

SONY®

Digital Powered Mixer

SRP-X500P

RS-232C Interface Manual

1st Edition

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1. Overview

1.1 About This Manual

This manual is the Interface Manual for the Sony SRP-X500P Digital Powered Mixer. The protocol explained in this manual is designed for controlling the SRP-X500P Digital Powered Mixer from an externally connected computer. This manual should be used together with the Operating Instructions and the User's Guide.

Note

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In this manual, numeric values are indicated as follows:

Unmarked numbers	: decimal numbers
Numbers prefaced by "0x" (e.g., 0x10)	: hexadecimal numbers
Numbers enclosed by single quotation marks (' ')	: ASCII-converted hexadecimal numbers code

1.2 Connecting the SRP-X500P to a Computer

Connect the COM port of the computer to the REMOTE RS-232C connector of the SRP-X500P.

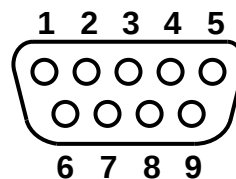
The REMOTE RS-232C connector of the SRP-X500P has the following specifications.

Terminal configuration : D-sub 9-pin, male, inch-sized screws

Electrical specifications : Conforms to the RS-232C standard

Connections :

Pin No.	Name
1	NC
2	RXD
3	TXD
4	OPEN
5	GND
6	NC
7	NC
8	NC
9	OPEN



SRP-X500P			Computer COM port		
REMOTE RS-232C connector			(for D-sub 9-pin, male connector)		
Name	Pin No.		Pin No.	Name	
RXD	2	_____	3	TXD	
TXD	3	_____	2	RXD	
GND	5	_____	5	GND	

1.3 Communication Format

The communication format is described below.

Baud rate	: 38,400 bps
Communication mode	: Half-duplex start stop system (asynchronous)
Data length	: 8 bits
Parity bit	: odd
Stop bit	: 1 bit
Flow control	: None

1.4 Communication Protocol

The communication protocol is described below.

- When the SRP-X500P successfully receives a command from the computer, the SRP-X500P returns an ACK (Acknowledge). When the SRP-X500P fails to process a command due to a reception error or other problem, it returns a NAK (Not Acknowledge).
- When the computer sends a command, the computer waits for an ACK or NAK from the SRP-X500P. If the computer receives a response, it can send the next command.
- If the computer does not receive a response even after 1000 ms has elapsed after the transmission of the command, it means that the SRP-X500P did not receive the command normally. The computer should re-send the command.
- Transmission of the command by the computer should take place within 1000 ms. If the transmission is not completed within 1000 ms, a NAK should be returned without processing of the command.
- If the computer receives a NAK while transmitting the command, the computer should stop transmitting the command immediately.

1.5 Note on Value Settings

When setting up or operating the SRP-X500P through the RS-232C connector, be sure the parameters are within the value ranges specified in this protocol manual. The setting of values not defined in this manual may be a cause of an operational malfunction in the SRP-X500P or a communication malfunction between the SRP-X500P and the SRP-X500P Manager software. If this happens, the FACTORY PRESET command should be transmitted to restore the SRP-X500P parameters to their factory settings.

Afterwards, the parameters should be set to their appropriate values.

1.6 Handshake Codes

ACK : 0x41 ('A')

When the SRP-X500P has received a command from an external computer and has processed it successfully, it returns an ACK to the computer as notification that the command has been executed. There are cases when other data are added to and returned with the ACK, depending on the command.

See "2. Command Reference" (page 6) for details.

NAK : 0x4E ('N')

When the SRP-X500P fails to process a command sent by an external computer, it returns a NAK to the computer.

DELIMITER : 0x0D ('CR')

The SRP-X500P adds a delimiter code (equivalent to the ASCII carriage return) as the last byte of all commands.

1.7 Communication Packet Format

Communication packets are variable in data length.

A communication packet consists of command, parameter and delimiter, as shown below.

Command example:

When "C" is selected in AV/RGB INPUT ('C S E L 3 CR')

<u>0x43</u> , <u>0x53</u> , <u>0x45</u> , <u>0x4C</u> ,	<u>0x33</u> ,	<u>0x0D</u>
Command	Parameter	Delimiter

Command : The command always comprises the first four bytes.

Parameter : The length and function of the parameter varies according to the command. See "2. Command Reference" (page 6) for details.

Delimiter : The SRP-X500P always adds the delimiter code 0x0D (equivalent to the ASCII carriage return) as the last byte of all commands.

Example of ACK

When the SRP-X500P returns the status of the AV/RGB INPUT SELECT (response to 'R S E L CR')

<u>0x41</u> ,	<u>0x33</u> ,	<u>0x0D</u>
ACK	Parameter	Delimiter

Parameter : The length and function of the parameter varies according to the command. See "2. Command Reference" (page6) for details.

Delimiter : The SRP-X500P always adds the delimiter code 0x0D (equivalent to the ASCII carriage return) as the last byte of all commands.

Example of NAK

<u>0x4E</u> ,	<u>0x0D</u>
NAK	Delimiter

Delimiter : The SRP-X500P always adds the delimiter code 0x0D (equivalent to the ASCII carriage return) as the last byte of all commands.

2. Command Reference

2.1 Basic Control Commands

The following commands are provided to perform basic control on the SRP-X500P such as volume level control and channel input selection.

2.1.1 AV/RGB INPUT SELECT : 0x43 0x53 0x45 0x4C ('CSEL')

This command is used to select the channel input from the AV/RGB INPUT connectors (A to E).

- **Packet format**

0x43 0x53 0x45 0x4C "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 1 byte of data, as shown in the following table.

Byte	Parameter
1st	AV/RGB INPUT SELECT

- **AV/RGB INPUT SELECT (1st byte)**

Specifies the channel as the parameter. The parameter and the channel are shown in the following table.

Channel	
OFF (All buttons turn off.)	0x30 ('0')
A (Only button A turns on.)	0x31 ('1')
B (Only button B turns on.)	0x32 ('2')
C (Only button C turns on.)	0x33 ('3')
D (Only button D turns on.)	0x34 ('4')
E (Only button E turns on.)	0x35 ('5')

- **Example**

To select channel B from among the AV/RGB INPUT connectors

0x43 0x53 0x45 0x4C 0x32 0x0D

('C S E L 2 CR')

2.1.2 AV/RGB INPUT SELECT PARAMETER REQUEST : 0x52 0x53 0x45 0x4C ('RSEL')

This command is used to read the selection of the channel input from the AV/RGB INPUT connectors from the SRP-X500P.

- **Packet format**

0x52 0x53 0x45 0x4C 0x0D

- **Return packet format**

When the SRP-X500P receives a command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

The parameter is the same as that of the AV/RGB INPUT SELECT command.

- **Example**

When channel B input from among the AV/RGB INPUT connectors is selected

0x41 0x32 0x0D

('A 2 CR')

2.1.3 INPUT FADER : 0x43 0x50 0x4D 0x35 ('CPM5')

This command is used to set the input fader setting.

The parameter set by this command works in the same way as the input fader setting in the OVER VIEW screen of the SRP-X500P Manager.

- **Packet format**

0x43 0x50 0x4D 0x35 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of the 6 bytes of data in order as shown in the following table.

Byte	Parameter
1st	MIC 1/WL 1 INPUT FADER
2nd	MIC 2/WL 2 INPUT FADER
3rd	MIC 3 INPUT FADER
4th	MIC 4 INPUT FADER
5th	LINE INPUT FADER
6th	AV/RGB INPUT FADER

- **FADER (1st-6th byte)**

The level for each fader can be specified (in dB units).

The parameter and levels are as shown in the following table.

