 0x04 + 0x04 + 0x13 + Checksum  
 Zone5 Source 5 : 0x02 + 0x00 + 0x05 + 0x04 + 0x14 + Checksum  
 Zone6 Source 6 : 0x02 + 0x00 + 0x06 + 0x04 + 0x15 + Checksum  
 Zone7 Source 7 : 0x02 + 0x00 + 0x07 + 0x04 + 0x16 + Checksum  
 Zone8 Source 8 : 0x02 + 0x00 + 0x08 + 0x04 + 0x17 + Checksum  
 Zone9 Source 9 : 0x02 + 0x00 + 0x09 + 0x04 + 0x18 + Checksum  
 Zone10 Source 10 : 0x02 + 0x00 + 0x0A + 0x04 + 0x19 + Checksum  
 Zone11 Source 11 : 0x02 + 0x00 + 0x0B + 0x04 + 0x1A + Checksum  
 Zone12 Source 12 : 0x02 + 0x00 + 0x0C + 0x04 + 0x1B + Checksum  
 Zone1 Source 13 : 0x02 + 0x00 + 0x01 + 0x04 + 0x63 + Checksum  
 Zone2 Source 14 : 0x02 + 0x00 + 0x02 + 0x04 + 0x64 + Checksum  
 Zone3 Source 15 : 0x02 + 0x00 + 0x03 + 0x04 + 0x65 + Checksum  
 Zone4 Source 16 : 0x02 + 0x00 + 0x04 + 0x04 + 0x66 + Checksum

Note:

- response is cmd 0x05 for the particular zone (14 bytes)
- there is NO response if the input is already at the desired source
- there is NO response and the physical keypad doesn't show a source name if the source number is out of range

### Party Mode Input Source Select

Head(1 byte) : 0x02  
 Reserved Byte(1 byte) : 0x00  
 Zone Address(1 byte) : 0 ~ 12  
 Command(1 byte) : 0x04  
 Data (1 byte) : 0x36 ~ 0x41, 0x69 ~ 0x6E

Party Mode Input Source Table :

Data	Party Mode Input	Remark
0x36	Party Mode INPUT 1	Lync 6 & Lync 12
0x37	Party Mode INPUT 2	Lync 6 & Lync 12
0x38	Party Mode INPUT 3	Lync 6 & Lync 12
0x39	Party Mode INPUT 4	Lync 6 & Lync 12
0x3A	Party Mode INPUT 5	Lync 6 & Lync 12
0x3B	Party Mode INPUT 6	Lync 6 & Lync 12
0x3C	Party Mode INPUT 7	Lync 6 & Lync 12
0x3D	Party Mode INPUT 8	Lync 6 & Lync 12
0x3E	Party Mode INPUT 9	Lync 6 & Lync 12
0x3F	Party Mode INPUT 10	Lync 6 & Lync 12
0x40	Party Mode INPUT 11	Lync 6 & Lync 12
0x41	Party Mode INPUT 12	Lync 6 & Lync 12
0x69	Party Mode INPUT 13	Lync 12
0x6A	Party Mode INPUT 14	Lync 12
0x6B	Party Mode INPUT 15	Lync 12
0x6C	Party Mode INPUT 16	Lync 12
0x6D	Party Mode INPUT 17	Lync 12
0x6E	Party Mode INPUT 18	Lync 12

Example:

Party Mode Source 1 : 0x02 + 0x00 + 0x01 + 0x04 + 0x36 + Checksum  
 Party Mode Source 2 : 0x02 + 0x00 + 0x02 + 0x04 + 0x37 + Checksum  
 Party Mode Source 3 : 0x02 + 0x00 + 0x03 + 0x04 + 0x38 + Checksum  
 Party Mode Source 4 : 0x02 + 0x00 + 0x04 + 0x04 + 0x39 + Checksum  
 Party Mode Source 5 : 0x02 + 0x00 + 0x05 + 0x04 + 0x3A + Checksum  
 Party Mode Source 6 : 0x02 + 0x00 + 0x06 + 0x04 + 0x3B + Checksum  
 Party Mode Source 7 : 0x02 + 0x00 + 0x07 + 0x04 + 0x3C + Checksum  
 Party Mode Source 8 : 0x02 + 0x00 + 0x08 + 0x04 + 0x3D + Checksum  
 Party Mode Source 9 : 0x02 + 0x00 + 0x09 + 0x04 + 0x3E + Checksum  
 Party Mode Source 10 : 0x02 + 0x00 + 0x0A + 0x04 + 0x3F + Checksum  
 Party Mode Source 11 : 0x02 + 0x00 + 0x0B + 0x04 + 0x40 + Checksum  
 Party Mode Source 12 : 0x02 + 0x00 + 0x0C + 0x04 + 0x41 + Checksum  
 Party Mode Source 13 : 0x02 + 0x00 + 0x0D + 0x04 + 0x69 + Checksum  
 Party Mode Source 14 : 0x02 + 0x00 + 0x0E + 0x04 + 0x6A + Checksum  
 Party Mode Source 15 : 0x02 + 0x00 + 0x0F + 0x04 + 0x6B + Checksum  
 Party Mode Source 16 : 0x02 + 0x00 + 0x10 + 0x04 + 0x6C + Checksum  
 Party Mode Source 17 : 0x02 + 0x00 + 0x10 + 0x04 + 0x6D + Checksum  
 Party Mode Source 18 : 0x02 + 0x00 + 0x10 + 0x04 + 0x6E + Checksum

### Query All Zone Status

Head(1 byte) : 0x02  
 Reserved Byte(1 byte) : 0x00  
 Zone Address(1 byte) : 0  
 Command(1 byte) : 0x05  
 Data (1 byte) : 0x00

Example:

Query All Zone Status : 0x02 + 0x00 + 0x00 + 0x05 + 0x00 + Checksum

Echo Data : Echo All Zone Status.

Reply format reference the "Tx Format" "Zone Internal Status"

### Zone Name Setting

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 1 ~ 12  
Command(1 byte) : 0x06  
Data1 : 0x00  
Data2 ~ Data 12 : ASCII char string (10 chars max)  
Data13 : 0x00

Example:

Set Zone 1 Name "Zone1" : 0x02 + 0x00 + 0x01 + 0x06 + 0x00 + 0x5A + 0x6F + 0x6E + 0x65 + 0x20 + 0x30 + 0x00 + 0x00 + 0x00 + 0x00 + 0x00 + Checksum

### Source Name Setting

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 1 ~ 12  
Command(1 byte) : 0x07  
Data1 : 1 ~ 18 (Source address)  
Data2 ~ Data 12 : ASCII char string (10 chars max)  
Data13 : 0x00

Example:

Set Zone 1 Input 1 Name "DVD" : 0x02 + 0x00 + 0x01 + 0x07 + 0x01 + 0x44 + 0x56 + 0x44 + 0x00 + 0x00 + 0x00 + 0x00 + 0x00 + 0x00 + 0x00 + Checksum

Note: Each Zone has its own set of Source Names that can be set.

### Query ID

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0x00  
Command(1 byte) : 0x08  
Data (1 byte) : 0x00

Example:

Query ID : 0x02 + 0x00 + 0x00 + 0x08 + 0x00 + Checksum

Reply Data : "Lync6" or "Lync12"



## Recall File

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0x00  
Command(1 byte) : 0x0A  
Data (1 byte) : 1 ~ 4

Example:

Recall File 1 : 0x02 + 0x00 + 0x00 + 0x0A + 0x01 + Checksum

## Save File

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0x00  
Command(1 byte) : 0x0B  
Data (1 byte) : 1 ~ 4

Example:

Save File 1 : 0x02 + 0x00 + 0x00 + 0x0B + 0x01 + Checksum

## Query All Zone Status

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 1 ~ 6(Lync6), 1 ~ 12(Lync12)  
Command(1 byte) : 0x0C  
Data (1 byte) : 0x00

Example:

Query Zone1 Status : 0x02 + 0x00 + 0x01 + 0x0C + 0x00 + Checksum

Echo Data :

