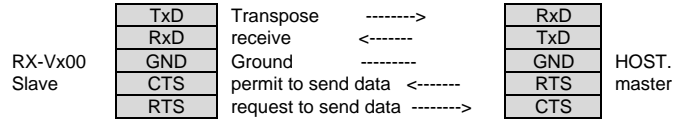


# 1 Outline

In case no comments in particular as for the contents of this papers, the descriptions are effective for the RX-Vx00 series(RX-V3000/RX-V1000).

## 1.1 Connection

5 wire system



\*When not connected, data sending to RX-VX00 is prohibited (CTS port pull down).

## 1.2 Communication format

based on RS-232C format

Full duplex, start-stop synchronization communication

Baud rate : 9600bps  
 Data bits : 8  
 Parity : No  
 Stop bit : 1bit  
 Handshaking : Hardware

\*RTS is keeps Low when the AC outlet are not plugged in.

When RTS keeps Low for over 10 seconds in spite of the AC outlet connection, there are some troubles.

## 1.3 Data block timeout

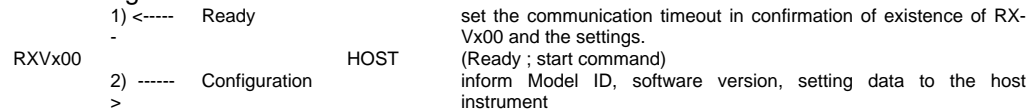
Please set the data sending timeout (from the start of the data block to the end) to 500msec.

That is, data block sending will finish at most in 500 msec.

When the data block sending doesn't finish in 500 msec, there are some troubles. Please cancel the data sent from the host instrument.

# 2 Start transactions

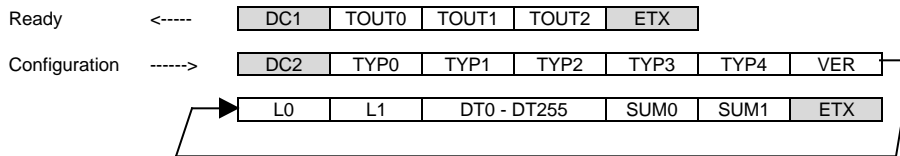
\*Publishing the start command



set the communication timeout in confirmation of existence of RX-Vx00 and the settings.  
 (Ready ; start command)  
 inform Model ID, software version, setting data to the host instrument

\*Please retry sending data if RXVx00 won't send back Configuration in 1sec. after sending Ready. When no configuration is sent back after the 5<sup>th</sup> sending, please stop to send any data after that. In this case RX-Vx00 may be plugged out or have some problem.

\*Even while the system is wait, it is possible to corresponding with RX-Vx00.



\*TYPx : Model ID  
 \*VER : Software Version  
 \*SUM : 2's complement of the sum of all data except for the header and footer

function name	function	data (ASCII)	range (HEX)
TOUT0 - 2	communication timeout	0 - 9, A - F	0 - 0xFF

\*timeout between the header and the footer  
 \*timeout=0 means no timeout

function name	function	data (ASCII)	range (HEX)
TYP0 - 4	model ID	0 - 9, A - F	voluntary
VER	software version	A - Z	voluntary
L0 - 1	data length	0 - 9, A - F	1 - 0xFF
DT0 - 255	data	0 - 9, A - F	0 - 0xF
SUM0	upper 4 bit if SUM	0 - 9, A - F	0 - 0xF
SUM1	lower 4 bit of SUM	0 - 9, A - F	0 - 0xF