Level		Level		Level		Level	
-∞	0x30 ('0')	-20.0	0x40 ('@')	-4.5	0x50 ('P')	+3.5	0x60 ('')
-70.0	0x31 ('1')	-19.0	0x41 ('A')	-4.0	0x51 ('Q')	+4.0	0x61 ('a')
-60.0	0x32 ('2')	-18.0	0x42 ('B')	-3.5	0x52 ('R')	+4.5	0x62 ('b')
-55.0	0x33 ('3')	-17.0	0x43 ('C')	-3.0	0x53 ('S')	+5.0	0x63 ('c')
-50.0	0x34 ('4')	-16.0	0x44 ('D')	-2.5	0x54 ('T')	+5.5	0x64 ('d')
-45.0	0x35 ('5')	-15.0	0x45 ('E')	-2.0	0x55 ('U')	+6.0	0x65 ('e')
-40.0	0x36 ('6')	-14.0	0x46 ('F')	-1.5	0x56 ('V')	+6.5	0x66 ('f')
-35.0	0x37 ('7')	-13.0	0x47 ('G')	-1.0	0x57 ('W')	+7.0	0x67 ('g')
-32.5	0x38 ('8')	-12.0	0x48 ('H')	-0.5	0x58 ('X')	+7.5	0x68 ('h')
-30.0	0x39 ('9')	-11.0	0x49 ('I')	0	0x59 ('Y')	+8.0	0x69 ('i')
-27.5	0x3A (':')	-10.0	0x4A ('J')	+0.5	0x5A ('Z')	+8.5	0x6A ('j')
-25.0	0x3B (';')	-9.0	0x4B ('K')	+1.0	0x5B ('[')	+9.0	0x6B ('k')
-24.0	0x3C ('<')	-8.0	0x4C ('L')	+1.5	0x5C ('\')	+10.0	0x6C ('l')
-23.0	0x3D ('=')	-7.0	0x4D ('M')	+2.0	0x5D (']')		
-22.0	0x3E ('>')	-6.0	0x4E ('N')	+2.5	0x5E ('^')		
-21.0	0x3F ('?')	-5.0	0x4F ('O')	+3.0	0x5F ('_')		

- **Example**

To set the level for each input fader as follows:

MIC 1/WL 1 INPUT : -10dB

MIC 2/WL 2 INPUT : -10dB

MIC 3 INPUT : -10dB

MIC 4 INPUT : -10dB

LINE INPUT : 0dB

AV/RGB INPUT : 0dB

0x43 0x50 0x4D 0x35 0x4A 0x4A 0x4A 0x59 0x59 0x0D

('C P M 5 J J J Y Y CR')

2.1.4 INPUT FADER REQUEST : 0x52 0x50 0x4D 0x35 ('RPM5')

This command is used to read the input fader settings from the SRP-X500P.

- **Packet format**

0x52 0x50 0x4D 0x35 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

The parameter consists of 6 bytes of data which are the same as those of the parameter of the INPUT FADER command.

2.1.5 OUTPUT FADER : 0x43 0x50 0x4D 0x40 ('CPM@')

This command is used to set the level of the output faders.

The parameter specified by this command functions in the same way as the output faders in the OVER VIEWscreen of the SRP-X500P Manager.

● Packet format

0x43 0x50 0x4D 0x40 "parameter" 0x0D

◆ Parameter

The parameter consists of 8 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SPEAKER OUTPUT 1 FADER
2nd	SPEAKER OUTPUT 2 FADER
3rd	SPEAKER OUTPUT 3 FADER
4th	SPEAKER OUTPUT 4 FADER
5th	LINE OUTPUT 1 FADER
6th	LINE OUTPUT 2 FADER
7th	LINE OUTPUT 3 FADER
8th	LINE OUTPUT 4 FADER

● FADER (1st-8th byte)

The level for each output fader can be specified (in dB units).

The correspondence of the parameter with the level meter setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

● Example

To specify the level for each output fader as follows:

```

SPEAKER OUTPUT 1 FADER      : -10dB
SPEAKER OUTPUT 2 FADER      : -10dB
SPEAKER OUTPUT 3 FADER      : -10dB
SPEAKER OUTPUT 4 FADER      : -10dB
LINE OUTPUT 1 FADER          : 0dB
LINE OUTPUT 2 FADER          : 0dB
LINE OUTPUT 3 FADER          : 0dB
LINE OUTPUT 4 FADER          : 0dB

```

```

0x43 0x50 0x4D 0x40 0x4A 0x4A 0x4A 0x4A 0x59 0x59 0x59 0x59 0x0D
('C P M @ J J J Y Y Y Y CR')

```

2.1.6 OUTPUT FADER REQUEST : 0x52 0x50 0x4D 0x40 ('RPM@')

This command is used to read the output fader settings of the SRP-X500P.

● Packet format

0x52 0x50 0x4D 0x40 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

The parameter consists of 8 bytes of data and is the same as that of the OUTPUT FADER command.

2.1.7 REMOTE 1-6 LEVEL : 0x43 0x4C 0x56 0x4C ('CLVL')

This command is used to set the level of the REMOTE faders.

The level of the REMOTE faders are reset to 0 dB when the SRP-X500P is turned off.

- **Packet format**

0x43 0x4C 0x56 0x4C "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	Channel
2nd	LEVEL

- **Channel (1st byte)**

Specifies the REMOTE fader channel.

The parameter and the REMOTE fader channel are as shown in the following table.

Channel	
REMOTE 1	0x42 ('B')
REMOTE 2	0x43 ('C')
REMOTE 3	0x44 ('D')
REMOTE 4	0x45 ('E')
REMOTE 5	0x46 ('F')
REMOTE 6	0x47 ('G')

- **LEVEL (2nd byte)**

The level for each fader can be specified (in dB units).

The parameter and the level are as shown in the following table.

Level		Level		Level	
$-\infty$	0x30 ('0')	-20.0	0x40 ('@')	-4.5	0x50 ('P')
-70.0	0x31 ('1')	-19.0	0x41 ('A')	-4.0	0x51 ('Q')
-60.0	0x32 ('2')	-18.0	0x42 ('B')	-3.5	0x52 ('R')
-55.0	0x33 ('3')	-17.0	0x43 ('C')	-3.0	0x53 ('S')
-50.0	0x34 ('4')	-16.0	0x44 ('D')	-2.5	0x54 ('T')
-45.0	0x35 ('5')	-15.0	0x45 ('E')	-2.0	0x55 ('U')
-40.0	0x36 ('6')	-14.0	0x46 ('F')	-1.5	0x56 ('V')
-35.0	0x37 ('7')	-13.0	0x47 ('G')	-1.0	0x57 ('W')
-32.5	0x38 ('8')	-12.0	0x48 ('H')	-0.5	0x58 ('X')
-30.0	0x39 ('9')	-11.0	0x49 ('I')	0	0x59 ('Y')
-27.5	0x3A (':')	-10.0	0x4A ('J')		
-25.0	0x3B (';')	-9.0	0x4B ('K')		
-24.0	0x3C ('<')	-8.0	0x4C ('L')		
-23.0	0x3D ('=')	-7.0	0x4D ('M')		
-22.0	0x3E ('>')	-6.0	0x4E ('N')		
-21.0	0x3F ('?')	-5.0	0x4F ('O')		

- **Example**

To set the REMOTE fader 1 to 0 dB
 0x43 0x4C 0x56 0x4C 0x42 0x59 0x0D
 ('C L V L B Y CR')

2.1.8 REMOTE FADER LEVEL PARAMETER REQUEST : 0x52 0x4C 0x56 0x4C ('RLVL')

This command is used to read the master volume and REMOTE fader level settings from the SRP-X500P.

- **Packet format**

0x52 0x4C 0x56 0x4C 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

◆ Parameter

The parameter consists of 7 bytes of data in the order shown in the following table.

Byte	Parameter
1st	MASTER VOLUME LEVEL
2nd	REMOTE 1 LEVEL
3rd	REMOTE 2 LEVEL
4th	REMOTE 3 LEVEL
5th	REMOTE 4 LEVEL
6th	REMOTE 5 LEVEL
7th	REMOTE 6 LEVEL

- **MASTER VOLUME LEVEL (1st byte)**

The master volume level is shown (in dB units).

The correspondence of the parameter with the level setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

- **REMOTE 1-6 LEVEL (2nd-7th byte)**

The level of each REMOTE fader is shown (in dB units).

The correspondence of the parameter with the level setting is the same as that of the LEVEL parameter of the REMOTE 1-6 LEVEL command (page 10).

2.1.9 MASTER VOLUME UP : 0x43 0x4C 0x56 0x2B ('CLV+')

This command is used to turn up the master volume.

When this command is transmitted, the volume increases continuously. When the MASTER VOLUME STOP command (page 13) is transmitted, the volume level stops increasing.

