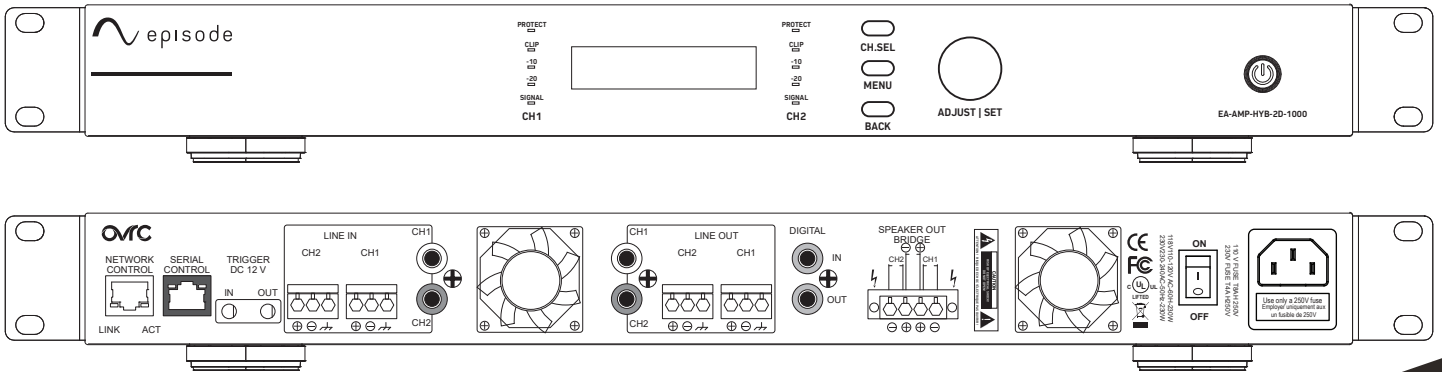




TELNET CONTROL API
EA-AMP-HYB-2D-1000
EA-AMP-HYB-2D-2000



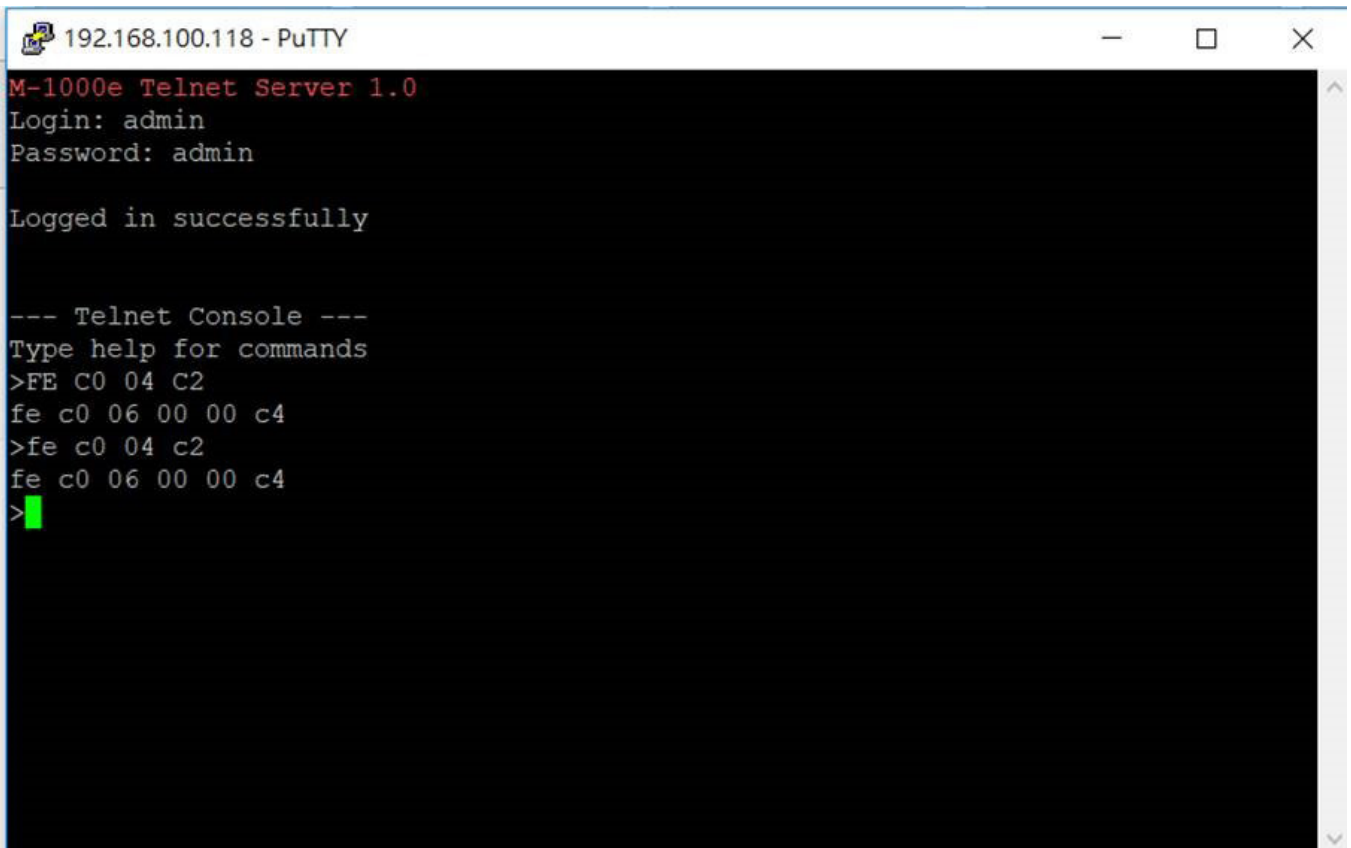
REAL. LIFE. SOUND.

