

# D&M SYSTEM control protocol

Ver.1.0.1

Application model : FY14 Model (DRA-N4, RCD-N9, DNP-730, NA8005, and NA6005)

Application terminal: **RS-232C/ Ethernet**

Rev 10.9.0

## Connector specification

### I. RS-232C

Connector type: DB-9pin female type, slave straight connection (DCE type)

( 1pin : GND , 2pin : TxD , 3pin : RxD , 5pin : Common(GND) , 4,6,7,8,9pin : NC )

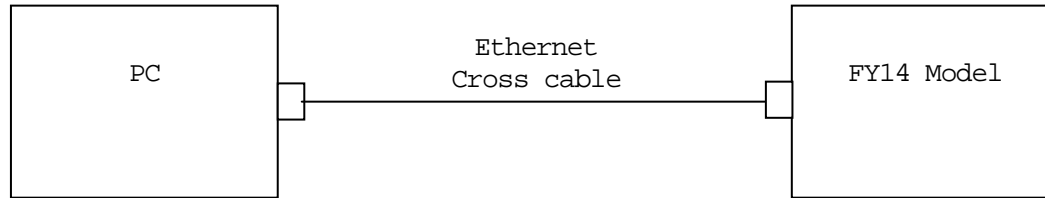
Communication format:

Synchronous system	: Tone step synchronization
Communication system	: A half duplex
Communication speed	: 9600bps
Character length	: 8 bits
Parity control	: None
Start bit	: 1 bit
Stop bit	: 1 bit
Communication procedure	: Non procedural
Communication data length	: 135 bytes (maximum)

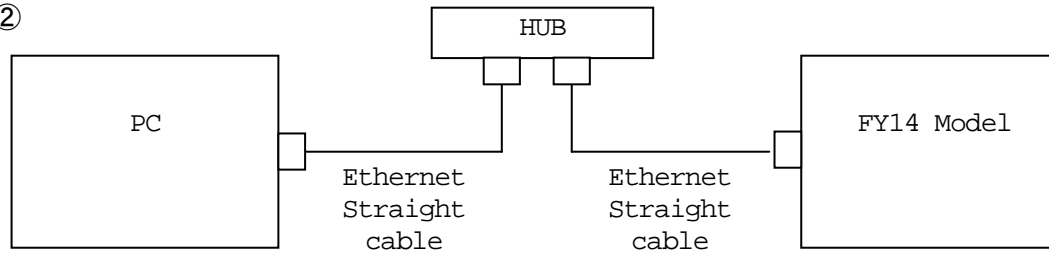
## II. Ethernet

Connector type : RJ-45(10BASE-T/100BASE-TX)

Example ①



Example ②



History:

Version	Date	Contents	Page
1.0.0	9.June.'14	Original	ALL
1.0.1	9.June.'14	Changed the setting of Network Information	11
1.0.2	2014/1/23	Improved	ALL
1.0.3	2014/1/30	Correspond to Remote Out	
	2014/6/17	Added Remote control code for AVR	
1.0.4	2014/7/15	Correspond to C4	
1.0.5	2014/7/29	Added new commands for new Apps	
1.0.6	2014/8/27	Correspond to Auto Standby	
1.0.7	2014/8/29	Added AUDIO Format	

## NETWORK SETUP of FY14 Model

### >Procedure of Network Setup mode.

(1) Press **MENU** button, then Menu appears on OLED-display.

(2) Select "Network > Settings" .

(3) Set parameters described below.

<DHCP> "On"---Use this setting when DHCP server is on the local network.  
"Off"---Use this setting when DHCP server is not on the local network.

<IP Address> When <DHCP> sets "Off", please set IP address.  
When <DHCP> sets "On", you can confirm the IP address that is set by server.

<Subnet Mask> When <DHCP> sets "Off", please set Subnet Mask.  
When <DHCP> sets "On", you can confirm the Subnet Mask that is set by server.

<Gateway> Set the address of Gateway when Gateway is on the local network.  
Do not set this parameter when Gateway is not on the local network.

<Primary DNS> Do not set this parameter.

<Second DNS> Do not set this parameter.

<Proxy> Set this parameter "Off".

<Network Option: Network Standby Mode>.

(1) Press **MENU** button, then Menu appears on OLED-display.

(2) Select "Network > Network Standby".

(3) Set parameters described below.

"**On**"---Use this setting when using the FY14 Model Connected in a network.

"**Off**"--- Use this setting when not using the FY14 Model connected in a network.  
This setting is reducing the power consumption in the standby mode.

Protocol specification

The following three data forms are defined.

- COMMAND** : The message sent to a system from a controller(Touch Panel etc.)  
A command to a system is given from a controller.
- EVENT** : The message sent to a controller (Touch Panel etc.) from a system  
The result is sent, when a system is operated directly and a state changes.  
\*The form of **EVENT** presupposes that it is the same as that of **COMMAND**.  
\*\*Refer to the following table for the contents of **COMMAND** and **EVENT**.
- RESPONSE** : The message sent to a controller (Touch Panel etc.) from a system  
if the 'request command' (**COMMAND+?+CR(0x0D)**) has come from a controller.  
The **RESPONSE** should be sent within 200ms of receiving the **COMMAND**.  
\*The form of **RESPONSE** presupposes that it is the same as that of **EVENT**.

**Basic specification:** The command by ASCII CODE, parameter expression

\*ASCII CODE which can be used is from 0x20 to 0x7F: the alphabet and the number of 0-9, and space (0x20), some signs,  
AND carriage return (0x0D) --- It is used only as a pause sign.

**Command structure:** COMMAND + PARAMETER + CR (0x0D)

COMMAND: ASCII CODE of 2 characters

Ex. SI : Select Input source

PW : system PoWer setting

PARAMETER : ASCII CODE ( up to 25 characters)

ex. IRADIO: function name

\*Special Parameter--- ? : for request command

**The example of a command** \* <CR> is the meaning of 0x0D.

SITUNER<CR> : Select Input source TUNER

PWON<CR> : system Power ON

PWSTANDBY<CR> : system Power STANDBY

SI?<CR> : Request command for now playing input source >> Return **RESPONSE** 'SI\*\*\*<CR>'

Others

A) **COMMAND** is receivable also during transmission of **EVENT**.