# RX-Vx00 RS-232C Interface(U)

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 modified by H.Kawai

## \*Structure of the data in Configuration command

data	When the power is OFF, only DT0 and DT1 are sent to the Host.		
DT0	0/1	System	OK/Busy
DT1	0/1	Power	OFF/ON
DT2	0 - C	Input	PHONO/CD/TUNER/CD-R/MD-TAPE/DVD/D-TV-LD/CBL-SAT(CABLE)/SAT/VCR1/VCR2-DVR/V-AUX
DT3	0/1	6ch input	OFF/ON
DT4	0 - 4	Input Mode	AUTO/DTS/ANALOG/ANALOG ONLY
DT5	0/1	Audio Mute	OFF/ON
DT6	0 - C	Zone2 Input	PHONO/CD/TUNER/CD-R/MD-TAPE/DVD/D-TV-LD/CBL-SAT(CABLE)/SAT/VCR1/VCR2-DVR/V-AUX
DT7	0/1	Zone2 Mute	OFF/ON
DT8	0 - F	Master Volume	Upper 4 bit
DT9	0 - F	Master Volume	Lower 4 bit
DT10	0 - F	Zone2 Volume	Upper 4 bit (v3000)
DT11	0 - F	Zone2 Volume	Lower 4 bit (v3000)
DT12	0 - F	Program	Upper 4 bit
DT13	0 - F	Program	Lower 4 bit
DT14	0/1	Effect	OFF/ON
DT15	0/1	6.1/ES key status	OFF/ON
DT16	0 - 2	OSD*	FULL/SHORT/OFF
DT17	0 - 3	Sleep	120/90/60/30/OFF
DT18	0 - 4	Tuner Page	A/B/C/D/E
DT19	0 - 7	Tuner No.	1/2/3/4/5/6/7/8
DT20	0 - 6	Home bank	Main/A/B/C
DT21	0 - 6	Volume bank	Main/A/B/C
DT22	0/1	Speaker relay A	OFF/ON
DT23	0/1	Speaker relay B	OFF/ON
DT24	0 - 8	Playback	6ch input/Analog/PCM/DD*(except 2.0)/DD(2.0)/DD.Karaoke/DD.EX/DTS/DTS-ES/DIGITAL
DT25	0 - 7	Fs	Analog/32kHz/44.1kHz/48kHz/64kHz/88.2kHz/96kHz/Unknown
DT26	0/1	6.1/ES playback	OFF/ON
DT27	0/1	Thr / Bypass	Normal / Bypass
DT28	0/1	RED dts	Release/Wait
DT29	0/1	Head Phone	OFF/ON
DT30	0/1	TUNER BAND	FM/AM
DT31	0/1	TUNER TUNED	TUNED/NOT TUNED

\*DD = Dolby Digital

\*OSD = On Screen Display

DT30 and DT31 are added as the configuration data.(Difference between RX-VX00 and RX-x00 series)

### 3 Commands

#### \*Control commands

RX-Vx00 <----- control commands HOST control commands from external instruments  
 \*RX-Vx00 accepts control commands only while the power is on.  
 (except for Power commands and System commands\*)

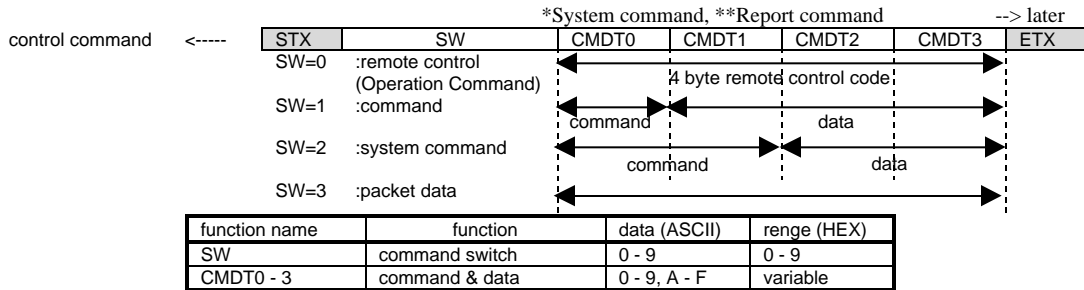
\*Please do not send control commands while the system status is wait. It is permitted to send commands after RX-Vx00 reports that the system status turned into OK.