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NOTES:

- Serial port parameter setting:
 - 8-N-1
 - Flow Control: None
 - Baud rate: 9600
- LEN: total length of command
- Check Sum: summation of Byte0 to Byte N and obtain 1 byte LSB, where N is LEN-1.
- In programming terms, CheckSum = SUM & 0xFF

TELNET**E.g. Get Mute Status (0xC0)**

```
192.168.100.118 - PuTTY
M-1000e Telnet Server 1.0
Login: admin
Password: admin

Logged in successfully

--- Telnet Console ---
Type help for commands
>FE C0 04 C2
fe c0 06 00 00 c4
>fe c0 04 c2
fe c0 06 00 00 c4
>
```

Total 11 bytes. (capital letter or small letter)

Capturing from 乙太網路 5 (host 192.168.100.118 && port 23)

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-F> Expression...

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.100.100	192.168.100.118	TELNET	65	Telnet Data ...
2	0.000055	192.168.100.100	192.168.100.118	TELNET	56	Telnet Data ...
3	0.001038	192.168.100.118	192.168.100.100	TCP	60	23 → 50694 [ACK] Seq=1 Ack=14 Win=500 Len=0
4	0.048741	192.168.100.118	192.168.100.100	TELNET	71	Telnet Data ...
5	0.048742	192.168.100.118	192.168.100.100	TCP	60	[TCP Window Update] 23 → 50694 [ACK] Seq=18 Ack=14 Win=512 Len=0
6	0.089020	192.168.100.118	192.168.100.100	TELNET	60	Telnet Data ...
7	0.089135	192.168.100.100	192.168.100.118	TCP	54	50694 → 23 [ACK] Seq=14 Ack=21 Win=64037 Len=0

> Frame 1: 65 bytes on wire (520 bits), 65 bytes captured (520 bits) on interface 0

▼ Ethernet II, Src: RealtekS_36:02:5f (00:e0:4c:36:02:5f), Dst: Microchi_4f:6b:93 (54:10:ec:4f:6b:93)

- > Destination: Microchi_4f:6b:93 (54:10:ec:4f:6b:93)
- > Source: RealtekS_36:02:5f (00:e0:4c:36:02:5f)
- Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 192.168.100.100, Dst: 192.168.100.118

Transmission Control Protocol, Src Port: 50694, Dst Port: 23, Seq: 1, Ack: 1, Len: 11

```
0000 54 10 ec 4f 6b 93 00 e0 4c 36 02 5f 08 00 45 00  T..Ok...L6...E.
0010 00 33 4d 2b 40 00 80 06 00 00 c0 a8 64 64 c0 a8  .3M+@...dd..
0020 64 76 c6 06 00 17 8b 67 ae 27 b7 ff d4 f7 50 18  dv.....g.....P.
0030 fa 39 4a 51 00 00 46 45 20 43 30 20 30 34 20 43  .9JQ..FE C0 04 C
0040 32 2
```

乙太網路 5: <live capture in progress> | Packets: 7 · Displayed: 7 (100.0%) | Profile: Default

Capturing from 乙太網路 5 (host 192.168.100.118 && port 23)

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-F> Expression...