To read the control status of the MASTER VOLUME motor from the SRP-X500P, use the STATUS REQUEST command (page 23).

To read the master volume level setting from the SRP-X500P, use the REMOTE FADER LEVEL PARAMETER REQUEST command (page 11).

- **Packet format**

0x43 0x4C 0x56 0x2B "parameter" 0x0D

◆ Parameter

The parameter consists of 1 byte of data.

Be sure to use 0x40('@') for this parameter.

- **Example**

To turn up the master volume level:

0x43 0x4C 0x56 0x2B 0x40 0x0D

('C L V + @ CR')

2.1.10 MASTER VOLUME DOWN : 0x43 0x4C 0x56 0x2D ('CLV-')

This command is used to turn down the master volume.

When this command is transmitted, the volume level decreases continuously. When the MASTER VOLUME STOP command (page 13) is transmitted, the volume level stops decreasing.

To read the control status of the MASTER VOLUME motor from the SRP-X500P, use the STATUS REQUEST command (page 23).

To read the master volume level setting from the SRP-X500P, use the REMOTE FADER LEVEL PARAMETER REQUEST command (page 11).

- **Packet format**

0x43 0x4C 0x56 0x2D "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 1 byte of data.

Be sure to use 0x40('@') for this parameter.

- **Example**

To turn down the master volume:

0x43 0x4C 0x56 0x2D 0x40 0x0D

('C L V - @ CR')

2.1.11 MASTER VOLUME STOP : 0x43 0x4C 0x56 0x53 ('CLVS')

This command is used to stop the increase or decrease in the master volume caused by the MASTER VOLUME UP or MASTER VOLUME DOWN command.

To read the control status of the MASTER VOLUME motor from the SRP-X500P, use the STATUS REQUEST command (page 23).

To read the master volume level setting from the SRP-X500P, use the REMOTE FADER LEVEL PARAMETER REQUEST command (page 11).

- **Packet format**

0x43 0x4C 0x56 0x53 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 1 byte of data.

Be sure to use 0x40('@') for this parameter.

- **Example**

To stop the increase or decrease in the master volume:

0x43 0x4C 0x56 0x53 0x40 0x0D

('C L V S @ CR')

2.1.12 MUTING : 0x43 0x4D 0x55 0x54 ('CMUT')

This command is used to turn off the specified channel ("Muting on") or turn the channel back on ("Muting off"). The parameter specified in this command for the MIC 1/2/WL 1/2 INPUT, MIC 3/4 INPUT, LINE INPUT, AV/RGB INPUT, SPEAKER OUTPUT 1-4, and LINE OUTPUT 1-4 channels function in the same way as the MUTING buttons in the BLOCK screen and the OVER VIEW screen of the SRP-X500P Manager.

Note

This command can be used only when the SYSTEM TYPE selector on the SRP-X500P is set to 0.

● Packet format

0x43 0x4D 0x55 0x54 "parameter" 0x0D

◆ Parameter

The parameter consists of 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	Channel
2nd	MUTING

● Channel (1st byte)

Specify muting of a channel.

The parameter and the channel selection are shown in the following table.

Channel		Channel	
MIC 1/WL 1 INPUT	0x30('0')	MASTER VOLUME	0x40('@')
MIC 2/WL 2 INPUT	0x31('1')	REMOTE 1	0x42('B')
MIC 3 INPUT	0x32('2')	REMOTE 2	0x43('C')
MIC 4 INPUT	0x33('3')	REMOTE 3	0x44('D')
LINE INPUT	0x36('6')	REMOTE 4	0x45('E')
AV/RGB INPUT	0x37('7')	REMOTE 5	0x46('F')
SPEAKER OUTPUT 1	0x38('8')	REMOTE 6	0x47('G')
SPEAKER OUTPUT 2	0x39('9')		
SPEAKER OUTPUT 3	0x3A(':',')		
SPEAKER OUTPUT 4	0x3B(';')		
LINE OUTPUT 1	0x3C('<')		
LINE OUTPUT 2	0x3D('='')		
LINE OUTPUT 3	0x3E('>')		
LINE OUTPUT 4	0x3F('?')		

● MUTING (2nd byte)

Specify muting or cancellation of muting.

The parameter and the muting setting are shown in the following table.

MUTING	
Muting off	0x40('@')
Muting on	0x41('A')

● Example

To turn off REMOTE fader 1(“Muting on”):
 0x43 0x4D 0x55 0x54 0x42 0x41 0x0D
 (‘C M U T B A C R’)

2.1.13 MUTING PARAMETER REQUEST : 0x52 0x4D 0x55 0x54 (‘RMUT’)

This command is used to read the muting status of the SRP-X500P.

● Packet format

0x52 0x4D 0x55 0x54 0x0D

● Return packet format

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 (‘A’)) in the order shown below.
 0x41 “parameter” 0x0D

◆ Parameter

The parameter consists of 5 bytes of data in the order shown in the following table.

Byte	Parameter
1st	INPUT MUTING
2nd	SPEAKER OUTPUT MUTING
3rd	LINE OUTPUT MUTING
4th	MASTER MUTING
5th	REMOTE MUTING

● INPUT MUTING (1st byte)

Shows the muting status of the input channels in the form of 8 bits of data.
 The bit is 0 for a channel which is not turned off (“Muting off”) and 1 for a channel which is turned off (“Muting on”).

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	AV/RGB	LINE	MIC 4	MIC 3	MIC 2	MIC 1
						/WL 2	/WL 1

● SPEAKER OUTPUT MUTING (2nd byte)

Shows the muting status of the speaker output channels in the form of 8 bits of data.
 The bit is 0 for a channel which is not turned off (“Muting off”) and 1 for a channel which is turned off (“Muting on”).

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	CH4	CH3	CH 2	CH 1

- **LINE OUTPUT MUTING (3rd byte)**

Shows the muting status of the LINE OUTPUT channels in the form of 8 bits of data.
The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	CH4	CH3	CH 2	CH 1

- **MASTER MUTING (4th byte)**

Shows the muting setting of the master volume.
The parameter and the muting setting are as shown in the following table.

MUTING	
Muting off	0x30('0')
Muting on	0x31('1')

- **REMOTE MUTING (5th byte)**

Shows the muting status of the REMOTE 1-6 faders in the form of 8 bits of data.
The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	CH 6	CH 5	CH4	CH3	CH 2	CH 1

- **Example**

When the muting status of each channel is as follows:

```

MIC 1/WL 1 INPUT      : Muting on
MIC 2/WL 2 INPUT      : Muting off
MIC 3 INPUT           : Muting on
MIC 4 INPUT           : Muting off
LINE INPUT            : Muting on
AV/RGB INPUT          : Muting off
SPEAKER OUTPUT 1     : Muting on
SPEAKER OUTPUT 2     : Muting off
SPEAKER OUTPUT 3     : Muting on
SPEAKER OUTPUT 4     : Muting off
LINE OUTPUT 1         : Muting on
LINE OUTPUT 2         : Muting off
LINE OUTPUT 3         : Muting on
LINE OUTPUT 4         : Muting off
MASTER               : Muting on
REMOTE 1              : Muting on
REMOTE 2              : Muting off
REMOTE 3              : Muting on
REMOTE 4              : Muting off
REMOTE 5              : Muting on
REMOTE 6              : Muting off

```

```

0x41 0x55 0x45 0x31 0x55 0x0D
('A U E E 1 U CR')

```

2.1.14 PROJECTOR ON/STANDBY : 0x43 0x50 0x4A 0x50 ('CPJP')

This command is used to change the power status (on or standby status) of the projector connected to the PROJECTOR CONTROL connector.

● Packet format

0x43 0x50 0x4A 0x50 "parameter" 0x0D

◆ Parameter

The parameter consists of 1 byte of data.

Byte	Parameter
1st	PROJECTOR CONTROL REQUEST

● PROJECTOR CONTROL REQUEST (1st byte)

Specify the power status of the projector.

The parameter and the power status setting are as shown in the following table.