\*No cancel command for a command which has already sent to RX-Vx00, basically. The last command sent is high priority on a kind of the report command.

\*Please retry sending the same command when RX-Vx00 sends no report command\*\* for over 1 sec. after Host send a control command. In this case, if there are no Report commands from RX-Vx00 after the 5<sup>th</sup> re-sending, please abort sending commands and re-start communication from the start transactions.

\*When the control command switch(SW) equals "0", RX-Vx00 act the same action and indicates the same FL/On screen displays, as it does when it receive a command from I/R.

\*RX-Vx00 send only one report command for each types of control after the control command is sent to RX-Vx00, which reports the last state of the setting as a result of a series of transactions. For example, if a user set the input selector in the unit to D-TV/LD just after the host send commands to change input to CD, RX-Vx00 may report only that the input was changed to D-TV/LD by the system operation.



\*Changing the SW, the data number of the command/data can be varied.  
 SW=0 : 4 byte command for remote control code  
 SW=1 : 1 byte command 0 - F (HEX expression in ASCII)  
 SW=2 : 2 byte command 10 - FF (HEX expression in ASCII)  
 SW=3 : 4 byte packet data

#### \*System Command

System command controls RX-Vx00's system settings like report command.

SW	command			data			Report Command		
	CMD T0	CMDT 1		CDM T2	CMD T3		Type	RCMDT,2	RDATA1,2
2	0	0	report command enable	0	0	enable	0	00	00(OK)
				0	1	disable	0	00	00(OK)
2	0	1	time between two report commands	0	0	real time	0	00	00(OK)
				0	1	50ms	0	00	00(OK)
				0	2	100ms	0	00	00(OK)
				0	3	150ms	0	00	00(OK)
				0	4	200ms	0	00	00(OK)
				0	5	250ms	0	00	00(OK)
				0	6	300ms	0	00	00(OK)
				0	7	350ms	0	00	00(OK)
				0	8	400ms	0	00	00(OK)
2	1	0	OSD message start command	0	0	start	0	00	00(OK)
2	2	0	Tuning frequency text request	0	0		Refer to the following section		
			Main volume value text request	0	1				
			Zone2 volume value text req (v3000)	0	2				
			Input name text request	0	3				
			Zone2 input name text request	0	4				
2	3	0	Master volume direct setting	0	0	-∞	0	26	
				0	1	-99.5dB			
				.	.	-0.5dB			
				C	6	0dB			
2	3	1	Zone2 volume direct setting	C	7		0	27	

#### \*OSD message function \*Additional function

OSD Message function can display a message of 16 characters to Vx00's OSD for a few seconds. The command sequence block will start by sending "start command" of mentioned above. After then it needs to send the packet data (4bytes) of SW:3 four times. After then the message of sixteen characters(ASCII) will display and the command block finish automatically.

(ex.)Want to display “ Test message ! ” characters to OSD.

1. Send the start command.

STX	2	1	0	0	0	ETX
-----	---	---	---	---	---	-----

2. Send SW:3 commands four times as follows.

STX	3	' '	'T'	'e'	's'	ETX
STX	3	't'	' '	'm'	'e'	ETX
STX	3	's'	's'	'a'	'g'	ETX
STX	3	'e'	' '	'!'	' '	ETX

3. The command block will be finished automatically.

The available characters to display the message are as follows.

""(SPACE)!"#"%&"(")"+",;"-  
 ". "0"1"2"3"4"5"6"7"8"9". "<"=" ">"?"A"B"C"D"E"F"G"H"I"J"K"L"M"N"  
 "O"P"Q"R"S"T"U"V"W"X"Y"Z"[ ]" \_ "a"b"c"d"e"f"g"h"i"j"k"l"m"n"o"  
 "p"q"r"s"t"u"v"w"x"y"z"

**\*Commands to get the display characters as text data(ASCII) \*Additional function**

This command can get a few kinds of text data(ASCII) which is the display characters of RX-Vx00 as follows.