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	192.168.100.100	192.168.100.118	TELNET	65	Telnet Data ...
2	0.000055	192.168.100.100	192.168.100.118	TELNET	56	Telnet Data ...
3	0.001038	192.168.100.118	192.168.100.100	TCP	60	23 → 50694 [ACK] Seq=1 Ack=14 Win=500 Len=0
4	0.048741	192.168.100.118	192.168.100.100	TELNET	71	Telnet Data ...
5	0.048742	192.168.100.118	192.168.100.100	TCP	60	[TCP Window Update] 23 → 50694 [ACK] Seq=18 Ack=14 Win=512 Len=0
6	0.089020	192.168.100.118	192.168.100.100	TELNET	60	Telnet Data ...
7	0.089135	192.168.100.100	192.168.100.118	TCP	54	50694 → 23 [ACK] Seq=14 Ack=21 Win=64037 Len=0

> Frame 4: 71 bytes on wire (568 bits), 71 bytes captured (568 bits) on interface 0

▼ Ethernet II, Src: Microchi_4f:6b:93 (54:10:ec:4f:6b:93), Dst: RealtekS_36:02:5f (00:e0:4c:36:02:5f)

- > Destination: RealtekS_36:02:5f (00:e0:4c:36:02:5f)
- > Source: Microchi_4f:6b:93 (54:10:ec:4f:6b:93)
- Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 192.168.100.118, Dst: 192.168.100.100

Transmission Control Protocol, Src Port: 23, Dst Port: 50694, Seq: 1, Ack: 14, Len: 17

```
0000 00 e0 4c 36 02 5f 54 10 ec 4f 6b 93 08 00 45 00  ..L6..T..Ok...E.
0010 00 39 00 5e 00 00 64 06 0c 36 c0 a8 64 76 c0 a8  .9^..d..6..dv..
0020 64 64 00 17 c6 06 b7 ff d4 f7 8b 67 ae 34 50 18  dd.....g..P.
0030 01 ff 1a dd 00 00 66 65 20 63 30 20 30 36 20 30  .....fe c0 06 0
0040 30 20 30 30 20 63 34 00 00 c4
```

乙太網路 5: <live capture in progress> | Packets: 7 · Displayed: 7 (100.0%) | Profile: Default

SET MUTE COMMAND (0XA0)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	Channel	Mute	Check Sum	Comments
0xFE	0xA0	0x06	0xC2 (Ch1) 0xC3 (Ch2)	0x00 (unmute) 0x01 (mute)		

AMPLIFIER return

- 0x06 (ACK) OK
- 0x15(NACK) ERROR

Examples

Set Channel 1 unmute

Control System-> AMPLIFIER	0xFE, 0xA0, 0x06, 0xC2, 0x00, 0x66
AMPLIFIER-> Control System	0x06

SET PHASE COMMAND (0XA1)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	Channel	Invert	Check Sum	Comments
0xFE	0xA1	0x06	0xC2 (Ch1) 0xC3 (Ch2)	0x00 (no invert) 0x01 (invert)		Inverted means 180Deg phase shift.

AMPLIFIER return

- 0x06 (ACK) OK
- 0x15(NACK) ERROR

Examples

Set Channel 1 Phase: Invert

Control System-> AMPLIFIER	0xFE, 0xA1, 0x06, 0xC2, 0x01, 0x68
AMPLIFIER-> Control System	0x06

SET VOLUME COMMAND (0XA2)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Parameter Header	Function Index	LEN	Channel	Volume MSB	Check Sum	Comments
0xFE	0xA2	0x07	0xC2 (Ch1) 0xC3 (Ch2)	0x0000 ~ 0x03DE (-99.0 ~ 0.0 dB)		Volume steps: 0.1dB

AMPLIFIER return

- 0x06 (ACK) OK
- 0x15(NACK) ERROR

Examples

SET CHANNEL 2 VOLUME: $-25.6 \text{ DB} * 10 + 990 = 734 \text{ (0X02DE)}$

	0xFE, 0xA2, 0x07, 0xC3, 0x02, 0xDE, 0x4A
AMPLIFIER-> Control System	0x06

SET LIMITER COMMAND (0XA3)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Parameter Header	Function Index	LEN	Channel	Threshold	Attack Time	Release Time
0xFE	0xA3	0x08	0xC2 (Ch1) 0xC3 (Ch2)	0x00~0x78 (-12 ~ 0dB)	0x00: (1ms) 0x01: (5ms) 0x02: (10ms) 0x03: (20ms) 0x04: (50ms) 0x05:(100ms)	0x00: (90ms) 0x01: (180ms) 0x02: (360ms) 0x03: (720ms) 0x04: (1.5s) 0x05:(3s)