1. Echo All Zone Status.
2. Echo All Zone Name.
3. Echo All Source Name
4. Echo MP3 On/Off
5. Echo MP3 File Name and Artist Name

## Query Zone Name

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 1 ~ 6(Lync6), 1 ~ 12(Lync12)  
Command(1 byte) : 0x0D  
Data (1 byte) : 0x00

Example:

Query Zone1 Status : 0x02 + 0x00 + 0x01 + 0x0D + 0x00 + Checksum

Echo Data : Echo Zone Name

### Query Source Name

Head(1 byte) : 0x02

Reserved Byte(1 byte) : 0x00

Zone Address(1 byte) : 1 ~ 6(Lync6), 1 ~ 12(Lync12)

Command(1 byte) : 0x0E

Data (1 byte) : 0x00

Example:

Query Zone1 Source1 Name : 0x02 + 0x00 + 0x01 + 0x0C + 0x01 + Checksum

Echo Data : Echo Zone Source Name

### Volume Setting Value Control

Head(1 byte) : 0x02

Reserved Byte(1 byte) : 0x00

Zone Address(1 byte) : 0 ~ 16

Command(1 byte) : 0x15

Data (1 byte) : 0x00~ 0x43( +0dB ~ -61dB)

Example:

Zone1 Volume 0 : 0x02 + 0x00 + 0x01 + 0x15 + 0x80 + Checksum

Zone1 Volume -10 : 0x02 + 0x00 + 0x01 + 0x15 + 0x76 + Checksum

Zone1 Volume -20 : 0x02 + 0x00 + 0x01 + 0x15 + 0x6C + Checksum

Zone1 Volume -61 : 0x02 + 0x00 + 0x01 + 0x15 + 0x43 + Checksum

Volume Table :

Volume	Data
0	0x80
-1	0x7F
-2	0x7E
-3	0x7D
-4	0x7C
-5	0x7B
-6	0x7A
-7	0x79
-8	0x78
-9	0x77
-10	0x76
-11	0x75
-12	0x74
-13	0x73
-14	0x72

-15	0x71
-16	0x70
-17	0x6F
-18	0x6E
-19	0x6D
-20	0x6C
-21	0x6B
-22	0x6A
-23	0x69
-24	0x68
-25	0x67
-26	0x66
-27	0x65
-28	0x64
-29	0x63
-30	0x62
-31	0x61
-32	0x60
-33	0x5F
-34	0x5E
-35	0x5D
-36	0x5C
-37	0x5B
-38	0x5A
-39	0x59
-40	0x58
-41	0x57
-42	0x56
-43	0x55
-44	0x54
-45	0x53
-46	0x52
-47	0x51
-48	0x50
-49	0x4F
-50	0x4E
-51	0x4D
-52	0x4C
-53	0x4B
-54	0x4A
-55	0x49
-56	0x48
-57	0x47
-58	0x46
-59	0x45
-60	0x44
-61	0x43

## Balance Setting Control

Head(1 byte) : 0x02  
 Reserved Byte(1 byte) : 0x00  
 Zone Address(1 byte) : 0 ~ 12  
 Command(1 byte) : 0x16  
 Data (1 byte) : 0x92 ~ 0x6E( +18dB ~ -18dB)

Example:

Zone1 Balance +18 : 0x02 + 0x00 + 0x01 + 0x04 + 0x92 + Checksum

Zone1 Balance 0 : 0x02 + 0x00 + 0x01 + 0x04 + 0x80 + Checksum

Zone1 Balance -18 : 0x02 + 0x00 + 0x01 + 0x04 + 0x6E + Checksum

Balance Table :

Balance Setting	Data
+18	0x92
+17	0x91
+16	0x90
+15	0x8F
+14	0x8E
+13	0x8D
+12	0x8C
+11	0x8B
+10	0x8A
+9	0x89
+8	0x88
+7	0x87
+6	0x86
+5	0x85
+4	0x84
+3	0x83
+2	0x82
+1	0x81
0	0x80
-1	0x7F
-2	0x7E
-3	0x7D
-4	0x7C
-5	0x7B
-6	0x7A
-7	0x79
-8	0x78
-9	0x77
-10	0x76
-11	0x75
-12	0x74
-13	0x73
-14	0x72
-15	0x71
-16	0x70
-17	0x6F
-18	0x6E