- Tuner frequency characters : “ 107.9 ”(MHz)
- Master volume value characters : “ -99.0dB ” / “ MUTE”
- Zone2 volume characters (v3000) : “ -79dB”
- Input name : “ MY PC ” (Even renamed by “SET MENU:INPUT RENAME”)
- Zone2 input name : “ PS 2 ” (Even renamed by “SET MENU:INPUT RENAME”)

The response protocol for the text request commands are as follows.

RX-Vx00 -----> Text char. HOST

RCMD0,1	COMMAND	0-9,A-F	0_0xFF
DDAT 0-7	DATA	0-9,A-Z SP	ASCII char. Space char.

	DC1	RCMD0	RCMD1	DDAT0	DDAT1	DDAT2	DDAT3	DDAT4	DDAT5	DDAT6	DDAT7	ETX
Tuner Frequency	DC1	0	0	SP	SP	X	X	X	X	X	X	ETX
Master volume value	DC1	0	1	SP	X	X	X	X	X	X	X	ETX
Zone2 volume value	DC1	0	2	SP	SP	SP	X	X	X	X	X	ETX
Input name	DC1	0	3	X	X	X	X	X	X	X	X	ETX
Zone2 input name	DC1	0	4	X	X	X	X	X	X	X	X	ETX

( 'X' = ASCII character )

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\*Operation Command

Operation command can control all functions that standard or extended I/R can control.

\*Operation Commands

SW	Operation Command				function	setting	Report Command	
	CMDT0	CMDT1	CDMT2	CMDT3			Type	RCMD1,2
0	7	A	1	A	master volume	Up	0	26
	7	A	1	B		Down		
	7	E	A	2	Audio Mute	ON		23
	7	E	A	3		OFF		
	7	A	1	4	Input	PHONO		21
	7	A	1	5		CD		
	7	A	1	6		TUNER		
	7	A	1	9		CD-R		
	7	A	C	9		MD/TAPE		
	7	A	C	1		DVD		
	7	A	5	4		D-TV/LD		
	7	A	C	0		CABLE (CBL/SAT)		
	7	A	C	A		SAT		
	7	A	0	F		VCR1		
	7	A	1	3		VCR2/DVR		
	7	A	5	5		V-AUX		
	7	E	A	4	6ch input	ON		
	7	E	A	5		OFF		
	7	E	A	6	Input Mode	AUTO		
	7	E	A	8		DTS		22
	7	E	A	A		ANALOG		
	7	A	D	A	Zone2 volume (v3000)	Up		27
	7	A	D	B		Down		
	7	E	A	0	Zone2 mute	ON		25
	7	E	A	1		OFF		
	7	A	D	0		PHONO		
	7	A	D	1		CD		
	7	A	D	2		TUNER		
	7	A	D	4		CD-R		
	7	A	C	F		MD/TAPE		
	7	A	C	D		DVD		
	7	A	D	9		D-TV/LD		
	7	A	C	C		CABLE ( CBL/SAT )		
	7	A	C	B		SAT		
	7	A	D	6		VCR1		
	7	A	D	7		VCR2/DVR		
	7	A	D	8		V-AUX		
	7	A	1	D	Power	ON		20
	7	A	1	E		OFF		
	7	E	B	A	Zone2 power	ON		
	7	E	B	B		OFF		
	7	E	B	0	On screen(OSD)	OFF		2B
	7	E	B	1		SHORT		
	7	E	B	2		FULL		
	7	E	B	3	Sleep	OFF		2C
	7	E	B	4		120		
	7	E	B	5		90		2D
	7	E	B	6		60		
	7	E	B	7		30		
	7	E	B	8	6.1/ES Key	ON		
	7	E	B	9		OFF		
	7	E	E	0	Effect	OFF		28
	7	E	E	1	DSP Program	Hall A ( HALL1 )		
	7	E	E	2		Hall B		
	7	E	E	3		Hall C		
	7	E	E	4		Live Concert ( HALL / HALL2 )		
	7	E	E	5		Freiburg ( CHURCH )		
	7	E	E	6		Royaumont		
	7	E	E	7		Village Gate		
	7	E	E	8		The Bottom Line ( JAZZ )		
	7	E	E	9		The Roxy Theatre ( ROCK )		
	7	E	E	A		Arena		
	7	E	B	B		Anaheim ( STADIUM )		
	7	E	E	C		Bowl		
	7	E	E	D		Disco		
	7	E	E	E		Game		
	7	E	E	F		5/6/8ch Stereo		
	7	E	F	0		Pop/Rock		
	7	E	F	1		Classical/Opera ( TV SPORTS )		
	7	E	F	2		Mono Movie		
	7	E	F	3		Variety Sports		
	7	E	F	4		Spectacle		
	7	E	F	5		Sci-Fi		
	7	E	F	6		Adventure		
	7	E	F	7		General		
	7	E	F	8		Normal		
	7	E	F	9		Enhanced		
	7	A	E	0	Tuner preset page	A		29
	7	A	E	1		B		
	7	A	E	2		C		
	7	A	E	3		D		
	7	A	E	4		E		
	7	A	E	5	Tuner preset No.	1		2A
	7	A	E	6		2		
	7	A	E	7		3		
	7	A	E	8		4		
	7	A	E	9		5		
	7	A	E	A		6		
	7	A	E	B		7		
	7	A	E	C		8		
	7	E	B	C	Tuner band	FM		35
	7	E	B	D		AM		
	7	E	B	E	Auto tuning start	UP		15
	7	E	B	F		DOWN		

