

DPX-1 RS-232C Protocol

1. Outline

This information sheet contains control specifications that make use of RS-232C Interface on the DPX-1.

2. Communication Format

Baud Rate: 115.2 k bit/s (Changeable)
Data Bits: 8 bits
Parity: No
Stop Bit: 1 bit
Handshaking: None

3. Data Block

DPX-1 can enable/disable external control via RS-232C.

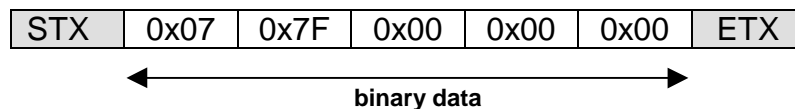
External control via RS-232C is disabled just after the main power is turned on.

3.1 Activate Commands

Send ASCII string "dpx1 comm wakeup" as a start command in order to enable external control via RS-232C. If ACK (0x06) is returned, the DPX-1 will be in the mode whereby it can control external devices.

3.2 Deactivate Commands

Send the following Codes to disable external control via RS-232C:

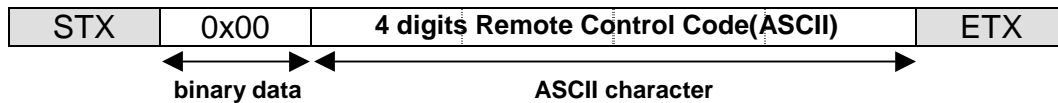


If ACK (0x06) is returned, the DPX-1 will be in the mode whereby it can cancel control of external devices.

4. Control Command

4.1 Remote Control Codes

DPX-1 can be controlled as same as when it's controlled using Extended IR Commands.



If the signal is correctly received, ACK(0x06) will be returned and if not, NAK(0x15) will be returned.

4 digits Remote Control Code consists of ;

Data Code of Extended IR Code (NEC Code) and
Data Code

<Example>

If you want to send 'Power ON' command,

Data Code = 0xC1

Data Code = 0x3E

The 4 digits Remote Control Code is "C13E" in ASCII.

1st byte : "C" 0x43

2nd byte : "1" 0x31

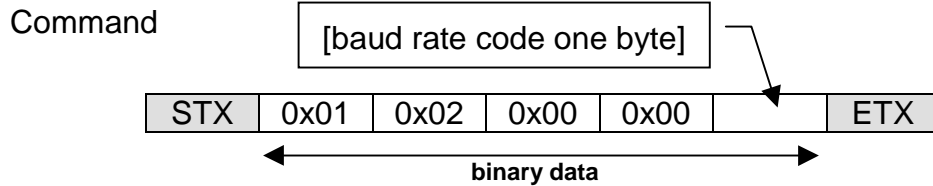
3rd byte : "3" 0x33

4th byte : "E" 0x45

Refer to the Appendix "Extended I/R Remote Control Codes" .

4.2 Changing Baud Rate

Baud rate can be changed via RS-232C. This command must be sent at current baud rate. For example, when baud rate needs be changed from 115.2kbps to 9600 bps, control command should be sent at 115.2 kbps. To activate a set-up baud rate, the DPX-1 should be re-booted (main power should be turned off, then on again).



If the signal is correctly received, ACK(0x06) will be returned, if not, NAK(0x15) will be returned.

<Baud Rate Code Byte>

- 0x00 : 9,600 bps
- 0x01 : 19,200 bps
- 0x02 : 38,400 bps
- 0x03 : 57,600 bps
- 0x04 : 115,200 bps

5. Appendix

5.1 Command Table

Function	Command	Return
External control enable	“dpx1 comm wakeup”	ACK/NAK
External control disable	STX 0x07 0x7f 0x00 0x00 0x00 ETX	ACK/NAK
Remote Control Code	STX 0x00 [Remote Control Code 4 bytes] ETX	ACK/NAK
Change Baud Rate	STX 0x00 0x02 0x00 0x00 [Baud Rate Code] ETX	ACK/NAK