B) The **RESPONSE** should be sent as opposed to the request command by all the commands with which an **EVENT** exists , not need to the another request commands(ex. SI command).

## COMMAND and PARAMETER list

※ Regarding SYSTEM

COMMAND	PARAMETER	Function		example
PW	ON	POWER ON/STANDBY change		PWON<CR>
	STANDBY			PWSTANDBY<CR>
	?	Return PW Status		PW?<CR>
MV	UP	MASTER VOLUME UP/DOWN , direct change to **dB		MVUP<CR>
	DOWN	(DRA-N4/RCD-N9)		MVDOWN<CR>
	**	**:00 to 60 by ASCII		MV45<CR>
	?	Return MV Status		MV?<CR>
MU	ON	OUTPUT MUTE ON/OFF change		MUON<CR>
	OFF	(DRA-N4/RCD-N9 )		MUOFF<CR>
	?	Return MU Status		MU?<CR>
SI	IRADIO	Internet Radio		SIIRADIO<CR>
	SERVER	Music Server		SISERVER<CR>
	LASTFM	Last.fm(EU only)		SILASTFM<CR>
	PANDORA	Pandora(NA only)		SIPANDORA<CR>
	SIRIUSXM	SiriusXM(NA only)		SISIRIUSXM<CR>
	SPOTIFY	Spotify		SISPOTIFY<CR>
	BLUETOOTH	Bluetooth		SIBLUETOOTH<CR>
	DEEZER	Deezer	Correspond to update	SIDEEZER<CR>
	USB	USB		SIUSB<CR>
	PC	PC(USB-DAC)		SIPC<CR>
	COAXIAL	Coaxial	NA8005/NA6005	SICOAXIAL<CR>
	OPTICAL	Optical	NA8005/NA6005	SIOPTICAL<CR>
	DIGITALIN1	RCD-N9 : Digital In 1 DRA-N4 : AUX:Digital In	DRA-N4/RCD-N9	SIDIGITALIN1<CR>
	DIGITALIN2	Digital In 2		SIDIGITALIN2<CR>
	ANALOGIN	RCD-N9 : Analog In DRA-N4 : AUX Analog In	DRA-N4/RCD-N9	SIANALOGIN<CR>
	CD	CD		SICD<CR>
	TUNER	TUNER		SITUNER<CR>
	FM	FM		SIFM<CR>
AM	AM		SIAM<CR>	
?	Return SI Status		SI?<CR>	

SLP	OFF	MAIN ZONE SLEEP TIMER setting	SLPOFF<CR>
	***	***:001 to 090 by ASCII , 010=10min	SLP***<CR>
	?	Return SLP Status	SLP?<CR>

※ALARM (DRA-N4/RCD-N9)

COMMAND	PARAMETER	Function	example																
TS	ONCE @**##-@\$% [F][N] VV [O]	ONCE TIMER TIME SET @:A or P or 2(A:AM,P:PM,2:24hour by ASCII) **## :start time(**=00~23hours,##=00~59minutes by ASCII) \$\$% :stop time(\$\$=00~23hours,%=00~59minutes by ASCII) (Not Use :FFFF) [F]:Function (2bytes by ASCII)	TSONCE A0730-AFFFF CD00 05 0<CR> TSONCE P0630-PFFFF FA01 05 1<CR> TSONCE 21930-2FFFF AA00 05 1<CR>																
		<table border="1"> <tr><td>FA</td><td>Favorite</td></tr> <tr><td>CD</td><td>CD</td></tr> <tr><td>AA</td><td>AUX:Analog In</td></tr> <tr><td>AD</td><td>AUX:Digital In</td></tr> <tr><td>AI</td><td>Analog In</td></tr> <tr><td>D1</td><td>Digital In 1</td></tr> <tr><td>D2</td><td>Digital In 2</td></tr> <tr><td>IU</td><td>iPod/USB</td></tr> </table>	FA	Favorite	CD	CD	AA	AUX:Analog In	AD	AUX:Digital In	AI	Analog In	D1	Digital In 1	D2	Digital In 2	IU	iPod/USB	
		FA	Favorite																
		CD	CD																
		AA	AUX:Analog In																
		AD	AUX:Digital In																
		AI	Analog In																
		D1	Digital In 1																
		D2	Digital In 2																
		IU	iPod/USB																
[N]:preset No.(2bytes by ASCII, except TU="00")																			
VV:VOLUME																			
[O]:ONCE TIMER ON/OFF(0:OFF,1:ON)																			
EVERY TIMER TIME SET @:A or P or 2(A:AM,P:PM,2:24hour by ASCII) **## :start time(**=00~23hours,##=00~59minutes by ASCII) \$\$% :stop time(\$\$=00~23hours,%=00~59minutes by ASCII) (Not Use :FFFF) [F]:Function (2bytes by ASCII) It is the same as that of ONCE TIMER TIME SET. [N]:preset No.(2bytes by ASCII, except TU="00")	TSEVERY P0630-PFFFF CD00 05 0<CR> TSEVERY P0630-PFFFF FV01 05 1<CR> TSEVERY 21830-2FFFF AA00 05 1<CR>																		
VV:VOLUME																			
[O]:EVERY TIMER ON/OFF(0:OFF,1:ON)																			
?	TIMER Status	TS?<CR>																	
CLK	?		CLK?<CR>																



※FAVORITE Control

COMMAND	PARAMETER	Function	example
FV	**	FAVORITE direct change to No.**	FV 25<CR>
	?	Return FAVORITE List	FV ?<CR>
	MEM **	FAVORITE MEMORY to No.**	FVMEM 01<CR>
	DEL **	FAVORITE DELEAT to No.**	FVDEL 01<CR>

※Tone Control (DRA-N4/RCD-N9)