Operation	
POWER STANDBY	0x40 ('@')
POWER ON	0x41 ('A')

● Example

To set the projector to standby status:

0x43 0x50 0x4A 0x50 0x40 0x0D

('C P J P A CR')

2.1.15 PROJECTOR ON/STANDBY PARAMETER REQUEST : 0x52 0x50 0x4A 0x50 ('RPJP')

This command is used to read the PROJECTOR ON/STANDBY POWER switch status of the SRP-X500P.

● Packet format

0x52 0x50 0x4A 0x50 0x0D

● Return packet format

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

◆ Parameter

The parameter consists of 1 byte of data.

Byte	Parameter
1st	PROJECTOR ON/STANDBY INDICATOR

- **PROJECTOR ON/STANDBY INDICATOR (1st byte)**

Shows the status of the PROJECTOR ON/STANDBY POWER switch.

The parameter and the status of the PROJECTOR ON/STANDBY POWER switch are as shown in the following table.

PROJECTOR ON/STANDBY INDICATOR	
STANDBY (The switch lights up red.)	0x30 ('0')
ON (The switch lights up red.)	0x31 ('1')
Cool off before entering STANDBY (the switch flashes green.)	0x32 ('2')

- **Example**

When the projector is cooling off before entering standby (the switch flashes green)

0x41 0x32 0x0D

('A 2 CR')

2.1.16 SCENE RECALL : 0x43 0x52 0x43 0x4C ('CRCL')

This command is used to recall a scene.

Note

This command can be used only when the SYSTEM TYPE selector on the SRP-X500P is set to 0.

- **Packet format**

0x43 0x52 0x43 0x4C "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 1 byte of data.

Byte	Parameter
1st	SCENE RECALL REQUEST

- **SCENE RECALL REQUEST (1st byte)**

Specify the scene number to be recalled.

SCENE RECALL REQUEST	
1	0x31 ('1')
2	0x32 ('2')
3	0x33 ('3')
4	0x34 ('4')
5	0x35 ('5')
6	0x36 ('6')
7	0x37 ('7')
8	0x38 ('8')

- **Example**

To recall scene No.7:

0x43 0x52 0x43 0x4C 0x37 0x0D

('C R C L 7 CR')

2.1.17 SCENE RECALL PARAMETER REQUEST : 0x52 0x52 0x43 0x4C ('RRCL')

This command is used to read the recalled scene number from the SRP-X500P.

- **Packet format**

0x52 0x52 0x43 0x4C 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41('A')) in the order shown below.

0x41 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 1 byte of data.

Byte	Parameter
1st	SCENE No.

- **SCENE No. (1st byte)**

Shows the recalled scene number, as shown in the following table.

SCENE No.	
None	0x30 ('0')
1	0x31 ('1')
2	0x32 ('2')
3	0x33 ('3')
4	0x34 ('4')
5	0x35 ('5')
6	0x36 ('6')
7	0x37 ('7')
8	0x38 ('8')

- **Example**

When no scene has been recalled:

0x41 0x30 0x0D

('A 0 CR')

2.2 Status Acquisition Commands

The following commands are used to acquire the settings and the status of the SRP-X500P.

2.2.1 INDEX REQUEST : 0x52 0x50 0x4D 0x44 ('RPMD')

This command is used to read the index names of all input/output connectors of the SRP-X500P.

The parameter returned for this command are the index names entered in the index name input boxes in the BLOCK screen of the SRP-X500P Manager.

- **Packet format**

0x52 0x50 0x4D 0x44 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

0x41 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 144 bytes of data in the order shown in the following table.

Byte	Parameter
1st-8th	MIC 1/WL 1 INPUT INDEX
9th -16th	MIC 2/WL 2 INPUT INDEX
17th-24 th	MIC 3 INPUT INDEX
25th-32nd	MIC 4 INPUT INDEX
33rd-40 th	LINE INPUT INDEX
41st-48 th	AV/RGB INPUT A INDEX
49th-56th	AV/RGB INPUT B INDEX
57th -64th	AV/RGB INPUT C INDEX
65th-72nd	AV/RGB INPUT D INDEX
73rd-80th	AV/RGB INPUT E INDEX
81st-88th	SPEAKER OUTPUT 1 INDEX
89th-96th	SPEAKER OUTPUT 2 INDEX
97th-104th	SPEAKER OUTPUT 3 INDEX
105th-112nd	SPEAKER OUTPUT 4 INDEX
113rd-120th	LINE OUTPUT 1 INDEX
121st-128th	LINE OUTPUT 2 INDEX
129th-136th	LINE OUTPUT 3 INDEX
137th-144th	LINE OUTPUT 4 INDEX

- **INDEX**

The index names of the input/output channels are shown using 8 bytes of ASCII code.

If an index name is shorter than 8 bytes, space characters (0x20) are used as fill-in.

● Example

When the input/output channels are specified with the index names as follows:

```

MIC 1/WL 1 INPUT      : MIC□1
MIC 2/WL 2 INPUT      : MIC□2
MIC 3 INPUT           : MIC□3
MIC 4 INPUT           : MIC□4
LINE INPUT            : MD
AV/RGB INPUT A        : CD
AV/RGB INPUT B        : DVD
AV/RGB INPUT C        : CASSETTE
AV/RGB INPUT D        : PC□1
AV/RGB INPUT E        : PC□2
SPEAKER OUTPUT 1     : SP□1
SPEAKER OUTPUT 2     : SP□2
SPEAKER OUTPUT 3     : SP□3
SPEAKER OUTPUT 4     : SP□4
LINE OUTPUT 1        : AUX□L
LINE OUTPUT 2        : AUX□R
LINE OUTPUT 3        : REC□L
LINE OUTPUT 4        : REC□R

```

```

0x41 0x4D 0x49 0x43 0x20 0x31 0x20 0x20 0x20 0x4D 0x49 0x43 0x20 0x32 0x20 0x20 0x20 0x4D 0x49
0x43 0x20 0x33 0x20 0x20 0x20 0x4D 0x49 0x43 0x20 0x34 0x20 0x20 0x20 0x4D 0x44 0x20 0x20 0x20
0x20 0x20 0x20 0x43 0x44 0x20 0x20 0x20 0x20 0x20 0x20 0x44 0x56 0x44 0x20 0x20 0x20 0x20 0x20
0x43 0x41 0x53 0x53 0x45 0x54 0x54 0x45 0x50 0x43 0x20 0x31 0x20 0x20 0x20 0x50 0x43 0x20
0x32 0x20 0x20 0x20 0x20 0x53 0x43 0x20 0x31 0x20 0x20 0x20 0x53 0x43 0x20 0x32 0x20 0x20
0x20 0x20 0x53 0x43 0x20 0x33 0x20 0x20 0x20 0x53 0x43 0x20 0x34 0x20 0x20 0x20 0x41
0x55 0x58 0x20 0x4C 0x20 0x20 0x20 0x41 0x55 0x58 0x20 0x52 0x20 0x20 0x20 0x52 0x45 0x43 0x20
0x4C 0x20 0x20 0x20 0x52 0x45 0x43 0x20 0x52 0x20 0x20 0x20 0x0D
('A M I C □ 1 □ □ □ M I C □ 2 □ □ □ M I C □ 3 □ □ □ M I C □ 4 □ □ □ M D □ □ □ □ □
□ C D □ □ □ □ □ □ D V D □ □ □ □ □ C A S S E T T E P C □ 1 □ □ □ □ P C □ 2 □ □ □
□ S P □ 3 □ □ □ □ S P □ 4 □ □ □ □ A U X □ L □ □ □ A U X □ R □ □ □ R E C □ L □ □
□ R E C □ R □ □ □ C R')

```

“□” indicates a space.

2.2.2 LEVEL METER PARAMETER REQUEST : 0x52 0x4D 0x54 0x52 ('RMTR')

This command is used to read the level meter indication from the SRP-X500P.

The parameter shown for this command indicates the level meter reading in the BLOCK screen and the OVER VIEW screen of the SRP-X500P Manager.

● Packet format

```
0x52 0x4D 0x54 0x52 0x0D
```

● Return packet format

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41 ('A')) in the order shown below.

```
0x41 "parameter" 0x0D
```

◆ Parameter

The parameter consists of 16 bytes of data in the order shown in the following table.