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set Channel 1 limiter

Threshold: $-3.1 \text{ dB} * 10 + 120 = 89 \text{ (0x59)}$

Attack time: 10ms

Release time: 720ms

Control System-> AMPLIFIER	0xFE, 0xA3, 0x08, 0xC2, 0x59, 0x02, 0x03,0xC9
AMPLIFIER-> Control System	0x06

Set Delay Command (0xA4)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	Channel	Delay Time	Check Sum	Comments
0xFE	0xA4	0x6	0xC2 (Ch1) 0xC3 (Ch2)	0x00 ~ 0x58 (0 ~ 8.8ms)		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

SET CHANNEL 1 DELAY: $7.8\text{MS} * 10 = 78 \text{ (0X4E)}$

Control System-> AMPLIFIER	0xFE, 0xA4, 0x06, 0xC2, 0x4E, 0xB8
AMPLIFIER-> Control System	0x06

SET CROSSOVER COMMAND (0XA5)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Parameter Header	Function Index	LEN	Channel	Band	Enable	Frequency MSB	Frequency LSB	Slope
0xFE	0xA5	0xA	0xC2 (Ch1) 0xC3 (Ch2)	0x03(LPF) 0x04(HPF)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)		0x00 (BW-6) 0x01 (BW-12)

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set Channel 1 Low Pass filter (LPF), enable, 60Hz, Butterworth -6dB/octave (BW-6).

Control System-> AMPLIFIER	0xFE,0xA5,0x0A,0xC2,0x03,0x01,0x00,0x3C,0x00,AF
AMPLIFIER-> Control System	0x06

SET PEQ COMMAND (0XA6)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Parameter Header	Function Index	LEN	Channel	Band	Enable	Frequency MSB	Frequency LSB	Gain
0xFE	0xA5	0xC	0xC2 (Ch1) 0xC3 (Ch2)	0x0 ~ 0x7 (Band 1~8)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)		0x00~0xF0 (-12 ~ +12dB)

Byte 9	Byte 10
Q Factor	Mode
0x06 ~ 0x8C (0.6 ~ 14)	0x00 (Peak), 0x01 (Hi-Shelf), 0x02 (Lo-Shelf), 0x03 (Notch), 0x04 (LPF), 0x05 (HPF)

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set Channel 1

Band: 3

Frequency: 2400Hz (0x0960)

Gain: +2.4dB *10 +120 = 144 (0x90)

Q: 1.2 *1 = 12 (0xC)

Mode: Peaking

Control System-> AMPLIFIER	0xFE,0xA6,0x0C,0xC2,0x02, 0x01, 0x09,0x60, 0x90,0x0C, 0x00,0x7A
AMPLIFIER-> Control System	0x06

LOAD PRESET COMMAND (0XA7)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Preset Bank	Check Sum	Comments
0xFE	0xA7	0xC	0x00 ~ 0x13 Preset (1 ~ 20)	0x0 ~ 0x7 (Band 1~8)	Load selected preset bank.

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Load preset bank 5.

Control System-> AMPLIFIER	0xFE,0xA7,0x05,0x04, 0xAE
AMPLIFIER-> Control System	0x06

SAVE PRESET COMMAND (0XA8)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Preset Bank	Check Sum	Comments
0xFE	0xA8	0x5	0x00 ~ 0x13 Preset (1 ~ 20)	0x0 ~ 0x7 (Band 1~8)	Save current DSP settings to selected preset bank

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Save current DSP settings to Preset bank 10.