COMMAND	PARAMETER	Function	example
PS	BAS UP	BASS UP/DOWN , direct change to **dB	PSBAS UP<CR>
	BAS DOWN	** :00 to 99 by ASCII , 50=0dB	PSBAS DOWN<CR>
	BAS **	SYSTEM can be operated from -10 to +10(40 to 60)	PSBAS 50<CR>
	BAS ?	Return PSBAS Status, 2Steps(40,42,44,...,50,...,56,58,60)	PSBAS ?<CR>
	TRE UP	TREBLE UP/DOWN , direct change to **dB	PSTRE UP<CR>
	TRE DOWN	** :00 to 99 by ASCII , 50=0dB	PSTRE DOWN<CR>
	TRE **	SYSTEM can be operated from -10 to +10(40 to 60)	PSTRE 50<CR>
	TRE ?	Return PSTRE Status, 2Steps(40,42,44,...,50,...,56,58,60)	PSTRE ?<CR>
	BAL LEFT	BALANCE LEFT/RIGHT , direct change to **	PSBAL LEFT<CR>
	BAL RIGHT	** :00 to 99 by ASCII , 50=CENTER	PSBAL RIGHT<CR>
	BAL **	SYSTEM can be operated from L6 to R6(44 to 56)	PSBAL 50<CR>
	BAL ?	Return PSBAL Status	PSBAL ?<CR>
	SDB ON	Denon Model:SDB / Marantz Model:DBB ON/OFF	PSSDB ON<CR>
	SDB OFF		PSSDB OFF<CR>
	SDB ?	Return PSSDB Status	PSSDB ?<CR>
	SDI ON	SOURCE DIRECT ON/OFF	PSSDI ON<CR>
	SDI OFF		PSSDI OFF<CR>
	SDI ?	Return PSS.DIRECT Status	PSSDI ?<CR>
	FRONT SPA	Speaker Select	PSFRONT SPA<CR>
	FRONT SPB	Speaker A / Speaker B / Speaker A+B	PSFRONT SPB<CR>
FRONT A+B		PSFRONT A+B<CR>	
FRONT ?	Return Speaker Select Status	PSFRONT ?<CR>	

※ANALOG TUNER Control (DRA-N4/RCD-N9/NA6005)

COMMAND	PARAMETER	Function	example
TF	ANUP	TUNER Frequency UP/DOWN	TFANUP<CR>
	ANDOWN		TFANDOWN<CR>
	AN***** (6 digits)	--- ****.** kHz at AM band (>050000 is AM.) ****.** MHz at FM band (<050000 is FM.)	TFAN105000<CR> (1050.00kHz at AM)
	AN?	Return TF Status	TFAN?<CR>
	ANNAME?	Return RDS Station Name ( <b>EU</b> Only)	TFANNAME?<CR>
TM	ANAM	TUNER BAND , MODE Select ---Band set to AM	TMANAM<CR>
	ANFM	---Band set to FM	TMANFM<CR>
	?	Return TM Status	TM?<CR>
	ANAUTO	---Tuning mode set to AUTO mode	TMANAUTO<CR>
	ANMANUAL	---Tuning mode set to MANUAL mode	TMANMANUAL<CR>

※Variable Output

COMMAND	PARAMETER	Function	example
SS	VAO	Variable Output (Audio Out Menu) :Fixed	SSVAO FIX
		Variable Output (Audio Out Menu) :variable	SSVAO VAR
		?	SSVAO ?
	VVL	Variable Output (Volume Limit) :0dB	SSVVL 000
		Variable Output (Volume Limit) :-10dB	SSVVL 010
		Variable Output (Volume Limit) :-20dB	SSVVL 020
		Volume Limit Direct	SSVVL *** (*** : Limit)
		?	SSVVL ?

※Auto Standby

COMMAND	PARAMETER	Function	example	
SS	STB	Auto Standby : ON	NA8005 only SSSTB ON<CR>	
		Auto Standby : OFF	ALL SSSTB OFF<CR>	
		Auto Standby : 1min	DNP-730、N4/N9、 NA6005	SSSTB 01<CR>
		Auto Standby : 5min		SSSTB 05<CR>
		Auto Standby : 15min		SSSTB 15<CR>
		Auto Standby Direct (** : TIME 01~99)		SSSTB **<CR>
		?	ALL	SSSTB ? <CR>

### ※Variable Output Volume

COMMAND	PARAMETER	Function	example
MV	UP	MASTER VOLUME UP/DOWN , direct change to **dB	MVUP<CR>
	DOWN		MVDOWN<CR>
	**	** : 99 to 00 by ASCII (99: -99dB, 00: 00dB, FF: MUTE)	MV45<CR>
	?	Return MV Status	MV?<CR>

### ※Language setting

COMMAND	PARAMETER	Function	example
SSLAN	ENG	English	SSLAN ENG<CR>
	DEU	German	SSLAN DEU<CR>
	FRA	French	SSLAN FRA<CR>
	ITA	Italian	SSLAN ITA<CR>
	ESP	Spanish	SSLAN ESP<CR>
	NER	Dutch	SSLAN NER<CR>
	SVE	Swedish	SSLAN SVE<CR>
	JPN	Japanese	SSLAN JPN<CR>
	CHI	Chinese	SSLAN CHI<CR>
	POL	Poland	SSLAN POL<CR>
	RUS	Russia	SSLAN RUS<CR>
	?	Request	SSLAN ? <CR>

### ※AUDIO Playback format

COMMAND	PARAMETER1	PARAMETER2	Function	example
SSFMT	?		Get type of playback file	SSFMT?<CR>

### ※DIMMER setting

COMMAND	PARAMETER	Function	example
SSDIM	000	DIMMER : 0%	SSDIM000<CR>
	025	DIMMER : 25% (For 5 step)	SSDIM025<CR>
	040	DIMMER : 40% (For 4 step)	SSDIM040<CR>
	050	DIMMER : 50% (For 5 step)	SSDIM050<CR>
	070	DIMMER : 70% (For 4 step)	SSDIM070<CR>
	075	DIMMER : 75% (For 5 step)	SSDIM075<CR>
	100	DIMMER : 100%	SSDIM100<CR>
	?	Request	SSDIM?<CR>

※Network Information setting

COMMAND	PARAMETER	Function	example
NSINF	?	Network Information (Request information) <ul style="list-style-type: none"> <li>▪ FriendlyName</li> <li>▪ Wired/Wireless</li> <li>▪ SSID</li> <li>▪ DHCP</li> <li>▪ IP Address</li> <li>▪ MAC Address</li> </ul>	NSINF?