Byte	Parameter
1st	MIC 1/WL 1 INPUT LEVEL METER
2nd	MIC 2/WL 2 INPUT LEVEL METER
3rd	MIC 3 INPUT LEVEL METER
4th	MIC 4 INPUT LEVEL METER
5th	LINE INPUT L LEVEL METER
6th	LINE INPUT R LEVEL METER
7th	AV/RGB INPUT L LEVEL METER
8th	AV/RGB INPUT R LEVEL METER
9th	SPEAKER OUTPUT 1 LEVEL METER
10th	SPEAKER OUTPUT 2 LEVEL METER
11th	SPEAKER OUTPUT 3 LEVEL METER
12th	SPEAKER OUTPUT 4 LEVEL METER
13th	LINE OUTPUT 1 LEVEL METER
14th	LINE OUTPUT 2 LEVEL METER
15th	LINE OUTPUT 3 LEVEL METER
16th	LINE OUTPUT 4 LEVEL METER

● LEVEL METER (1st-16th byte)

Indicates the level meter reading (in VU units).

The parameter and the level meter reading are as shown in the following table.

Level meter reading		Level meter reading	
Less than -30	0x30 ('0')	-4	0x39 ('9')
-30	0x31 ('1')	-3	0x3A (':')
-20	0x32 ('2')	-2	0x3B (';')
-15	0x33 ('3')	-1	0x3C ('<')
-10	0x34 ('4')	0	0x3D ('=')
-8	0x35 ('5')	1	0x3E ('>')
-7	0x36 ('6')	2	0x3F ('?')
-6	0x37 ('7')	3 or more	0x40 ('@')
-5	0x38 ('8')		

- **Example**

When the level meter readings are as follows:

MIC 1/WL 1 INPUT LEVEL METER	: Less than -30 [VU]
MIC 2/WL 2 INPUT LEVEL METER	: -30 [VU]
MIC 3 INPUT LEVEL METER	: -20 [VU]
MIC 4 INPUT LEVEL METER	: -15 [VU]
LINE INPUT L LEVEL METER	: -10 [VU]
LINE INPUT R LEVEL METER	: -8 [VU]
AV/RGB INPUT L LEVEL METER	: -7 [VU]
AV/RGB INPUT R LEVEL METER	: -6 [VU]
SPEAKER OUTPUT 1 LEVEL METER	: -5 [VU]
SPEAKER OUTPUT 2 LEVEL METER	: -4 [VU]
SPEAKER OUTPUT 3 LEVEL METER	: -3 [VU]
SPEAKER OUTPUT 4 LEVEL METER	: -2 [VU]
LINE OUTPUT 1 LEVEL METER	: -1 [VU]
LINE OUTPUT 2 LEVEL METER	: 0 [VU]
LINE OUTPUT 3 LEVEL METER	: 1 [VU]
LINE OUTPUT 4 LEVEL METER	: 2 [VU]

0x41 0x30 0x31 0x32 0x33 0x34 0x35 0x36 0x37 0x38 0x39 0x3A 0x3B 0x3C 0x3D 0x3E 0x3F 0x0D
(‘A 0 1 2 3 4 5 6 7 8 9 : ; < = > ? CR’)

2.2.3 STATUS REQUEST : 0x52 0x50 0x4D “specified value” (‘RPM“specified value”’)

This command is used to acquire status information, such as the level meter value, from the SRP-X500P.

- **To acquire status of single item**

Transmit the following command to acquire the status of single item.

- **Packet format**

0x52 0x50 0x4D “specified value” 0x0D

Specify any single value that corresponds with the parameter in the following table.

- **Example**

To acquire the PROTECTION status:

0x52 0x50 0x4D 0x71 0x0D
(‘R P M q CR’)

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter corresponding to the specified value is returned together with an ACK (0x41(‘A’)) in the order shown below.

0x41 “parameter” 0x0D

- **To acquire the status of all items**

Transmit the following command to acquire the status of all items available using the STATUS REQUEST command.

- **Packet format**

0x52 0x41 0x53 0x54 0x0D
(‘R A S T C R’)

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41(‘A’)) in the order shown below.

0x41 “parameter” 0x0D

● Parameters

The parameter consists of 108 bytes of data, as shown in the following table.

Byte (when acquiring all items at one time)	Parameter	Specified value (when acquiring single item)	Parameter byte(s) (when acquiring single item)
1st	PROJECTOR PROTOCOL SWITCH	0x51 ('Q')	1
2nd	SYSTEM TYPE SWITCH	0x52 ('R')	1
3rd-8th	INPUT VOLUME	0x53 ('S')	6
9th	MASTER VOLUME LEVEL	0x54 ('T')	1
10th	REMOTE 1 LEVEL	0x55 ('U')	1
11th	REMOTE 2 LEVEL	0x56 ('V')	1
12th	REMOTE 3 LEVEL	0x57 ('W')	1
13th	REMOTE 4 LEVEL	0x58 ('X')	1
14th	REMOTE 5 LEVEL	0x59 ('Y')	1
15th	REMOTE 6 LEVEL	0x5A ('Z')	1
16th-21st	INPUT LEVEL	0x5B ('[')	6
22nd-29th	OUTPUT LEVEL	0x5C ('\')	8
30th	INPUT MUTING	0x5D (']')	1
31st, 32nd	OUTPUT MUTING	0x5E ('^')	2
33rd	MASTER MUTING	0x5F ('_')	1
34th	REMOTE MUTING	0x60 ('`')	1
35th	(RESERVED)		
36th	RF/AF INDICATOR	0x61 ('a')	1
37th	WL INDICATOR	0x62 ('b')	1
38th	+48V SWITCH	0x63 ('c')	1
39th	MIC 1 TRIM	0x64 ('d')	1
40th	MIC 2 TRIM	0x65 ('e')	1
41st	MIC 3 TRIM	0x66 ('f')	1
42nd	MIC 4 TRIM	0x67 ('g')	1
43rd	LINE TRIM	0x68 ('h')	1
44th-48th	AV/RGB TRIM	0x69 ('i')	5
49th	REF INDICATOR	0x6A ('j')	1
50th-53rd	FR	0x6B ('k')	4
54th, 55th	FR SETUP STATUS	0x6C ('l')	2
56th	AV/RGB INPUT SELECT	0x6D ('m')	1
57th, 58th	SPEAKER OUTPUT LEVEL	0x6E ('n')	2
59th	IR OUTPUT MODE INDICATOR	0x6F ('o')	1
60th-75th	LEVEL METER	0x70 ('p')	16
76th	PROTECTION	0x71 ('q')	1
77th	CLIP INDICATOR	0x72 ('r')	1
78th, 79th	TEMPERATURE	0x73 ('s')	2
80th	PROJECTOR ON/STANDBY INDICATOR	0x74 ('t')	1
81st, 82nd	(RESERVED)		
83rd	EMG MUTING	0x77 ('w')	1
84th	SCENE No.	0x78 ('x')	1
85th-94th	PARALLEL INPUT	0x79 ('y')	10
95th, 96th	PARALLEL OUTPUT	0x7A ('z')	2
97th	FAN MOTOR	0x7B ('{'	1
98th	MASTER VOLUME CONTROL	0x7C (' ')	1
99th-108th	GAIN REDUCTION	0x7D ('}')	10

The parameters returned have the following meanings.

◆ PROJECTOR PROTOCOL SWITCH (1st byte)

SYSTEM TYPE SWITCH (2nd byte)

Shows the position of the PROJECTOR PROTOCOL selector or the SYSTEM TYPE selector on the front panel of the SRP-X500P.

The parameters and the switch position are shown in the following table.

SWITCH	
0	0x30 ('0')
1	0x31 ('1')
2	0x32 ('2')
3	0x33 ('3')
4	0x34 ('4')
5	0x35 ('5')
6	0x36 ('6')
7	0x37 ('7')
8	0x38 ('8')
9	0x39 ('9')
A	0x3A (':')
B	0x3B (';')
C	0x3C ('<')
D	0x3D ('=')
E	0x3E ('>')
F	0x3F ('?')

◆ INPUT VOLUME (3rd-8th byte)

Shows the setting of the input level controls on the front panel of the SRP-X500P.