Control System-> AMPLIFIER	0xFE,0xA8,0x05,0x09, 0xB4
AMPLIFIER-> Control System	0x06

RENAME PRESET COMMAND (0XA9)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Parameter Header	Function Index	LEN	Preset Bank	Character 0	Character 1	Character 2	Character 3
0xFE	0xA9	0x11	0x00 ~ 0x13 Preset (1 ~ 20)	Character 0	Character 1	Character 2	Character 3

Byte 8	Byte 9	Byte 10	Byte 11	Byte 12	Byte 13	Byte 14	Byte 15
Character 4	Character 5	Character 6	Character 7	Character 8	Character 9	Character 10	Character 11
Character 4	Character 5	Character 6	Character 7	Character 8	Character 9	Character 10	Character 11

Comments
For "space" character, use 0x20

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Rename preset 2 to "Concert" (Ascii: 0x43 0x6f 0x6e 0x63 0x65 0x72 0x74)

Control System-> AMPLIFIER	0xFE,0xA9, 0x11,0x00,0x43, 0x6f, 0x6e, 0x63, 0x65, 0x72, 0x74,0x20,0x20,0x20,0x20,0x20,0x20, 0x26
AMPLIFIER-> Control System	0x06

SET LINE OUT VOLUME MODE COMMAND (0XAA)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Comments
Parameter Header	Function Index	LEN	Mode	Check Sum	
0xFE	0xAA	0x5	0x 01 = Fixed 0x00 = Variable		Fixed: independent of master volume control. Variable: Varies with master volume control.

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set line out volume mode to fixed. (Not affected by master volume control)

Control System-> AMPLIFIER	0xFE,0xAA, 0x05, 0x01,0xAE
AMPLIFIER-> Control System	0x06



SELECT INPUT SOURCE COMMAND (0xAB)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Source	Check Sum	Comments
0xFE	0xAB	0x5	0x00 (Analogue) 0x01 (SPDIF) 0x02 (eAudioCast)		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Select audio from SPDIF.

Control System-> AMPLIFIER	0xFE,0xAB, 0x05, 0x01,0xAF
AMPLIFIER-> Control System	0x06

SET INPUT MODE COMMAND (0xAC)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Input Mode	Check Sum	Comments
0xFE	0xAC	0x5	0x00 (Stereo) 0x01 (Mono) 0x02 (Y)		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set input mode to mono configuration.

Control System-> AMPLIFIER	0xFE,0xAC,0x05,0x01, 0xB0
AMPLIFIER-> Control System	0x06

SET SLEEP MODE COMMAND (0xAD)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xAD	0x5	0x00: Deep 0x01: Light		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set sleep mode to deep mode.

Control System-> AMPLIFIER	0xFE,0xAD,0x05,0x00, 0xB0
AMPLIFIER-> Control System	0x06

SET POWER MODE COMMAND (0XAE)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xAE	0x5	0x00: ON 0x01: Auto 0x02: 12V Trigger		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set power on mode to 12V triggered.

Control System-> AMPLIFIER	0xFE,0xAE,0x05,0x02, 0xB3
AMPLIFIER-> Control System	0x06

SET OUTPUT MODE COMMAND (0XAF)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	Channel	Mode	Check Sum	Comments
0xFE	0xAF	0x6	0xC2 (Ch1) 0xC3 (Ch2)	0x00: Lo-Z 0x01: 70V 0x02: 100V		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set output mode of Channel 1 to 70V.

Control System-> AMPLIFIER	0xFE,0xAF,0x06,0xC2, 0x01, 0x76
AMPLIFIER-> Control System	0x06

SET BRIDGE MODE COMMAND (0XB0)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xB0	0x5	0x00: Bridge Off 0x01: Bridge On		

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set bridge mode on.

Control System-> AMPLIFIER	0xFE,0xB0,0x05,0x01, 0xB4
AMPLIFIER-> Control System	0x06

SET INPUT LEVEL COMMAND (0XB1)

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Parameter Header	Function Index	LEN	Channel	Volume	Check Sum
0xFE	0xB1	0x6	0xC2 (Ch1) 0xC3 (Ch2)	0x00~ 0x18 (-18 ~ +6 dB)	

AMPLIFIER return

0x06 (ACK) OK

0x15(NACK) ERROR

Examples

Set input level of Channel 2: -10dB +18 = 8 (0x08)

Control System-> AMPLIFIER	0xFE,0xB1,0x06,0xC3,0x08,0x7F
AMPLIFIER-> Control System	0x06

GET MUTE STATUS (0XC0)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3
Parameter Header	Function Index	LEN	Check Sum
0xFE	0xC0	0x4	0xC2

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Parameter Header	Function Index	LEN	CH1 MUTE	CH2 MUTE	Check Sum
0xFE	0xC0	0x6	0x00 (unmute) 0x01(mute)	0x00 (unmute) 0x01(mute)	