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SW	CMDT	CMDT	CDMT	CMDT	function	setting	Type	RCMD1
0	7	E	A	B	speaker relay A	ON	0	2E
	7	E	A	C		OFF		
	7	E	A	D	speaker relay B	ON		2F
	7	E	A	E		OFF		
	7	E	2	0	Home bank	Main		30
	7	E	2	1		A		
	7	E	2	2		B		
	7	E	2	3		C		
	7	E	2	B	Home preset memory	A		
	7	E	2	C		B		
	7	E	2	D		C		
	7	E	3	5	Home preset recall	A		
	7	E	3	6		B		
	7	E	3	7		C		
	7	E	6	0	Volume bank	Main		31
	7	E	6	1		A		
	7	E	6	2		B		
	7	E	6	3		C		
	7	E	6	B	Volume preset memory	A		
	7	E	6	C		B		
	7	E	6	D		C		
	7	E	7	5	Volume preset recall	A		
	7	E	7	6		B		
	7	E	7	7		C		

#### 4 **Reset Command**

\*This command reset RX-Vx00's all current settings which can be controlled by RS-232C commands to factory presets.

\*Resetting the stored settings should be thought to be a final solution.

RX-Vx00 <----- reset HOST

\*Please confirm the RX-Vx00 settings from the Configuration after the reset transaction with 500msec's wait.

Ready <----- 

DC3	DEL	DEL	DEL	ETX
-----	-----	-----	-----	-----

 \*recall factory preset of all data

## 5 Report Command

\*Reports which informs the change of settings controlled by the control command, remote controller or keys in the unit.

RX-Vx00 -----> Report command HOST

\*Report commands are divided into following three types.

System state report : This report command informs the system state, such as busy, when it changes.

Playback state report : This report command informs the RX-Vx00's internal playback state and Fs of source, when the source signal changes.

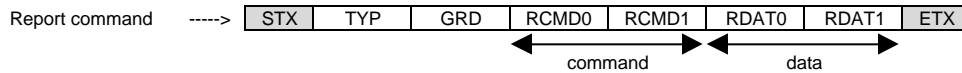
Operation report : This report command informs the last state of the setting which is controlled by I/R, RS-232C, or keys, when the transactions are completed.