5.2 Extended I/R Code

Function	Data Code	Data Code	Type	Panel/Standard Remote Control Key
POWER OFF	0xC0	0x3F	Direct	
POWER ON	0xC1	0x3E	Direct	
POWER ON/OFF	0xC2	0x3D	Toggle	STANDBY/ON
AUTO	0xC3	0x3C	Direct	AUTO
HIDE OFF	0xC4	0x3B	Direct	
HIDE ON	0xC5	0x3A	Direct	
HIDE ON/OFF	0xC6	0x39	Toggle	HIDE
PATTERN OFF	0xC7	0x38	Direct	
PATTERN ON	0xC8	0x37	Direct	
PATTERN ON/OFF	0xC9	0x36	Toggle	PATTERN
RESET	0xCA	0x35	Direct	RESET
UP	0xCC	0x33	Direct	UP
DOWN	0xCD	0x32	Direct	DOWN
LEFT	0xCE	0x31	Direct	LEFT
RIGHT	0xCF	0x30	Direct	RIGHT
SELECT	0xD0	0x2F	Direct	SELECT
MENU OFF	0xD1	0x2E	Direct	
MENU ON	0xD2	0x2D	Direct	
MENU ON/OFF	0xD3	0x2C	Direct	MENU
ESCAPE	0xD5	0x2A	Direct	ESCAPE
INPUT ON/OFF	0xD6	0x29	Direct	INPUT
INPUT 1	0xD8	0x27	Direct	S VIDEO
INPUT 2	0xD9	0x26	Toggle	VIDEO
INPUT 3	0xDA	0x25	Direct	INPUT A
INPUT 4	0xDB	0x24	Direct	INPUT B
INPUT 5	0xDC	0x23	Direct	DVI
INPUT 6	0xDD	0x22	Direct	D4 VIDEO
STILL OFF	0xDE	0x21	Direct	

STILL ON	0xDF	0x20	Direct	
STILL ON/OFF	0xE0	0x1F	Toggle	STILL
MEMORY 1	0xE1	0x1E	Direct	MEMORY 1
MEMORY 2	0xE2	0x1D	Direct	MEMORY 2
MEMORY 3	0xE3	0x1C	Direct	MEMORY 3
MEMORY 4	0xE4	0x1B	Direct	MEMORY 4
MEMORY 5	0xE5	0x1A	Direct	MEMORY 5
MEMORY 6	0xE6	0x19	Direct	MEMORY 6
ASPECT	0xEA	0x15	Increment	ASPECT
ASPECT NORMAL	0xEB	0x14	Direct	
ASPECT ZOOM	0xEC	0x13	Direct	
ASPECT ZOOM TITLE	0xED	0x12	Direct	
ASPECT SQUEEZE	0xEE	0x11	Direct	
ASPECT THROUGH	0xEF	0x10	Direct	
ASPECT AUTO	0xF0	0x0F	Direct	
ASPECT THRU SQUEEZE	0xF1	0x0E	Direct	
INPUT A COMPONENT	0xF3	0x0C	Direct	
INPUT A RGB PC	0xF4	0x0B	Direct	
INPUT A RGB TV	0xF5	0x0A	Direct	
INPUT B COMPONENT	0xF6	0x09	Direct	
INPUT B RGB PC	0xF7	0x08	Direct	
INPUT B RGB TV	0xF8	0x07	Direct	

5.3 ASCII Chart

	0	1	2	3	4	5	6	7
0	NUL	DLE	SP	0	@	P	`	p
1	SOH	DC1	!	1	A	Q	a	q
2	STX	DC2	"	2	B	R	b	r
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	\$	4	D	T	d	t
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	l	y
A	LF	SUB	*	:	J	Z	j	z
B	VT	EXC	+	;	K	[	k	{
C	FF	FS	,	<	L	¥	l	|
D	CR	GS	-	=	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL

- * the column number = the first hexadecimal digit
the row number = the second hexadecimal digit