Examples

Get AMPLIFIER mute data

Control System-> AMPLIFIER	0xFE, 0xC0, 0x04, 0xC2
AMPLIFIER-> Control System	0xFE, 0xC0, 0x06, 0x00, 0x01, 0xC5

GET PHASE STATUS (0XC1)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3
Parameter Header	Function Index	LEN	Check Sum
0xFE	0xC1	0x04	0xC3

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Parameter Header	Function Index	LEN	CH1 Invert	CH2 Invert	Check Sum
0xFE	0xC1	0x6	0x00 (no invert) 0x01 (invert)	0x00 (no invert) 0x01 (invert)	

Examples

Get AMPLIFIER invert data

Control System-> AMPLIFIER	0xFE, 0xC1, 0x04, 0xC3
AMPLIFIER-> Control System	0xFE, 0xC1, 0x06, 0x01, 0x01, 0xC7

GET VOLUME LEVEL (0XC2)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xC2	0x04	0xC4	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Comments
Parameter Header	Function Index	LEN	CH1 Volume MSB	CH1 Volume LSB	CH2 Volume MSB	CH2 Volume LSB	Check Sum	
0xFE	0xC2	0x8	0x0000 ~ 0x03DE (-99.0 ~ 0.0 dB)		0x0000 ~ 0x03DE (-99.0 ~ 0.0 dB)			

Examples

Get AMPLIFIER Volume data

Control System-> AMPLIFIER	0xFE, 0xC2, 0x04, 0xC4
AMPLIFIER-> Control System	0xFE, 0xC2, 0x08, 0x03, 0xDE, 0x03, 0xDE, 0x8A

GET LIMITER PARAMETER (0XC3)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xC3	0x04	0xC5	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
Parameter Header	Function Index	LEN	CH1 Threshold	CH1 Attack Time	CH1 Release Time
0xFE	0xC3	0x0A	0x00~0x78 (-12 ~ 0dB)	0x00: (1ms) 0x01: (5ms) 0x02: (10ms) 0x03: (20ms) 0x04: (50ms) 0x05:(100ms)	0x00: (90ms) 0x01: (180ms) 0x02: (360ms) 0x03: (720ms) 0x04: (1.5s) 0x05:(3s)

Byte 6	Byte 7	Byte 8	Byte 9	
CH2 Threshold	CH2 Attack Time	CH2 Release Time	Check Sum	Comments
0x00~0x78 (-12 ~ 0dB)	0x00: (1ms) 0x01: (5ms) 0x02: (10ms) 0x03: (20ms) 0x04: (50ms) 0x05:(100ms)	0x00: (90ms) 0x01: (180ms) 0x02: (360ms) 0x03: (720ms) 0x04: (1.5s) 0x05:(3s)	0xC5	



Examples

Get AMPLIFIER Limiter Value

Control System-> AMPLIFIER	0xFE, 0xC3, 0x04, 0xC5
AMPLIFIER-> Control System	0xFE, 0xC3, 0x0A, 0x78, 0x01, 0x03, 0x78, 0x01, 0x03, 0xC3

GET DELAY VALUE (0XC4)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xC4	0x04	0xC6	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	CH1 Delay	CH2 Delay	Check Sum	Comments
0xFE	0xC4	0x06	0x00 ~ 0x58 (0 ~ 8.8ms)	0x00 ~ 0x58 (0 ~ 8.8ms)		

Examples

Get AMPLIFIER Delay Value

Control System-> AMPLIFIER	0xFE, 0xC4, 0x04, 0xC6
AMPLIFIER-> Control System	0xFE, 0xC4, 0x06, 0x00, 0x00, 0xC8

GET CROSSOVER (LOW PASS FILTER) VALUE (0XC5)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Band	Check Sum	Comments
0xFE	0xC5	0x05	0x03(LPF)	0xCB	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Parameter Header	Function Index	LEN	Band	CH1 Enable	CH1 Frequency MSB	CH1 Frequency LSB
0xFE	0xC5	0xD	0x03(LPF)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)	

Byte 7	Byte 8	Byte 9	Byte 10	Byte 11	Byte 12	
CH1 Slope	CH2 Enable	CH2 Frequency MSB	CH2 Frequency LSB	CH2 Slope	Check Sum	Comments
0x00 (BW-6) 0x01 (BW-12)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)		0x00 (BW-6) 0x01 (BW-12)		