Byte	Parameter
1st	MIC 1/WL 1 INPUT VOLUME
2nd	MIC 2/WL 2 INPUT VOLUME
3rd	MIC 3 INPUT VOLUME
4th	MIC 4 INPUT VOLUME
5th	LINE INPUT VOLUME
6th	AV/RGB INPUT VOLUME

The correspondence of the parameter with the level setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

◆ MASTER VOLUME LEVEL (9th byte)

Shows the setting of the MASTER control on the front panel of the SRP-X500P.

The correspondence of the parameter with the level setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

◆ REMOTE 1-6 LEVEL (10th-15th byte)

Shows the level of the REMOTE 1-6 faders.

The correspondence of the parameter with the level setting is the same as that of the LEVEL parameter of the REMOTE 1-6 LEVEL command (page 10).

◆ INPUT LEVEL (16th-21st byte)

Shows the value indicated by the yellow triangular marker at the side of the input fader in the OVER VIEW screen of the SRP-X500P Manager. This value is calculated using the input volume parameter, input fader parameter, master volume level parameter, and remote fader 1-6 parameters and this indicates the total input level value.

The INPUT LEVEL parameter consists of the 6 bytes of data in the order shown in the following table.

Byte	Parameter
1st	MIC 1/WL 1 INPUT LEVEL
2nd	MIC 2/WL 2 INPUT LEVEL
3rd	MIC 3 INPUT LEVEL
4th	MIC 4 INPUT LEVEL
5th	LINE INPUT LEVEL
6th	AV/RGB INPUT LEVEL

The correspondence of the parameter with the level setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

◆ OUTPUT LEVEL (22nd-29th byte)

Shows the value indicated by the yellow triangular marker at the side of the output fader in the OVER VIEW screen of the SRP-X500P Manager. This value is calculated using the output fader parameter, master volume level parameter, and remote fader 1-6 parameter. This value is an indication of the total input level value.

The OUTPUT LEVEL parameter consists of 8 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SPEAKER OUTPUT 1 LEVEL
2nd	SPEAKER OUTPUT 2 LEVEL
3rd	SPEAKER OUTPUT 3 LEVEL
4th	SPEAKER OUTPUT 4 LEVEL
5th	LINE OUTPUT 1 LEVEL
6th	LINE OUTPUT 2 LEVEL
7th	LINE OUTPUT 3 LEVEL
8th	LINE OUTPUT 4 LEVEL

The correspondence of the parameter with the level setting is the same as that of the FADER parameter of the INPUT FADER command (page 7).

◆ INPUT MUTING (30th byte)

Shows the muting status of the input channels in the form of 8 bits data.

The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	AV/RGB	LINE	MIC 4	MIC 3	MIC 2	MIC 1
						/WL 2	/WL 1

◆ OUTPUT MUTING (31st and 32nd byte)

Shows the muting status of the output channels.

The OUTPUT MUTING parameter consists of the 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SPEAKER OUTPUT MUTING
2nd	LINE OUTPUT MUTING

• SPEAKER OUTPUT MUTING

Shows the muting status of the speaker output channels in the form of 8 bits of data.

The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	CH4	CH3	CH 2	CH 1

• LINE OUTPUT MUTING

Shows the muting status of the LINE OUTPUT channels in the form of 8 bits of data.

The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	CH4	CH3	CH 2	CH 1

◆ MASTER MUTING (33rd byte)

Shows the muting setting of the master volume.

The parameter and the muting setting are as shown in the following table.

MUTING	
Muting off	0x30('0')
Muting on	0x31('1')

◆ REMOTE MUTING (34th byte)

Shows the muting status of the REMOTE 1-6 faders in the form of 8 bits of data.

The bit is 0 for a channel which is not turned off ("Muting off") and 1 for a channel which is turned off ("Muting on").

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	CH 6	CH 5	CH4	CH3	CH 2	CH 1

◆ RF/AF INDICATOR (36th byte)

Shows the status of the RF and AF indicators on the front panel of the SRP-X500P in the form of 8 bits of data.

The bit is 0 for indicators that are turned off and 1 for indicators that are turned on.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	WL 2	WL 2	WL 1	WL 1
				AF	RF	AF	RF

◆ WL INDICATOR (37th byte)

Shows the status of the WL indicators in the form of 8 bits of data.

The parameter shown for this command is the WL indicators in the BLOCK screen and the OVER VIEW screen of the SRP-X500P Manager.

The bit is 0 for indicators that are turned off and 1 for indicators that are turned on.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	0	0	WL 2	WL 1

◆ +48V SWITCH (38th byte)

Shows the status of the +48V ON/OFF switches on the front panel of the SRP-X500P in the form of 8 bits of data.

The bit is 0 for switches that are turned off and 1 for switches that are turned on.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	MIC 4	MIC 3	MIC 2	MIC 1

◆ MIC 1-4 TRIM (39th-42nd byte)

Shows the setting of the TRIM control for the microphone input on the front panel of the SRP-X500P (in dBu units).

The parameter and the TRIM control setting are shown in the following table.

TRIM		TRIM	
-60	0x30 ('0')	-44	0x40 ('@')
-59	0x31 ('1')	-43	0x41 ('A')
-58	0x32 ('2')	-42	0x42 ('B')
-57	0x33 ('3')	-41	0x43 ('C')
-56	0x34 ('4')	-40	0x44 ('D')
-55	0x35 ('5')	-39	0x45 ('E')
-54	0x36 ('6')	-38	0x46 ('F')
-53	0x37 ('7')	-37	0x47 ('G')
-52	0x38 ('8')	-36	0x48 ('H')
-51	0x39 ('9')	-35	0x49 ('I')
-50	0x3A (':')	-34	0x4A ('J')
-49	0x3B (';')	-33	0x4B ('K')
-48	0x3C ('<')	-32	0x4C ('L')
-47	0x3D ('=')	-31	0x4D ('M')
-46	0x3E ('>')	-30	0x4E ('N')
-45	0x3F ('?')		

◆ LINE TRIM (43rd byte)

Shows the setting of the TRIM controls for the LINE input on the front panel of the SRP-X500P (in dBu units).

The parameter and the TRIM control setting are shown in the following table.

TRIM		TRIM	
-30	0x30 ('0')	-14	0x40 ('@')
-29	0x31 ('1')	-13	0x41 ('A')
-28	0x32 ('2')	-12	0x42 ('B')
-27	0x33 ('3')	-11	0x43 ('C')
-26	0x34 ('4')	-10	0x44 ('D')
-25	0x35 ('5')	-9	0x45 ('E')
-24	0x36 ('6')	-8	0x46 ('F')
-23	0x37 ('7')	-7	0x47 ('G')
-22	0x38 ('8')	-6	0x48 ('H')
-21	0x39 ('9')	-5	0x49 ('I')
-20	0x3A (':')	-4	0x4A ('J')
-19	0x3B (';')	-3	0x4B ('K')
-18	0x3C ('<')	-2	0x4C ('L')
-17	0x3D ('=')	-1	0x4D ('M')
-16	0x3E ('>')	0	0x4E ('N')
-15	0x3F ('?')		

◆ AV/RGB TRIM (44th-48th byte)

Shows the setting of the TRIM controls for the AV/RGB input on the front panel of the SRP-X500P (in dBu units).

The AV/RGB TRIM parameter consists of the 5 bytes of data in the order shown in the following table.

Byte	Parameter
1st	AV/RGB INPUT A TRIM
2nd	AV/RGB INPUT B TRIM
3rd	AV/RGB INPUT C TRIM
4th	AV/RGB INPUT D TRIM
5th	AV/RGB INPUT E TRIM

The correspondence of the parameter with the TRIM control settings is the same as that of the LINE TRIM parameter.

◆ REF INDICATOR (49th byte)

Shows the status of the REF. indicators on the front panel of the SRP-X500P in the form of 8 bits of data.

The bit is 0 for indicators that are turned off and 1 for indicators that are turned on.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	AV/RGB	LINE	MIC 4	MIC 3	MIC 2	MIC 1
						/WL 2	/WL 1

◆ FR (50th-53rd byte)

The FR parameter consists of the 4 bytes of data in the order shown in the following table.

Byte	Parameter
1st	MIC 1/WL 1 FR
2nd	MIC 2/WL 2 FR
3rd	MIC 3 FR
4th	MIC 4 FR

• FR

Shows the status of the FEED BACK REDUCER. The correspondence of the parameter with the FEED BACK REDUCER setting is shown in the following table.