## Treble Setting Control

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x17  
Data (1 byte) : 0x76 ~ 0x8A( +10dB ~ -10dB)

Example:

Zone1 Treble +10 : 0x02 + 0x00 + 0x01 + 0x17 + 0x8A + Checksum

Zone1 Treble 0 : 0x02 + 0x00 + 0x01 + 0x17 + 0x80 + Checksum

Zone1 Treble -10 : 0x02 + 0x00 + 0x01 + 0x17 + 0x76 + Checksum

Treble Table :

Treble Setting	Data
+10	0x8A
+9	0x89
+8	0x88
+7	0x87
+6	0x86
+5	0x85
+4	0x84
+3	0x83
+2	0x82
+1	0x81
0	0x80
-1	0x7F
-2	0x7E
-3	0x7D
-4	0x7C
-5	0x7B
-6	0x7A
-7	0x79
-8	0x78
-9	0x77
-10	0x76

## Bass Setting Control

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x18  
Data (1 byte) : 0x76 ~ 0x8A( +10dB ~ -10dB)

Example:

Zone1 Bass +10 : 0x02 + 0x00 + 0x01 + 0x18 + 0x8A + Checksum

Zone1 Bass 0 : 0x02 + 0x00 + 0x01 + 0x18 + 0x80 + Checksum  
 Zone1 Bass -10 : 0x02 + 0x00 + 0x01 + 0x18 + 0x76 + Checksum

Bass Table :

Bass Setting	Data
+10	0x8A
+9	0x89
+8	0x88
+7	0x87
+6	0x86
+5	0x85
+4	0x84
+3	0x83
+2	0x82
+1	0x81
0	0x80
-1	0x7F
-2	0x7E
-3	0x7D
-4	0x7C
-5	0x7B
-6	0x7A
-7	0x79
-8	0x78
-9	0x77
-10	0x76

### Set Echo Mode

Head(1 byte) : 0x02  
 Reserved Byte(1 byte) : 0x00  
 Zone Address(1 byte) : 0x00  
 Command(1 byte) : 0x19  
 Data (1 byte) : 0x00( OFF/Default), 0xFF( ON)

Example:

Echo On : 0x02 + 0x00 + 0x00 + 0x19 + 0xFF + Checksum  
 Echo Off : 0x02 + 0x00 + 0x00 + 0x19 + 0x00 + Checksum

Note: This command suppresses returned responses from Lync.

### Set Zone Name and Source Name To Default

Head(1 byte) : 0x02  
 Reserved Byte(1 byte) : 0x00  
 Zone Address(1 byte) : 0  
 Command(1 byte) : 0x1C  
 Data (1 byte) : 0x00

Example:

Set To Default : 0x02 + 0x00 + 0x00 + 0x1C + 0x00 + Checksum

Zone Name Default Table :

Zone #	Lync 6 Zone Name	Lync 12 Zone Name
1	Zone 1	Zone 1
2	Zone 2	Zone 2
3	Zone 3	Zone 3
4	Zone 4	Zone 4
5	Zone 5	Zone 5
6	Zone 6	Zone 6
7		Zone 7
8		Zone 8
9		Zone 9
10		Zone 10
11		Zone 11
12		Zone 12

Source Name Default Table :

Source #	Lync 6 Source Name	Lync 12 Source Name
1	Source 1	Source 1
2	Source 2	Source 2
3	Source 3	Source 3
4	Source 4	Source 4
5	Source 5	Source 5
6	Source 6	Source 6
7		Source 7
8		Source 8
9		Source 9
10		Source 10
11		Source 11
12		Source 12
13		Source 13
14		Source 14
15		Source 15
16		Source 16
17		Source 17
18		Source 18

### Set Audio To Default

Head(1 byte) : 0x02  
Reserved Byte(1 byte) : 0x00  
Zone Address(1 byte) : 0 ~ 12  
Command(1 byte) : 0x1E  
Data (1 byte) : 0x00