\*RX-Vx00 reports the "Power Off" report (System state report), when a control command except for the Ready, Power control, and System command is sent to RX-Vx00.

\*RX-Vx00 reports the guard status, which indicates if transaction is prohibited or not, and what is prohibiting the transaction when the guard is on.

\*RX-Vx00 send only one report command for each types of control after the control command is sent to RX-Vx00, which reports the last state of the setting as a result of the series of transactions.

For example, If a user set the input selector in the unit to D-TV/LD just after the host send commands to change input to CD, RX-Vx00 may report only that the input was changed to D-TV/LD by the system operation.



function name	function	data (ASCII)	range (HEX)
TYP	control type	0 - 9	0 - 9
GRD	guard status	0 - 9	0 - 9
RCMD0, 1	command	0 - 9, A - F	0 - 0xFF
RDAT0, 1	data	0 - 9, A - F	0 - 0xFF

<Control type> This indicates for which type of control the report command is.

TYP	control type
0	control by RS-232C
1	control by remote controller (I/R)
2	control by keys in the unit
3	control by system
4	control by encoder

<Guard status> This indicates guard status against all control command

GRD	Guard status
0	no guard
1	guarded by system
2	guarded by setting



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\*Factor of the guards and the contents informed in report commands when there are no guards

operation	no guard	system guard	setting guard
Power	Power status	---	---
Input	6ch input/ selected input	---	---
Input mode	selected Input mode	6ch Input is ON during Input Rename function doesn't have the designated Input mode	---
Zone2 Input	selected input	zone2 selector is not at "REMOTE"	---
Mute	mute status	---	---
Zone2 mute	mute status	---	---
master volume	volume value	---	---
Zone2 volume	volume value (v3000)	---	Zone2 volume is set to "FIX"
Program	Program ID	6ch input is ON source is not 32kHz,44.1kHz or 48kHz	---
6.1/ES Key	status	6ch input is ON Program is OFF	---
Tuner page	page	Tuner function is not active	---
Tuner Preset No.	No.	Tuner function is not active	---
OSD	status	SETMENU is active Test tone is ON	Memory Guard is ON
Sleep	status	Test tone is ON	---
Home	selected Bank	---	---
Home volume	selected Bank	---	---
Speaker A/B	ON/OFF Status	Headphone Mode	---

## <Contents of report>

### \*System status reports

RCMD0, 1	content	RDAT0, 1	state
00	no guard	00	OK
		01	Busy
		02	Power Off

ready for accepting the control commands  
 start of the term prohibits sending commands  
 report against the command which cannot be accepted when the Power is Off

\*RX-VX00 sends this report when the system is reset or the power turns off.  
 It can be used for observation of the system revival.

RCMD0, 1	content	RDAT0, 1	state
01	warning	00	over current
		01	DC Detect
		02	power trouble
		03	over heat

report of abnormal states  
 (Only when it's possible to report)

### \*Playback status reports

RCMD0, 1	content	RDAT0, 1	state
10	Playback	00	external decoder
		01	Analog
		02	PCM
		03	D.D.(except for 2/0)
		04	D.D.(2/0)
		05	D.D.karaoke
		06	D.D.6.1
		07	DTS
		08	DTS.ES
09	Digital		
11	Fs	00	Analog
		01	32kHz
		02	44.1kHz
		03	48kHz
		04	64kHz
		05	88.2kHz
		06	96kHz
07	Unknown		
12	6.1/ES	00	ON
		01	OFF
13	Thr / Bypass	00	Normal
		01	Bypass
14	RED dts	00	Release
		01	Wait
15	Tuner tuned	00	Not tuned
		01	Tuned

audio code mode excepting for 2/0  
 audio code 2/0

waiting to decode, etc.