FR	
Turned off	0x30 ('0')
Turned on	0x31 ('1')
Setting up in progress	0x32 ('2')
Cancellation in progress	0x33 ('3')

◆ FR SETUP STATUS (54th and 55th byte)

The FEED BACK REDUCER setup status parameter consists of the 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SETUP CHANNEL
2nd	SETUP STATUS

• SETUP CHANNEL

Shows the channel for which the FEED BACK REDUCER setting is in progress. The parameter and the channel are shown in the following table.

Channel	
Normal operation	0x30 ('0')
MIC 1/WL 1	0x31 ('1')
MIC 2/WL 2	0x32 ('2')
MIC 3	0x33 ('3')
MIC 4	0x34 ('4')
CANCEL	0x35 ('5')

• SETUP STATUS

Shows the progress of the FEED BACK REDUCER setting.
The parameter and the progress are as shown in the following table.

Progress	
Stopped (finished)	0x30 ('0')
1	0x31 ('1')
2	0x32 ('2')
3	0x33 ('3')
4	0x34 ('4')
5	0x35 ('5')
6	0x36 ('6')
7	0x37 ('7')
8	0x38 ('8')
9	0x39 ('9')
10	0x3A (':')
11	0x3B (';')
12	0x3C ('<')
13	0x3D ('=')
14	0x3E ('>')
15	0x3F ('?')

◆ AV/RGB INPUT SELECT (56th byte)

Shows the selection of the channel input from among the AV/RGB INPUT connectors.
The parameter and the channel are shown in the following table.

Channel	
OFF (All the AV RGB SELECT buttons are turned off.)	0x30 ('0')
A (The AV RGB SELECT A button lights up.)	0x31 ('1')
B (The AV RGB SELECT B button lights up.)	0x32 ('2')
C (The AV RGB SELECT C button lights up.)	0x33 ('3')
D (The AV RGB SELECT D button lights up.)	0x34 ('4')
E (The AV RGB SELECT E button lights up.)	0x35 ('5')

◆ SPEAKER OUTPUT LEVEL (57th, 58th byte)

Shows the level of the SPEAKER OUT controls on the front panel of the SRP-X500P.
The SPEAKER OUTPUT LEVEL parameter consists of the 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SPEAKER OUTPUT CH1/2 LEVEL
2nd	SPEAKER OUTPUT CH3/4 LEVEL

The correspondence of the parameter with the speaker output level is the same as that of the LEVEL parameter of the REMOTE 1-6 LEVEL command (page 10).

◆ IR OUTPUT MODE INDICATOR (59th byte)

Shows the status of the IR OUTPUT MODE button on the front panel of the SRP-X500P.

The correspondence of the parameter with the IR OUTPUT MODE button status is shown in the following table.

IR OUTPUT MODE	
Normal operation (The button is turned off.)	0x30 ('0')
Transmission wait status (The button lights up.)	0x31 ('1')
Transmission in progress (The button flashes.)	0x32 ('2')

◆ LEVEL METER (60th-75th byte)

Shows the level meter indication of the input/output channels.

The configuration of the parameter and the correspondence of the parameter with the level meters are the same as those of the LEVEL METER PARAMETER REQUEST command (page 21).

◆ PROTECTION (76th byte)

Shows the protection circuit status of the power amplifiers in 8 bits of data.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	CH3/4	CH3/4	CH1/2	CH1/2	DC
			TEMP.	IC	TEMP.	IC	DETECTION

• TEMP.

The bit for the power amplifier is 0 when the protection circuit is not activated and 1 when the protection circuit is activated due to increased internal temperature of the SRP-X500P.

• IC

The bit for the power amplifier is 0 when the protection circuit incorporated in the IC is not activated and 1 when the protection circuit incorporated in the IC is activated.

• DC DETECTION

When the protection circuit is not activated, The bit for the power amplifier is 0. When the DC power voltage is output to the SPEAKER CH terminals and the protection circuit is activated, the bit for the power amplifier is 1.

◆ CLIP INDICATOR (77th byte)

Shows the CLIP indicator status in 8 bits of data.

The parameter shown for this command is the status of the CLIP indicators in the BLOCK screen and the OVER VIEW screen of the SRP-X500P Manager.

When the CLIP indicator is turned off, the corresponding bit is 0. When the CLIP indicator is turned on, the corresponding bit is 1.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	CH 4	CH 3	CH 2	CH 1

◆ TEMPERATURE (78th and 79th byte)

The TEMPERATURE parameter consists of 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	SPEAKER OUTPUT CH1/2 TEMPERATURE
2nd	SPEAKER OUTPUT CH3/4 TEMPERATURE

● TEMPERATURE

Shows the temperature of the heat sink in the power amplifier section.

The correspondence of the parameter with the temperature is shown in the following table.

Temperature	
Less than 30°C	0x30 ('0')
30-34°C	0x31 ('1')
35-39°C	0x32 ('2')
40-44°C	0x33 ('3')
45-49°C	0x34 ('4')
50-54°C	0x35 ('5')
55-59°C	0x36 ('6')
60-64°C	0x37 ('7')
65-69°C	0x38 ('8')
70-74°C	0x39 ('9')
75-79°C	0x3A (':')
80-84°C	0x3B (';')
85-89°C	0x3C ('<')
90-94°C	0x3D ('=')
95-99°C	0x3E ('>')
100°C or more	0x3F ('?')

◆ PROJECTOR ON/STANDBY INDICATOR (80th byte)

Shows the status of the PROJECTOR ON/STANDBY POWER switch on the front panel of the SRP-X500P.

The parameter and the status of the PROJECTOR ON/STANDBY POWER switch are shown in the following table.

PROJECTOR ON/STANDBY INDICATOR	
STANDBY (The switch lights up red.)	0x30 ('0')
ON (The switch lights up red.)	0x31 ('1')
Cooling down before entering STANDBY (The switch flashes green.)	0x32 ('2')

◆ EMG MUTING (83rd byte)

Shows the muting status of the REMOTE PARALLEL connector using the EMG function.

The parameter and the muting status using the EMG function are shown in the following table.

EMG MUTING	
Muting off	0x30 ('0')
Muting on	0x31 ('1')

◆ SCENE No. (84th byte)

Shows the scene number to be recalled.

The parameter and the scene number are shown in the following table.

SCENE No.	
None	0x30 ('0')
1	0x31 ('1')
2	0x32 ('2')
3	0x33 ('3')
4	0x34 ('4')
5	0x35 ('5')
6	0x36 ('6')
7	0x37 ('7')
8	0x38 ('8')

◆ PARALLEL INPUT (85th-94th byte)

The information on the input pins of the REMOTE PARALLEL connector is provided using 10 bytes of data in the order shown in the following table.

Byte	Parameter
1st	INPUT 1 LEVEL
2nd	INPUT 2 LEVEL
3rd	INPUT 3 LEVEL
4th	INPUT 4 LEVEL
5th	INPUT 5 LEVEL
6th	INPUT 6 LEVEL
7th	INPUT 7 LEVEL
8th	INPUT 8 LEVEL
9th	INPUT 9 LEVEL
10th	INPUT 10 LEVEL

• LEVEL

Shows the voltage input to the input pins of the REMOTE PARALLEL connector (in dB units).

The correspondence of the parameter with the level setting is the same as that of the LEVEL parameter of the REMOTE 1-6 LEVEL command (page 10).

◆ PARALLEL OUTPUT (95th and 96th byte)

Shows the on/off status of the output pins of the REMOTE PARALLEL connector.

The information on the output pins of the REMOTE PARALLEL connector is provided using 2 bytes of data in the order shown in the following table.

Byte	Parameter
1st	OUTPUT 1-6
2nd	OUTPUT 7-10

- **OUTPUT 1-6**

Shows the on/off status of output pins 1 to 6 of the REMOTE PARALLEL connector in 8 bits of data.

When an output pin is off, the corresponding bit is 0, and when an output pin is on, the corresponding bit is 1.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	OUT6	OUT5	OUT4	OUT3	OUT2	OUT1

- **OUTPUT 7-10**

Shows the on/off status of output pins 7 to 10 of the REMOTE PARALLEL connector in 8 bits of data.