Examples

Get AMPLIFIER Low Pass Filter Value

Control System-> AMPLIFIER	0xFE, 0xC5, 0x05, 0x03, 0xCB
AMPLIFIER-> Control System	0xFE, 0xC5, 0x0D, 0x03, 0x01, 0x4E, 0x20, 0x00, 0x01, 0x4E, 0x20, 0x00, 0xB1

GET CROSSOVER (HIGH PASS FILTER) VALUE (0XC5)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Band	Check Sum	Comments
0xFE	0xC5	0x05	0x04(HPF)	0xCC	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Parameter Header	Function Index	LEN	Band	CH1 Enable	CH1 Frequency MSB	CH1 Frequency LSB
0xFE	0xC5	0xD	0x04(HPF))	0x01 = On 0x00 = Off	0x0000 ~ 0x03DE (-99.0 ~ 0.0 dB)	

Byte 7	Byte 8	Byte 9	Byte 10	Byte 11	Byte 12	
Parameter Header	CH2 Enable	CH2 Frequency MSB	CH2 Frequency LSB	CH2 Slope	Check Sum	Comments
0xFE	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)		0x00 (BW-6) 0x01 (BW-12)		

Examples

Get AMPLIFIER High Pass Filter Value

Control System-> AMPLIFIER	0xFE, 0xC5, 0x05, 0x04, 0xCC
AMPLIFIER-> Control System	0xFE, 0xC5, 0x0D, 0x04, 0x01, 0x4E, 0x20, 0x00, 0x01, 0x4E, 0x20, 0x00, 0xB2

GET PEQ (BAND X) VALUE (0XC6)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Band	Check Sum	Comments
0xFE	0xC6	0x05	0x00 ~ 0x07 (Band 1 ~ 8)		

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
Parameter Header	Function Index	LEN	Band	CH1 Enable	CH1 Frequency MSB	CH1 Frequency LSB
0xFE	0xC6	0x11	0x00 ~ 0x07 (Band 1 ~ 8)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)	



Byte 7	Byte 8	Byte 9	Byte 10	Byte 11	Byte 12	Byte 13
CH1 Gain	CH1 Q Factor	CH1 Mode	CH2 Enable	CH2 Frequency MSB	CH2 Frequency LSB	CH2 Gain
0x00~0xF0 (-12 ~ +12dB)	0x06 ~ 0x8C (0.6 ~ 14)	0x00(Peak) 0x01(Hi-Shelf) 0x02(Lo-Shelf) 0x03(Notch) 0x04(LPF) 0x05(HPF)	0x01 = On 0x00 = Off	0x0014 ~ 0x4E20 (20 ~ 20kHz)		0x00~0xF0 (-12 ~ +12dB)

Byte 14	Byte 15	Byte 16
CH2 Q Factor	CH2 Mode	Check Sum
0x06 ~ 0x8C (0.6 ~ 14)	0x00(Peak) 0x01(Hi-Shelf) 0x02(Lo-Shelf) 0x03(Notch) 0x04(LPF) 0x05(HPF)	

Examples

Get AMPLIFIER PEQ (Band 4) Value

Control System-> AMPLIFIER	0xFE, 0xC6, 0x05, 0x03, 0xCC
AMPLIFIER-> Control System	0xFE, 0xC6, 0x11, 0x03, 0x01, 0x4E, 0x20, 0x78, 0x00, 0x06, 0x01, 0x4E, 0x20, 0x78, 0x00, 0x06, 0xB0

GET PRESET NAME (BANK X) (0XC9)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4
Parameter Header	Function Index	LEN	Preset Bank	Check Sum
0xFE	0xC9	0x05	0x00 ~ 0x13 Preset (1 ~ 20)	0xCC

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Parameter Header	Function Index	LEN	Preset Bank	Character 0	Character 1	Character 2	Character 3	Character 4
0xFE	0xC9	0x11	0x00 ~ 0x13 Preset (1 ~ 20)	Character 0	Character 1	Character 2	Character 3	Character 4

Byte 9	Byte 10	Byte 11	Byte 12	Byte 13	Byte 14	Byte 15	Byte 16
Character 5	Character 6	Character 7	Character 8	Character 9	Character 10	Character 11	Check Sum
Character 5	Character 6	Character 7	Character 8	Character 9	Character 10	Character 11	For "space" character : 0x00

Examples

Get preset bank 4's name which is "Concert" (Ascii: 0x43 0x6f 0x6e 0x63 0x65 0x72 0x74)

Control System-> AMPLIFIER	0xFE, 0xC9, 0x05, 0x03, 0xCF
AMPLIFIER-> Control System	0xFE, 0xC9, 0x11, 0x03, 0x43, 0x6f, 0x6e, 0x63, 0x65, 0x72, 0x74, 0x00, 0x00, 0x00, 0x00, 0x00, 0xA9

GET LINE OUT VOLUME MODE (0XCA)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCA	0x04		

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xCA	0x05	0x00 = Fixed 0x01 = Variable		

Examples

Get line out volume mode.