6.1/ES Playback status

DSP Through status

RED dts status\*

This report will be sent in case of signal changed.

\*After the signals of DTS CD/LD are stopped, the RED dts status keeps "Wait" for 30 sec., then turned to "Release"

\*While the RED dts is "Wait", this can be released by changing the Input Mode.

### \*Operation reports

RCMD0, 1	content	RDAT0, 1	state	RCMD0, 1	content	RDAT0, 1	state
----------	---------	----------	-------	----------	---------	----------	-------

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20	Power	0	OFF	29	Tuner Page	0	A
-	-	1	ON	-	-	1	B
21	Input	x,0	PHONO	-	-	2	C
-	-	x,1	CD	-	-	3	D
-	-	x,2	TUNER	-	-	4	E
-	-	x,3	CD-R	2A	Tuner Preset No.	0	1
-	-	x,4	MD/TAPE	-	-	1	2
-	-	x,5	DVD	-	-	2	3
-	-	x,6	D-TV/LD	-	-	3	4
-	-	x,7	CABLE ( CBL/SAT )	-	-	4	5
-	-	x,8	SAT	-	-	5	6
-	-	x,9	VCR1	-	-	6	7
-	-	x,A	VCR2/DVR	-	-	7	8
-	-	x,B	V-AUX	2B	OSD	0	FULL
-	-	0/1,x	6ch input OFF/ON	-	-	1	SHORT
22	Input mode	0	AUTO	-	-	2	OFF
-	-	2	DTS	2C	SLEEP	0	120
-	-	4	ANALOG	-	-	1	90
-	-	5	ANALOG ONLY	-	-	2	60
23	Mute	0	OFF	-	-	3	30
-	-	1	ON	-	-	4	OFF
24	Zone2 Input	0	PHONO	2D	6.1/ES Key	0	OFF
-	-	1	CD	-	-	1	ON
-	-	2	TUNER	2E	Speaker relay A	0	OFF
-	-	3	CD-R	-	-	1	ON
-	-	4	MD/TAPE	2F	Speaker relay B	0	OFF
-	-	5	DVD	-	-	1	ON
-	-	6	D-TV/LD	30	Home bank	0	Main
-	-	7	CABLE ( CBL/SAT )	-	-	1	A
-	-	8	SAT	-	-	2	B
-	-	9	LD	-	-	3	C
-	-	0A	VCR1	31	Home Preset memory	1	A
-	-	0B	VCR2/DVR	-	-	2	B
-	-	0C	V-AUX	-	-	3	C
25	Zone2 Mute	0	OFF	32	volume bank	0	Main
-	-	1	ON	-	-	1	A
26	Master volume	0	-∞	-	-	2	B
-	-	1	-99dB	-	-	3	C
-	-	2	-98.5dB	33	Volume Preset Memory	1	A
-	-	....	....	-	-	2	B
-	-	C7	0dB	-	-	3	C
27	Zone2 volume (v3000)	0	-∞dB	34	Head Phone	0	OFF
-	-	1	-79dB	-	-	1	ON
-	-	2	-78dB	35	FM/AM	0	FM
-	-	....	....	-	-	1	AM
-	-	50	0dB	-	-	-	-
28	Program	80	OFF	-	-	-	-
-	-	0	Hall A(HALL1)	-	-	-	-
-	-	1	Hall B	-	-	-	-
-	-	4	Hall C	-	-	-	-
-	-	5	Live Concert(HALL2)	-	-	-	-
-	-	8	Freiburg(CHURCH)	-	-	-	-
-	-	9	Royaumont	-	-	-	-
-	-	0C	Village Gate	-	-	-	-
-	-	0D	The Bottom Line(JAZZ)	-	-	-	-
-	-	10	The Roxy Theatre(ROCK)	-	-	-	-
-	-	11	Arena	-	-	-	-
-	-	14	Anaheim(STADIUM)	-	-	-	-
-	-	15	Bowl	-	-	-	-
-	-	18	Disco	-	-	-	-
-	-	19	Game	-	-	-	-
-	-	1A	6/8ch Stereo	-	-	-	-
-	-	1C	Pop/Rock	-	-	-	-
-	-	1D	Classical/Opera(TV SPORTS)	-	-	-	-
-	-	20	Mono Movie	-	-	-	-
-	-	21	Variety Sports	-	-	-	-
-	-	24	Spectacle	-	-	-	-
-	-	25	Sci-Fi	-	-	-	-
-	-	28	Adventure	-	-	-	-
-	-	29	General	-	-	-	-
-	-	2C	Normal	-	-	-	-
-	-	2D	Enhanced	-	-	-	-