※Network/Rhapsody/Napster/USB/iPod Direct Extended Control (SS COMMAND)

COMMAND	PARAMETER	Function	example
NS	90	"Cursor Up" Control	NS90<CR>
	91	"Cursor Down" Control	NS91<CR>
	92	"Cursor Left" Control	NS92<CR>
	93	"Cursor Right" Control	NS93<CR>
	94	"Enter (Play/Pause)" Control	NS94<CR>
	9A	"Play" Control(iRadio/mServer/USB) "Play/Pause" Control(iPod Direct)	NS9A<CR>
	9B	"Pause" Control "Play/Pause" Control(iPod Direct)	NS9B<CR>
	9C	"Stop" Control	NS9C<CR>
	9D	"Skip Plus" Control	NS9D<CR>
	9E	"Skip Minus" Control	NS9E<CR>
	9F	Start Fast Forward	NS9F<CR>
	9G	Start Fast Forward	NS9G<CR>
	9H	"Repeat One" (USB/iPod DIRECT/mServer)	NS9H<CR>
	9I	"Repeat All" (USB/iPod DIRECT/mServer)	NS9I<CR>
	9J	"Repeat Off" (USB/iPod DIRECT/mServer)	NS9J<CR>
	9K	"Random On/Repeat ALL" (USB/mServer) "Shuffle Songs" Control (iPod Direct Only)	NS9K<CR>
	9M	"Random Off" (USB/mServer) "Shuffle Off" Control (iPod Direct Only)	NS9M<CR>
	9W	Toggle Switch "Browse Mode/Remote Mode" Control (iPod Direct Only)	NS9W<CR>
	9X	Page Up	NS9X<CR>
	9Y	Page Down	NS9Y<CR>
9Z	End Fast Forward / Reverse	NS9Z<CR>	

NSA		Request Onscreen Display Information List (Ascii)	NSA<CR> (Return NSE0-NSE8,Refer to Page 22)
NSE		Request Onscreen Display Information List (UTF-8 CODE Character)	NSE<CR> (Return NSE0-NSE8,Refer to Page 23)

※APPS\_RC-5 OUT Command (NA8005/NA6005)

COMMAND	PARAMETER	Function	example
MV	UP	VOLUME UP	MVUP<CR>
	DOWN	VOLUME DOWN	MVDOWN<CR>
MVLONG	UP	VOLUME UP(Long push)	MVLONGUP<CR>
	DOWN	VOLUME DOWN(Long push)	MVLONGDOWN<CR>
	END	VOLUME(Long push END)	MVLONGEND<CR>
IRTX	1601201	AMP:(Power) On	IRTX1601201<CR>
	1601202	AMP:Standby	IRTX1601202<CR>
	20063	AMP:CD	IRTX20063<CR>
	17063	AMP:LINE 1	IRTX17063<CR>
	1600010	AMP:LINE 2	IRTX1600010<CR>
	26063	AMP:RECORDER 1	IRTX26063<CR>
	18063	AMP:RECORDER 2	IRTX18063<CR>
	21063	AMP:PHONO	IRTX21063<CR>
	1600020	AMP:BALANCED	IRTX1600020<CR>
	1706300	AMP:TUNER	IRTX1706300<CR>
	1600006	AMP:AUX	IRTX1600006<CR>
	1600010	AMP:DVD	IRTX1600010<CR>
	1601300	AMP:Mute on	IRTX1601300<CR>
	1601301	AMP:Mute Off	IRTX1601301<CR>
	1616	AMP:VOL UP	IRTX1616<CR>
	1617	AMP:VOL DOWN	IRTX1617<CR>
	1613	AMP:ATT(Mute)	IRTX1613<CR>
	2001201	CD:Power On	IRTX2001201<CR>
	2001202	CD:Power Off	IRTX2001202<CR>
	20045	CD:Eject	IRTX20045<CR>
	20033	CD:Previous	IRTX20033<CR>
	20053	CD:Play	IRTX20053<CR>
	20032	CD:Next	IRTX20032<CR>
	20048	CD:Pause	IRTX20048<CR>
	20054	CD:Stop	IRTX20054<CR>
	20029	CD:Repeat	IRTX20029<CR>
	20028	CD:Shuffle	IRTX20028<CR>

※APPS\_KASEIKYO CODE (SHARP) Command (DRA-N4/RCD-N9/DNP-730)