Control System-> AMPLIFIER	0xFE, 0xCA, 0x04, 0xCC
AMPLIFIER-> Control System	0xFE, 0xCA, 0x05, 0x01, 0xCE

GET INPUT SOURCE SELECT SETTING (0XCB)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCB	0x04	0x?	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Input Source	Check Sum	Comments
0xFE	0xCB	0x5	0x00 (Analogue) 0x01 (SPDIF) 0x02 (e-AudioCast)		

Examples

Get Input source selected.

Control System-> AMPLIFIER	0xFE, 0xCB, 0x04, 0xCD
AMPLIFIER-> Control System	0xFE, 0xCB, 0x05, 0x01, 0xCF

GET INPUT MODE SETTING (0XCC)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCC	0x04	0xCE	

AMPLIFIER return



Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Input mode	Check Sum	Comments
0xFE	0xCC	0x5	0x00 (Stereo) 0x01 (Mono) 0x02 (Y)		

Examples

Get Input mode setting

Control System-> AMPLIFIER	0xFE, 0xCC, 0x04, 0xCE
AMPLIFIER-> Control System	0xFE, 0xCC, 0x05, 0x01, D0

GET SLEEP MODE SETTING (0XCD)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCD	0x04	0xCF	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xCD	0x5	0x00: Deep 0x01: Light		

Examples

Get Sleep mode setting

Control System-> AMPLIFIER	0xFE, 0xCC, 0x04, 0xCE
AMPLIFIER-> Control System	0xFE, 0xCC, 0x05, 0x01, D0

GET POWER MODE SETTING (0XCE)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCE	0x04	0xD0	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xCE	0x5	0x00: ON 0x01: Auto 0x02: 12V Trigger		

Examples

Get power mode setting.

Control System-> AMPLIFIER	0xFE, 0xCE, 0x04, 0xD0
AMPLIFIER-> Control System	0xFE, 0xCE, 0x05, 0x02, 0xD3

GET OUTPUT MODE SETTING (0XCF)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xCF	0x04	0xC2	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	CH1 Mode	CH2 Mode	Check Sum	Comments
0xFE	0xCF	0x06	0x00: Lo-Z 0x01: 70V 0x02: 100V	0x00: Lo-Z 0x01: 70V 0x02: 100V		

Examples

Get AMPLIFIER output mode setting

Control System-> AMPLIFIER	0xFE, 0xCF, 0x04, 0xD1
AMPLIFIER-> Control System	0xFE, 0xCF, 0x06, 0x01, 0x01, 0xD5

GET BRIDGE MODE SETTING (0XD0)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xD0	0x04	0xD2	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	
Parameter Header	Function Index	LEN	Mode	Check Sum	Comments
0xFE	0xD0	0x05	0x00: Bridge Off 0x01: Bridge On		

Examples

Get Bridge mode setting

Control System-> AMPLIFIER	0xFE, 0xD0, 0x04, 0xD2
AMPLIFIER-> Control System	0xFE, 0xD0, 0x05, 0x01, 0xD4

GET INPUT LEVEL (0XD1)

Control System send command

Byte 0	Byte 1	Byte 2	Byte 3	
Parameter Header	Function Index	LEN	Check Sum	Comments
0xFE	0xD1	0x04	0xD3	

AMPLIFIER return

Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	
Parameter Header	Function Index	LEN	CH1 Volume	CH2 Volume	Check Sum	Comments



Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5
0xFE	0xD1	0x6	0x00~ 0x18 (-18 ~ +6 dB)	0x00~ 0x18 (-18 ~ +6 dB)	

Examples

Get AMPLIFIER analogue input level.

Control System-> AMPLIFIER	0xFE, 0xD1, 0x04, 0xD3
AMPLIFIER-> Control System	0xFE, 0xD1, 0x06, 0x12, 0x12, 0xF9





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