Example:

Zone1 Set To Default : 0x02 + 0x00 + 0x01 + 0x1E + 0x00 + Checksum

Set To Default	Data
Input Source	Input 1
Volume	-40dB
Treble	0dB
Bass	0dB
Balance	0dB

### Echo Error Status

Echo Data : 0x02 + 0x00 + 0x00 + 0x1B + Error No. + 0x00 + 0x00 + 0x00 + 0x00 + 0x00 + 0x00  
+ 0x00 + 0x00 + Checksum

Error Table

Error No.	Error Status
1	Volume Setting Range Error
2	Balance Setting Range Error
3	Treble Setting Range Error
4	Bass Setting Range Error

Error No.	Error Status
1	Volume Setting Range Error
2	Balance Setting Range Error
3	Treble Setting Range Error
4	Bass Setting Range Error



## Commands Sent from Lync To PC (aka Responses)

### Command Format

Head Code + Reserved Byte + Zone Address + Command + Data\_1 + Data2 + Data3 + Data4 + Data5 + Data6 + Data7 + Data8 + Data9 + Check Sum

**Head Code** : 1 byte 0x02

**Reserved Byte** : 1 byte 0x00

**Zone Address** : 1 byte

Broadcast : 0

Zone 1 : 1

Zone 2 : 2

Zone 3 : 3

Zone 4 : 4

Zone 5 : 5

Zone 6 : 6

Zone 7 : 7

Zone 8 : 8

Zone 9 : 9

Zone 10 : 10

Zone 11 : 11

Zone 12 : 12

Lync6 zone address range : 1 ~ 6

Lync12 zone address range : 1 ~ 12

**Command** : 1 byte

*Zone Internal Status: 0x05*

Audio and Keypad Exist channel : 0x06

MP3 Play End : 0x09

*Zone Source Name : 0x0C*

*Zone Name : 0x0D*

*MP3 File Name : 0x11*

*MP3 Artist Name : 0x12*

*MP3 ON : 0x13*

*MP3 OFF : 0x14*

**Data** : Different commands with different data length

Checksum :

Checksum = Head Code + Reserved Byte + Zone Address + Command + Data\_X +

Function Code	Function Name	Data Length or "Tx String"	Zone Address
0x05	Zone Internal Status	9	Zone
0x06	Audio & Keypad Exist Channel	9	0
0x09	MP3 Play End	""	0
0x0c	Zone Source Name	11	Zone
0x0D	Zone Name	11	Zone
0x11	MP3 File Name	Max. 64	0
0x12	MP3 Artist Name	Max. 64	0
0x13	MP3 ON	""	0
0x14	MP3 OFF	"Device Not Found"	0

### Zone Internal Status

Head(1 byte) : 0x02  
 Reserved(1 byte) : 0x00  
 Zone Address(1 byte) : 0(Broadcast) , 1 – 6(Lync6) , 1 – 12(Lync12)  
 Command(1 byte) : 0x05

Data1(1 byte) :

Bit	Function	Remark
0	Power ON/OFF	0: OFF 1: ON
1	Mute ON/OFF	0: OFF 1: ON
2	DND ON/OFF	0: OFF 1: ON
3 ~ 7		

Data2(1 byte) :

Bit	Function	Remark
7	All ON	0: OFF 1: ON
6	All OFF	0: OFF 1: ON
5	Party Mode	0: OFF 1: ON
0 ~ 4		

Data3(1 byte) :

Bit	Function	Remark
0 ~ 3		
4	MP3 Repeat Loop	0: OFF 1: ON
5 ~ 7		

Data4(1 byte) : PARTY MODE

Bit	Function	Remark
0 ~ 3		
4	MP3 Repeat Loop	0: OFF 1: ON
5 ~ 7		

Data5(1 byte) : INPUT PORT

Data Byte	Function	Remark
0x01	Input 1	Lync 6
0x02	Input 2	Lync 6
0x03	Input 3	Lync 6
0x04	Input 4	Lync 6
0x05	Input 5	Lync 6
0x06	Input 6	Lync 6
0x07	Input 7	Lync 6 & Lync 12
0x08	Input 8	Lync 6 & Lync 12
0x09	Input 9	Lync 6 & Lync 12
0x0A	Input 10	Lync 6 & Lync 12
0x0B	Input 11	Lync 6 & Lync 12
0x0C	Input 12	Lync 6 & Lync 12