COMMAND	PARAMETER	Function	example
IRTXK	2400314	POWER	IRTXK2400314<CR>
	2403317	DIMMER	IRTXK2403317<CR>
	2402A86	RANDOM	IRTXK2402A86<CR>
	2402B96	REPEAT	IRTXK2402B96<CR>
	2401135	1 ./	IRTXK2401135<CR>
	2401205	2 ABC	IRTXK2401205<CR>
	2401315	3 DEF	IRTXK2401315<CR>
	2401465	4 GHI	IRTXK2401465<CR>
	2401575	5 JKL	IRTXK2401575<CR>
	2401645	6 MNO	IRTXK2401645<CR>
	2401755	7 PQRS	IRTXK2401755<CR>
	24018A5	8 TUV	IRTXK24018A5<CR>
	24019B5	9 WXYZ	IRTXK24019B5<CR>
	2401CE5	+10	IRTXK2401CE5<CR>
	2401B95	0 _ (space)*	IRTXK2401B95<CR>
	2402FD6	CLEAR	IRTXK2402FD6<CR>
	2404020	INTERNET RADIO PRESET 1	IRTXK2404020<CR>
	2404130	INTERNET RADIO PRESET 2	IRTXK2404130<CR>
	2404200	INTERNET RADIO PRESET 3	IRTXK2404200<CR>
	2400DF4	<<	IRTXK2400DF4<CR>
	2400A84	PLAY/ PAUSE	IRTXK2400A84<CR>
	2400CE4	>>	IRTXK2400CE4<CR>
	2400FD4	<<	IRTXK2400FD4<CR>
	2400B94	STOP	IRTXK2400B94<CR>
	2400EC4	>>	IRTXK2400EC4<CR>
	2405311	PURE DIRECT	IRTXK2405311<CR>
	2403207	INFO	IRTXK2403207<CR>
	2403757	MODE	IRTXK2403757<CR>
	2402026	UP	IRTXK2402026<CR>
	2402206	LEFT	IRTXK2402206<CR>
	2402466	ENTER	IRTXK2402466<CR>
	2402316	RIGHT	IRTXK2402316<CR>
	2402136	DOWN	IRTXK2402136<CR>
	2405021	SOURCE	IRTXK2405021<CR>
	2403647	MENU	IRTXK2403647<CR>
	2402996	PROGRAM	IRTXK2402996<CR>

2403A87	FAVORITE	IRTXK2403A87<CR>
24038A7	SEARCH	IRTXK24038A7<CR>
2205EC7	POWER ON	IRTXK2205EC7<CR>
2205FD7	POWER OFF	IRTXK2205FD7<CR>
2203311	POWER	IRTXK2203311<CR>
2203571	DIMMER	IRTXK2203571<CR>
2202A80	RANDOM	IRTXK2202A80<CR>
2201463	REPEAT	IRTXK2201463<CR>
2200202	1	IRTXK2200202<CR>
2200312	2	IRTXK2200312<CR>
2200462	3	IRTXK2200462<CR>
2200572	4	IRTXK2200572<CR>
2200642	5	IRTXK2200642<CR>
2200752	6	IRTXK2200752<CR>
22008A2	7	IRTXK22008A2<CR>
22009B2	8	IRTXK22009B2<CR>
2200A82	9	IRTXK2200A82<CR>
2200CE2	+10	IRTXK2200CE2<CR>
2200132	0	IRTXK2200132<CR>
2201133	CLEAR	IRTXK2201133<CR>
2203FD1	UP	IRTXK2203FD1<CR>
2204026	DOWN	IRTXK2204026<CR>
2204466	LEFT	IRTXK2204466<CR>
2204576	RIGHT	IRTXK2204576<CR>
2204646	ENTER	IRTXK2204646<CR>
2201CE3	PLAY	IRTXK2201CE3<CR>
2201DF3	PAUSE	IRTXK2201DF3<CR>
2203461	PLAY/ PAUSE	IRTXK2203461<CR>
2201EC3	STOP	IRTXK2201EC3<CR>
22019B3	<<	IRTXK22019B3<CR>
22018A3	>>	IRTXK22018A3<CR>
2201B93	<<	IRTXK2201B93<CR>
2201A83	>>	IRTXK2201A83<CR>
2204B96	MODE	IRTXK2204B96<CR>
2204756	REMOTE/BROWSE	IRTXK2204756<CR>
2204EC6	MENU	IRTXK2204EC6<CR>
2201313	INFO	IRTXK2201313<CR>
2203B91	FOLDER MODE	IRTXK2203B91<CR>
22049B6	PURE DIRECT	IRTXK22049B6<CR>
2201023	OPEN/CLOSE	IRTXK2201023<CR>

2204DF6	TITLE/ARTIST	IRTXK2204DF6<CR>
2204CE6	PLAY SELECT	IRTXK2204CE6<CR>
2200DF2	PROGRAM	IRTXK2200DF2<CR>
2201203	CALL	IRTXK2201203<CR>
2205027	DISC/USB	IRTXK2205027<CR>
2203EC1	DISC LAYER	IRTXK2203EC1<CR>
2204136	TITLE	IRTXK2204136<CR>
2204316	ARTIST	IRTXK2204316<CR>
7100431	AUX1/DVD	IRTXK7100431<CR>
7100521	AUX-2	IRTXK7100521<CR>
7100611	AUX-3	IRTXK7100611<CR>
7100701	NETWORK	IRTXK7100701<CR>
71008F1	USB-DAC	IRTXK71008F1<CR>
71009E1	Bluetooth	IRTXK71009E1<CR>
7100BC1	MUTING	IRTXK7100BC1<CR>
7100CB1	VOLUME DOWN	IRTXK7100CB1<CR>
7100DA1	VOLUME UP	IRTXK7100DA1<CR>
7100E91	INPUT FUNCTION DOWN	IRTXK7100E91<CR>
7100F81	INPUT FUNCTION UP	IRTXK7100F81<CR>
7101070	POWER ON/OFF	IRTXK7101070<CR>
7101160	SOURCE DIRECT	IRTXK7101160<CR>
7101250	BALANCE L	IRTXK7101250<CR>
7101340	BALANCE R	IRTXK7101340<CR>
7101430	OPTICAL-1	IRTXK7101430<CR>
7101520	OPTICAL-2	IRTXK7101520<CR>
7101610	COAXIAL	IRTXK7101610<CR>
71018F0	TAPE MONITOR	IRTXK71018F0<CR>
71019E0	TAPE1/RECORDER1	IRTXK71019E0<CR>
7101AD0	TAPE2/RECORDER2	IRTXK7101AD0<CR>
7102E93	SP-A	IRTXK7102E93<CR>
7102F83	SP-B	IRTXK7102F83<CR>
7103072	SP-C	IRTXK7103072<CR>
7103162	POWER OFF(AMP)	IRTXK7103162<CR>
7103252	MODE(AMP)	IRTXK7103252<CR>
7103522	Phase change for Sub-woofer	IRTXK7103522<CR>
7103612	Select cut-off frequency for Sub-woofer	IRTXK7103612<CR>
7103702	MUTING for Sub-woofer	IRTXK7103702<CR>
71038F2	Power ON/OFF for Sub-woofer	IRTXK71038F2<CR>
71039E2	VOL UP for Sub-woofer	IRTXK71039E2<CR>
7103AD2	VOL DOWN for Sub-woofer	IRTXK7103AD2<CR>