**Attentions**

\*When the Input is changed, RX-Vx00 sends Operation Report for Input (RCMD0,1="21") and Input mode(RCMD0,1="22").

\*When the Home bank is changed, RX-Vx00 sends Operation Report for Home bank (RCMD0,1="30") and Configuration Command.

\*When a headphone is plugged into the headphone jack and Speaker Relay turned off, RX-Vx00 send the Operation Report for Speaker Relay A and B (RCMD0,1="2E","2F", RDAT="00(OFF)"). RX-Vx00 sends the Operation Command for Speaker Relay A and B when the headphone is jacked off, too.

\*Each time the source from the Inputs or playback status (ex. 6.1/ES, RED dts etc.) of the system changes, RX-Vx00 send the Playback Status report.

\*Each time the busy status of the system change, RX-Vx00 send the System Status report.

## Communications

- [1] No connection of the AC Outlet of the RX-VX00 / no connection of RS-232C cable

Because RX-Vx00 can not send a configuration after the 5<sup>th</sup> re-sending of Ready, please let host report trouble.

RX-Vx00 <---X----- HOST

- [2] AC outlet / RS-232C cable is plugged off after the communication has started

In this case, when host detected a data block timeout or 5<sup>th</sup> re-sending, please let host prohibit publishing any commands and clear send buffer. After that, re-start communication from sending Ready (start transactions) and check the [1].

However this cannot be detected when the report command is set to disable.

When the RS-232C cable is plugged off, though RX-Vx00 try to send report commands for the operations by the remote controller or keys, the reports data are only stocked in the send buffer, which make it overflow.

When the send buffer overflowed, RX-Vx00 clears the send buffer and stop sending report commands.

\*In this case, RX-Vx00 sends no report commands even after the RS-232C cable is re-connected.

Please plug off and on the AC outlet, or re-start communication from sending Ready (start transactions).

- [3] AC outlet is plugged in after [1],[2]

RX-Vx00 report that the system is reset.

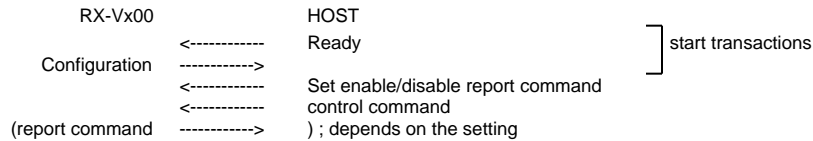
When the host receives the report, please let host send Ready to start communication.

- [4] Host turns on after the RX-Vx00 turned on

After confirming existence of RX-Vx00 by Configuration, control command can be sent to RX-Vx00.

However, RX-Vx00 can accept only System command and power command when the power is Off, and can accept no report commands for other operations.

When communication errors (timeout etc.) occur during the start transactions, the same process as [1] is needed.



- [5] Error transactions after [4]

When host detect a timeout of report command or 5<sup>th</sup> re-sending of control command, please clear the send buffer and re-start from the start transactions.

**6 Appendix**

\* ASCII Chart

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

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

\* The characters in the gray sells are available in the RS-232C communications.