Data6(1 byte) : VOLUME

Volume	Data
0	0x00
-1	0xFF
-2	0xFE
-3	0xFD
-4	0xFC
-5	0xFB
-6	0xFA
-7	0xF9
-8	0xF8
-9	0xF7
-10	0xF6
-11	0xF5
-12	0xF4
-13	0xF3
-14	0xF2
-15	0xF1
-16	0xF0
-17	0xEF
-18	0xEE
-19	0xED
-20	0xEC
-21	0xEB
-22	0xEA
-23	0xE9
-24	0xE8
-25	0xE7
-26	0xE6
-27	0xE5
-28	0xE4
-29	0xE3
-31	0xE1
-32	0xE0
-33	0xDF
-34	0xDE

-35	0xDD
-36	0xDC
-37	0xDB
-38	0xDA
-39	0xD9
-40	0xD8
-41	0xD7
-42	0xD6
-43	0xD5
-44	0xD4
-45	0xD3
-46	0xD2
-47	0xD1
-48	0xD0
-49	0xCF
-50	0xCE
-51	0xCD
-52	0xCC
-53	0xCB
-54	0xCA
-55	0xC9
-56	0xC8
-57	0xC7
-58	0xC6
-59	0xC5
-60	0xC4
-61	0xC3

Data7(1 byte) : TREBLE

<b>Treble Setting</b>	<b>Data</b>
10	0x0A
9	0x09
8	0x08
7	0x07
6	0x06
5	0x05
4	0x04
3	0x03
2	0x02
1	0x01
0	0x00
-1	0xFF
-2	0xFE
-3	0xFD
-4	0xFC
-5	0xFB
-6	0xFA
-7	0xF9
-8	0xF8
-9	0xF7
-10	0xF6

Data8(1 byte) : BASS

<b>Bass Setting</b>	<b>Data</b>
10	0x0A
9	0x09
8	0x08
7	0x07
6	0x06
5	0x05
4	0x04
3	0x03
2	0x02
1	0x01
0	0x00
-1	0xFF
-2	0xFE
-3	0xFD
-4	0xFC
-5	0xFB
-6	0xFA
-7	0xF9
-8	0xF8
-9	0xF7
-10	0xF6

Data9(1 byte) : BALANCE

<b>Balance Left/Right</b>	<b>Data</b>
18	0x12
17	0x11
16	0x10
15	0x0F
14	0x0E
13	0x0D
12	0x0C
11	0x0B
10	0x0A
9	0x09
8	0x08
7	0x07
6	0x06
5	0x05
4	0x04
3	0x03
2	0x02
1	0x01
0	0x00
-1	0xFF
-2	0xFE
-3	0xFD
-4	0xFC
-5	0xFB

-6	0xFA
-7	0xF9
-8	0xF8
-9	0xF7
-10	0xF6
-11	0xF5
-12	0xF4
-13	0xF3
-14	0xF2
-15	0xF1
-16	0xF0
-17	0xEF
-18	0xEE

**Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data1 + Data2 + Data3 + Data4 + Data5 + Data6 + Data7 + Data8 + Data9**

NOTE: the 0x05 response is only sent back if a zone actually had a change in state. E.g. if one Lync6 zone is "ON" then an "all power on command" will have 5 cmd 0x05 responses (since 5 zones were off)

### Lync Audio and Keypad Exist Channel

Head(1 byte) : 0x02  
Reserved(1 byte) : 0x00  
Zone Address(1 byte) : 0(Broadcast) , 1 – 6(Lync6) , 1 – 12(Lync12)  
Command(1 byte) : 0x06  
Data1(1 byte) : 0x00

Data2(1 byte) :