7103CB2	PHONO MM	IRTXK7103CB2<CR>
7103DA2	PHONO MC	IRTXK7103DA2<CR>
7103E92	BALANCE	IRTXK7103E92<CR>
7103F82	EXT.PRE	IRTXK7103F82<CR>
7104075	TONE	IRTXK7104075<CR>
7104255	CH+/SKIP >>	IRTXK7104255<CR>
7104345	CH-/SKIP <<	IRTXK7104345<CR>
7104435	TU+/FWD >>	IRTXK7104435<CR>
7104525	TU-/REV <<	IRTXK7104525<CR>
7104F85	DIMMER	IRTXK7104F85<CR>
7105074	cursor ↑(up)	IRTXK7105074<CR>
7105164	cursor ↓(down)	IRTXK7105164<CR>
7105254	cursor ←(left)	IRTXK7105254<CR>
7105344	cursor →(right)	IRTXK7105344<CR>
7105434	ENTER/Enter	IRTXK7105434<CR>
7105524	BACK(/RETURN)	IRTXK7105524<CR>
7105614	SETUP	IRTXK7105614<CR>
7105E94	POWER ON	IRTXK7105E94<CR>
7105F84	POWER OFF	IRTXK7105F84<CR>

※Remote Code (C4 Command) (DENON : KASEIKYO CODE) (DRA-N4/RCD-N9/DNP-730)

COMMAND	PARAMETER	Function				example
			Genre1	Genre2	DATA	
RCKSK	24001	POWER ON(730)	2	4	001	RCKSK24001<CR>
	24002	POWER OFF(730)	2	4	002	RCKSK24002<CR>
	24003	POWER(730)	2	4	003	RCKSK24003<CR>
	24008	PLAY(730)	2	4	008	RCKSK24008<CR>
	24009	PAUSE(730)	2	4	009	RCKSK24009<CR>
	2400A	PLAY/ PAUSE(730)	2	4	00A	RCKSK2400A<CR>
	2400B	STOP(730)	2	4	00B	RCKSK2400B<CR>
	2400C	>> (730)	2	4	00C	RCKSK2400C<CR>
	2400D	<<(730)	2	4	00D	RCKSK2400D<CR>
	2400E	>>(730)	2	4	00E	RCKSK2400E<CR>
	2400F	<<(730)	2	4	00F	RCKSK2400F<CR>
	24011	1 ./(730)	2	4	011	RCKSK24011<CR>
	24012	2 ABC(730)	2	4	012	RCKSK24012<CR>
	24013	3 DEF(730)	2	4	013	RCKSK24013<CR>
24014	4 GHI(730)	2	4	014	RCKSK24014<CR>	

24015	5 JKL(730)	2	4	015	RCKSK24015<CR>
24016	6 MNO(730)	2	4	016	RCKSK24016<CR>
24017	7 PQRS(730)	2	4	017	RCKSK24017<CR>
24018	8 TUV(730)	2	4	018	RCKSK24018<CR>
24019	9 WXYZ(730)	2	4	019	RCKSK24019<CR>
2401B	0 _(space)*(730)	2	4	01B	RCKSK2401B<CR>
2401C	+10 a/A(730)	2	4	01C	RCKSK2401C<CR>
24020	UP(730)	2	4	020	RCKSK24020<CR>
24021	DOWN(730)	2	4	021	RCKSK24021<CR>
24022	LEFT(730)	2	4	022	RCKSK24022<CR>
24023	RIGHT(730)	2	4	023	RCKSK24023<CR>
24024	ENTER(730)	2	4	024	RCKSK24024<CR>
2402A	RANDOM(730)	2	4	02A	RCKSK2402A<CR>
2402B	REPEAT(730)	2	4	02B	RCKSK2402B<CR>
2402F	CLEAR(730)	2	4	02F	RCKSK2402F<CR>
24031	SLEEP(730)	2	4	031	RCKSK24031<CR>
24032	INFO(730)	2	4	032	RCKSK24032<CR>
24033	DIMMER(730)	2	4	033	RCKSK24033<CR>
24035	TOP MENU(730)	2	4	035	RCKSK24035<CR>
24036	SETUP(730)	2	4	036	RCKSK24036<CR>
24037	MODE(730)	2	4	037	RCKSK24037<CR>
24038	SEARCH(730)	2	4	038	RCKSK24038<CR>
2403A	FAVORITE(730)	2	4	03A	RCKSK2403A<CR>
2403B	iPod/USB(730)	2	4	03B	RCKSK2403B<CR>
2403C	MUSIC SERVER(730)	2	4	03C	RCKSK2403C<CR>
2403E	INTERNET RADIO(730)	2	4	03E	RCKSK2403E<CR>
24050	SOURCE(730)	2	4	050	RCKSK24050<CR>
24054	FAVORITES CALL(730)	2	4	054	RCKSK24054<CR>
24055	FAVORITES ADD(730)	2	4	055	RCKSK24055<CR>
51401	Power On(N4/N9)	5	1	401	RCKSK51401<CR>
51402	Stansby(N4/N9)	5	1	402	RCKSK51402<CR>
51403	POWER(N4/N9)	5	1	403	RCKSK51403<CR>
51404	vol.up(N4/N9)	5	1	404	RCKSK51404<CR>
51405	vol.down(N4/N9)	5	1	405	RCKSK51405<CR>
51406	MUTE(N4/N9)	5	1	406	RCKSK51406<CR>
51408	play(N4/N9)	5	1	408	RCKSK51408<CR>
51409	pause(N4/N9)	5	1	409	RCKSK51409<CR>
5140A	Play pause(N4/N9)	5	1	40A	RCKSK5140A<CR>
5140E	TUNE,+>>(N4/N9)	5	1	40E	RCKSK5140E<CR>
5140F	<<,TUNE-(N4/N9)	5	1	40F	RCKSK5140F<CR>