When an output pin is off, the corresponding bit is 0, and when an output pin is on, the corresponding bit is 1.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	OUT10	OUT9	OUT8	OUT7

- ◆ **FAN MOTOR (97th byte)**

Shows the status of the fan motor operation.

The parameter and the fan motor operation are shown in the following table.

FAN MOTOR	
Low-speed rotation (normal operation)	0x30 ('0')
High-speed rotation	0x31 ('1')
Stopped (locked)	0x32 ('2')

- ◆ **MASTER VOLUME CONTROL (98th byte)**

Shows the control status of the MASTER VOLUME motor in 8 bits of data.

When the MASTER VOLUME UP command is transmitted, bit 0 is 0 and bit 1 is 1. When the MASTER VOLUME DOWN command is transmitted, bit 0 is 1 and bit 1 is 0.

MSB				LSB			
bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
0	1	0	0	0	0	UP	DOWN

◆ GAIN REDUCTION (99th-108th byte)

The GAIN REDUCTION parameter consists of the 8 bytes of data in the order shown in the following table.

Byte	Parameter
1st	(RESERVED)
2nd	MIC AGC GAIN REDUCTION
3rd	SPEAKER OUTPUT 1 COMPRESSOR GAIN REDUCTION
4th	SPEAKER OUTPUT 2 COMPRESSOR GAIN REDUCTION
5th	SPEAKER OUTPUT 3 COMPRESSOR GAIN REDUCTION
6th	SPEAKER OUTPUT 4 COMPRESSOR GAIN REDUCTION
7th	LINE OUTPUT 1 COMPRESSOR GAIN REDUCTION
8th	LINE OUTPUT 2 COMPRESSOR GAIN REDUCTION
9th	LINE OUTPUT 3 COMPRESSOR GAIN REDUCTION
10th	LINE OUTPUT 4 COMPRESSOR GAIN REDUCTION

● AGC GAIN CONTROL

Indicates the gain reduction level reading of the AGC (in dB units).

The parameter and the gain reduction level reading are shown in the following table.

GAIN CONTROL		GAIN CONTROL		GAIN CONTROL	
Less than -30	0x30 ('0')	-15	0x40 ('@')	+1	0x50 ('P')
-30	0x31 ('1')	-14	0x41 ('A')	+2	0x51 ('Q')
-29	0x32 ('2')	-13	0x42 ('B')	+3	0x52 ('R')
-28	0x33 ('3')	-12	0x43 ('C')	+4	0x53 ('S')
-27	0x34 ('4')	-11	0x44 ('D')	+5	0x54 ('T')
-26	0x35 ('5')	-10	0x45 ('E')	+6	0x55 ('U')
-25	0x36 ('6')	-9	0x46 ('F')	+7	0x56 ('V')
-24	0x37 ('7')	-8	0x47 ('G')	+8	0x57 ('W')
-23	0x38 ('8')	-7	0x48 ('H')	+9	0x58 ('X')
-22	0x39 ('9')	-6	0x49 ('I')	+10	0x59 ('Y')
-21	0x3A (':')	-5	0x4A ('J')		
-20	0x3B (';')	-4	0x4B ('K')		
-19	0x3C ('<')	-3	0x4C ('L')		
-18	0x3D ('=')	-2	0x4D ('M')		
-17	0x3E ('>')	-1	0x4E ('N')		
-16	0x3F ('?')	0	0x4F ('O')		

- **COMPRESSOR GAIN REDUCTION**

Indicates the gain reduction level reading of the COMPRESSOR (in dB units).

The parameter and the gain reduction level reading are shown in the following table.

GAIN REDUCTION		GAIN REDUCTION	
More than 30	0x30 ('0')	15	0x40 ('@')
30	0x31 ('1')	14	0x41 ('A')
29	0x32 ('2')	13	0x42 ('B')
28	0x33 ('3')	12	0x43 ('C')
27	0x34 ('4')	11	0x44 ('D')
26	0x35 ('5')	10	0x45 ('E')
25	0x36 ('6')	9	0x46 ('F')
24	0x37 ('7')	8	0x47 ('G')
23	0x38 ('8')	7	0x48 ('H')
22	0x39 ('9')	6	0x49 ('I')
21	0x3A (':')	5	0x4A ('J')
20	0x3B (';')	4	0x4B ('K')
19	0x3C ('<')	3	0x4C ('L')
18	0x3D ('=')	2	0x4D ('M')
17	0x3E ('>')	1	0x4E ('N')
16	0x3F ('?')	0	0x4F ('O')

2.3 Maintenance Information Commands

The following commands are provided to read and write the information on the SRP-X500P and to restore the parameters to their factory default settings.

2.3.1 INFORMATION REQUEST : 0x52 0x50 0x4D 0x45 ('RPME')

This command is used to read information from the SRP-X500P.

The parameter that is shown for this command are the contents entered in the INFORMATION input section in the PANEL VIEW screen of the SRP-X500P Manager.

- **Packet format**

0x52 0x50 0x4D 0x45 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41('A')) in the order shown below.

0x41 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 128 bytes of data in the order shown in the following table.

Byte	Parameter
1st–128th	INFORMATION

- **INFORMATION**

The information is shown as 128 bytes of ASCII code.

If information is less than 128 bytes, space characters (0x20) are used as fill-in.

- **Example**

When the following information is indicated:

INFORMATION : SETUP□DATE□2005/01/23

```

0x41 0x53 0x45 0x54 0x55 0x50 0x20 0x44 0x41 0x54 0x45 0x20 0x32 0x30 0x30 0x35 0x2F 0x30 0x31
0x2F 0x32 0x33 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20
0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x20 0x0D
('A S E T U P □ D A T E □ 2 0 0 5 / 0 1 / 2 3 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
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CR')
```

“□” indicates a space.

2.3.3 MAINTENANCE INFORMATION READ WRITE REQUEST : 0x52 0x4D 0x49 0x31 ('RMI1')

This command is used to read the information entered in the 256-byte readable/writable area in the maintenance information memory of the SRP-X500P.

- **Packet format**

0x52 0x4D 0x49 0x31 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with an ACK (0x41('A')) in the order shown below.

0x41 "parameter" 0x0D

The parameter is the same as that for the MAINTENANCE INFORMATION READ WRITE command.

2.3.4 MAINTENANCE INFORMATION READ ONLY REQUEST : 0x52 0x4D 0x49 0x32 ('RMI2')

This command is used to read the information entered in the 256-byte read-only area in the maintenance information memory of the SRP-X500P.

You can use this command to distinguish the SRP-X500P from other devices.

- **Packet format**

0x52 0x4D 0x49 0x32 0x0D

- **Return packet format**

When the SRP-X500P receives the command successfully, the parameter is returned together with ACK (0x41('A')) in the order shown below.

0x41 "parameter" 0x0D

- ◆ **Parameter**

The parameter consists of 256 bytes of data in the order shown in the following table.

Byte	Parameter
1st-256th	MAINTENANCE INFORMATION READ ONLY

- **MAINTENANCE INFORMATION READ ONLY**

The model name is shown using up to 256 bytes of ASCII code.

Space character (0x20) is used for fill-in, except for the model name.

- **Example**

When the version is 1.00

0x41 0x31 0x2E 0x30 0x30 0x20 0x20 0x20 0x20
(‘A 1 . 0 0 ’)

“ ” indicates a space.

2.3.6 FACTORY PRESET : 0x43 0x52 0x53 0x54 (‘CRST’)

This command is used to restore the parameters of the SRP-X500P to their factory default setting.

When this command is transmitted, all parameters of the SRP-X500P return to their factory default setting, including the scene memory settings.

- **Packet format**

0x43 0x52 0x53 0x54 0x0D

- ◆ **Parameter**

The FACTORY PRESET command does not require the addition of a parameter.

- **Example**

To return to the SRP-X500P to its factory preset settings:

0x43 0x52 0x53 0x54 0x0D
(‘C R S T CR’)

Note

When the SRP-X500P has received the command successfully, it returns an ACK (0x41 (‘A’)) after about 5 seconds.

Do not transmit any other commands until the SRP-X500P receives an ACK (0x41 (‘A’)).

After confirming that an ACK (0x41 (‘A’)) has been returned, restart the SRP-X500P.