Bit	Function	Lync 6	Lync 12
0	Zone 1 Exist	0: NO 1: YES	0: NO 1: YES
1	Zone 2 Exist	0: NO 1: YES	0: NO 1: YES
2	Zone 3 Exist	0: NO 1: YES	0: NO 1: YES
3	Zone 4 Exist	0: NO 1: YES	0: NO 1: YES
4	Zone 5 Exist	0: NO 1: YES	0: NO 1: YES
5	Zone 6 Exist	0: NO 1: YES	0: NO 1: YES
6	Zone 7 Exist	0	0: NO 1: YES
7	Zone 8 Exist	0	0: NO 1: YES

Data3(1 byte) :

Bit	Function	Lync 6	Lync 12
0	Zone 1 Keypad Exist	0: NO 1: YES	0: NO 1: YES
1	Zone 2 Keypad Exist	0: NO 1: YES	0: NO 1: YES
2	Zone 3 Keypad Exist	0: NO 1: YES	0: NO 1: YES
3	Zone 4 Keypad Exist	0: NO 1: YES	0: NO 1: YES
4	Zone 5 Keypad Exist	0: NO 1: YES	0: NO 1: YES
5	Zone 6 Keypad Exist	0: NO 1: YES	0: NO 1: YES
6	Zone 7 Keypad Exist	0	0: NO 1: YES
7	Zone 8 Keypad Exist	0	0: NO 1: YES

Data4(1 byte) :

Bit	Function	Lync 6	Lync 12
0	Zone 9 Exist	0	0: NO 1: YES
1	Zone 10 Exist	0	0: NO 1: YES
2	Zone 11 Exist	0	0: NO 1: YES
3	Zone 12 Exist	0	0: NO 1: YES
4		0	0
5		0	0
6		0	0
7		0	0

Data5(1 byte) :

Bit	Function	Lync 6	Lync 12
0	Zone 9 Exist	0	0: NO 1: YES
1	Zone 10 Exist	0	0: NO 1: YES
2	Zone 11 Exist	0	0: NO 1: YES
3	Zone 12 Exist	0	0: NO 1: YES
4		0	0
5		0	0
6		0	0
7		0	0

Data6(1 byte) : 0x00

Data7(1 byte) : 0x00

Data8(1 byte) : 0x00

Data9(1 byte) : 0x00

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data1 + Data2 + Data3  
+ Data4 + Data5 + Data6 + Data7 + Data8 + Data9

### MP3 Play End Stop

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(1 byte) : 0x00

Command(1 byte) : 0x09

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data

### Zone Source Name

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(12 byte) : char string

Command(1 byte) : 0x0C

Data1 ~ Data11 : indicator source name string

Data12 : indicator INPUT channel

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data1 + Data2 + Data3  
+ Data4 + Data5 + Data6 + Data7 + Data8 + Data9 + Data10 + Data11 + Data12

### Zone Name

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(12 byte) : char string

Command(1 byte) : 0x0D

Data1 ~ Data11 : indicator ZONE name string

Data12 : indicator ZONE address

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data1 + Data2 + Data3  
+ Data4 + Data5 + Data6 + Data7 + Data8 + Data9 + Data10 + Data11 + Data12

### MP3 File Name

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(1~64 byte) : char string(by 0x00 to end)

Command(1 byte) : 0x011

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + (Data1 ~ Data64 + 0x00)

### MP3 Artist Name

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(1~64 byte) : char string(by 0x00 to end)

Command(1 byte) : 0x012

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + (Data1 ~ Data64 + 0x00)

### MP3 ON

Head(1 byte) : 0x02

Reserved(1 byte) : 0x00

Zone Address(1 byte) : 0x00

Data(1 byte) : 0x00

Command(1 byte) : 0x13

Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data



## MP3 OFF

Head(1 byte) : 0x02  
Reserved(1 byte) : 0x00  
Zone Address(1 byte) : 0x00  
Data(17 byte) : "Device Not Found"  
Command(1 byte) : 0x14  
Checksum(1 byte) : Head + Reserved Byte + Zone Address + Command + Data1 ~ Data17