51411	1 ./ (N4/N9)	5	1	411	RCKSK51411<CR>
51412	2 ABC(N4/N9)	5	1	412	RCKSK51412<CR>
51413	3 DEF(N4/N9)	5	1	413	RCKSK51413<CR>
51414	4 GHI(N4/N9)	5	1	414	RCKSK51414<CR>
51415	5 JKL(N4/N9)	5	1	415	RCKSK51415<CR>
51416	6 MNO(N4/N9)	5	1	416	RCKSK51416<CR>
51417	7 PQRS(N4/N9)	5	1	417	RCKSK51417<CR>
51418	8 TUV(N4/N9)	5	1	418	RCKSK51418<CR>
51419	9 WXYZ(N4/N9)	5	1	419	RCKSK51419<CR>
5141B	0 _(space)*(N4/N9)	5	1	41B	RCKSK5141B<CR>
5141C	+10a/A(N4/N9)	5	1	41C	RCKSK5141C<CR>
51420	UP(N4/N9)	5	1	420	RCKSK51420<CR>
51421	DOWN(N4/N9)	5	1	421	RCKSK51421<CR>
51422	LEFT(N4/N9)	5	1	422	RCKSK51422<CR>
51423	RIGHT(N4/N9)	5	1	423	RCKSK51423<CR>
51424	ENTER(N4/N9)	5	1	424	RCKSK51424<CR>
51429	PROGRAM(N9)	5	1	429	RCKSK51429<CR>
5142A	RANDOM(N4/N9)	5	1	42A	RCKSK5142A<CR>
5142B	REPEAT(N4/N9)	5	1	42B	RCKSK5142B<CR>
5142F	CLEAR(N4/N9)	5	1	42F	RCKSK5142F<CR>
51430	SDB/TONE(N4/N9)	5	1	430	RCKSK51430<CR>
51431	SLEEP(N4/N9)	5	1	431	RCKSK51431<CR>
51432	INFO(N4/N9)	5	1	432	RCKSK51432<CR>
51433	DIMMER(N4/N9)	5	1	433	RCKSK51433<CR>
51434	CLOCK(N4/N9)	5	1	434	RCKSK51434<CR>
51435	TOP MENU(N4/N9)	5	1	435	RCKSK51435<CR>
5143D	SEARCH(N4/N9)	5	1	43D	RCKSK5143D<CR>
5143E	MODE(N4/N9)	5	1	43E	RCKSK5143E<CR>
5143F	STOP(N4/N9)	5	1	43F	RCKSK5143F<CR>
51440	SETUP(N4/N9)	5	1	440	RCKSK51440<CR>
51446	CH+, >>   (N4/N9)	5	1	446	RCKSK51446<CR>
51447	<<, CH- (N4/N9)	5	1	447	RCKSK51447<CR>
52408	AUX1(N4/N9)	5	2	408	RCKSK52408<CR>
5240E	AUX(N4/N9)	5	2	40E	RCKSK5240E<CR>
52413	iPod/USB(N4/N9)	5	2	413	RCKSK52413<CR>
52414	Digital In(N4/N9)	5	2	414	RCKSK52414<CR>
52415	DIGITAL IN(N4/N9)	5	2	415	RCKSK52415<CR>
5241C	Digital In 2(N9)	5	2	41C	RCKSK5241C<CR>
5241D	Bluetooth(N4/N9)	5	2	41D	RCKSK5241D<CR>
53407	CD(N9)	5	3	407	RCKSK53407<CR>

56407	TUNER(N9)	5	6	407	RCKSK56407<CR>
56408	AM(N9)	5	6	408	RCKSK56408<CR>
56409	FM(N9)	5	6	409	RCKSK56409<CR>
57484	INTERNET RADIO(N4/N9)	5	7	484	RCKSK57484<CR>
57485	MUSIC SERVER(N4/N9)	5	7	485	RCKSK57485<CR>
574BE	(Favorite)CALL(N4/N9)	5	7	4BE	RCKSK574BE<CR>
574BF	(Favorite)ADD(N4/N9)	5	7	4BF	RCKSK574BF<CR>

※Remote Code (C4 Command) (Marantz : RC-5) (NA8005/NA6005)

COMMAND	PARAMETER	Function	example
RCRC5	2501200	Remote Code:ON/STANDBY	RCRC52501200<CR>
	2503801	Remote Code:SLEEP	RCRC52503801<CR>
	2506351	Remote Code:INTERNET RADIO	RCRC52506351<CR>
	2506350	Remote Code:MUSIC SERVER	RCRC52506350<CR>
	2506352	Remote Code:ONLINE MUSIC	RCRC52506352<CR>
	2506321	Remote Code:USB	RCRC52506321<CR>
	2506330	Remote Code:OPT/COAX	RCRC52506330<CR>
	2506337	Remote Code:PC(USB-DAC)	RCRC52506337<CR>
	2511922	Remote Code:FAVORITES ADD	RCRC52511922<CR>
	2511921	Remote Code:FAVORITES CALL	RCRC52511921<CR>
	2503300	Remote Code:Skip-	RCRC52503300<CR>
	2505300	Remote Code:Play/Pause	RCRC52505300<CR>
	2503200	Remote Code:Skip+	RCRC52503200<CR>
	2505000	Remote code:FR	RCRC52505000<CR>
	2505400	Remote Code:Stop	RCRC52505400<CR>
	2505200	Remote code:FF	RCRC52505200<CR>
	2501100	Remote Code:INFO	RCRC52501100<CR>
	2508720	Remote Code:TOP MENU	RCRC52508720<CR>
	2503210	Remote Code:SEARCH	RCRC52503210<CR>
	2511930	Remote Code:MODE	RCRC52511930<CR>
	2508200	Remote Code:SETUP	RCRC52508200<CR>
	2508000	Remote Code:cursor UP	RCRC52508000<CR>
	2508100	Remote Code:cursor DOWN	RCRC52508100<CR>
	2508500	Remote Code:cursor LEFT	RCRC52508500<CR>
2508600	Remote Code:cursor RIGHT	RCRC52508600<CR>	
2508700	Remote Code:ENTER	RCRC52508700<CR>	
2500100	Remote Code:1	RCRC52500100<CR>	
2500200	Remote Code:2 ABC	RCRC52500200<CR>	
2500300	Remote Code:3 DEF	RCRC52500300<CR>	

2500400	Remote Code:4 GHI	RCRC52500400<CR>
2500500	Remote Code:5 JKL	RCRC52500500<CR>
2500600	Remote Code:6 MNO	RCRC52500600<CR>
2500700	Remote Code:7 PQRS	RCRC52500700<CR>
2500800	Remote Code:8 TUV	RCRC52500800<CR>
2500900	Remote Code:9 WXYZ	RCRC52500900<CR>
2500000	Remote Code:0	RCRC52500000<CR>
2501000	Remote Code:+10 a/A	RCRC52501000<CR>
2504900	Remote Code:CLEAR	RCRC52504900<CR>
2507100	Remote Code:DIMMER	RCRC52507100<CR>
2502800	Remote Code:RANDOM	RCRC52502800<CR>
2502900	Remote Code:REPEAT	RCRC52502900<CR>
2507700	Remote code:Digital Out (Toggle)	RCRC52507700<CR>
16012	Remote Code:AMP (Power)	RCRC516012<CR>
1600013	Remote Code:INPUT UP	RCRC51600013<CR>
1600014	Remote Code:INPUT DOWN	RCRC51600014<CR>
16016	Remote Code:VOLUME UP	RCRC516016<CR>
16017	Remote Code:VOLUME DOWN	RCRC516017<CR>
2501201	Extended code:Power On	RCRC52501201<CR>
2501202	Extended code:Power Off	RCRC52501202<CR>
2505301	Extended code:Play	RCRC52505301<CR>
2504801	Extended code:Pause	RCRC52504801<CR>
2506355	Extended code:(input) Pandora	RCRC52506355<CR>
2506356	Extended code:(input) Last.fm	RCRC52506356<CR>
2506357	Extended code:(input) SiriusXM	RCRC52506357<CR>
2506358	Extended code:(input) Spotify	RCRC52506358<CR>
2506332	Extended code:(input) COAXIAL	RCRC52506332<CR>
2506331	Extended code:(input) OPTICAL	RCRC52506331<CR>
2506300	Extended code:Input select up	RCRC52506300<CR>
2506301	Extended code:Input select down	RCRC52506301<CR>
2508210	Extended code:iPod mode (Toggle)	RCRC52508210<CR>
2508211	Extended code:iPod Direct mode	RCRC52508211<CR>
2508212	Extended code:iPod Remote mode	RCRC52508212<CR>
2502801	Extended code:Random On	RCRC52502801<CR>
2502802	Extended code:Random Off	RCRC52502802<CR>
2502902	Extended code:Repeat 1	RCRC52502902<CR>
2502903	Extended code:Repeat All	RCRC52502903<CR>
2502901	Extended code:Repeat Off	RCRC52502901<CR>
2507701	Extended code:Digital Out On	RCRC52507701<CR>
2507702	Extended code:Digital Out Off	RCRC52507702<CR>

2507101	Extended code:Dimmer Off	RCRC52507101<CR>
2507102	Extended code:Dimmer Mode 1	RCRC52507102<CR>
2507103	Extended code:Dimmer Mode 2	RCRC52507103<CR>
2507104	Extended code:Dimmer Mode 3	RCRC52507104<CR>
2511920	Extended code:Favorite	RCRC52511920<CR>

※CD Control (DRA-N4/RCD-N9)

COMMAND	PARAMETER	Function	example
BD	CURSOR UP	"Cursor Up" Control	BDCURSOR UP<CR>
	CURSOR DOWN	"Cursor Down" Control	BDCURSOR DOWN<CR>
	CURSOR LEFT	"Cursor Left" Control	BDCURSOR LEFT<CR>
	CURSOR RIGHT	"Cursor Right" Control	BDCURSOR RIGHT<CR>
	ENTER	"Enter" Control	BDENTER<CR>
	PLAY	"Play" Control	BDPLAY<CR>
	PAUSE	"Pause" Control	BDPAUSE<CR>
	PLAY/PAUSE	"Play/Pause" Control	BDPLAY PAUSE<CR>
	STOP	"Stop" Control	BDESTOP<CR>
	SKIP +	"Skip Plus" Control	BDSKIP +<CR>
	SKIP -	"Skip Minus" Control	BDSKIP -<CR>
	MANUAL SEARCH +	"Manual Search Plus" Control (Search Forward)	BDMANUAL SEARCH +<CR>
	MANUAL SEARCH -	"Manual Search Minus" Control (Search Reverse)	BDMANUAL SEARCH -<CR>
	DS TRACK ****	Direct Select(Select track number) ****:0000 to 9999 by ASCII, 0000=number0, 3000= number 3000 ---SYSTEM can be operated from 0 to 9999	BDDS TRACK 0010<CR>
	OPEN/CLOSE	Disc tray open / closing	BDOPEN/CLOSE<CR>
	REPEAT	"Repeat" setting	BDREPEAT<CR>
	REPEAT ONE	"Repeat One"	BDREPEAT ONE<CR>
	REPEAT ALL	"Repeat All"	BDREPEAT ALL<CR>
	REPEAT OFF	"Repeat Off"	BDREPEAT OFF<CR>
	RANDOM	"RANDOM" Control	BDRANDOM<CR>
	RANDOM ON	"Random On"	BDRANDOM ON<CR>
	RANDOM OFF	"Random Off"	BDRANDOM OFF<CR>
	FOLDER MODE ON	"Folder Mode On"	BDFOLDER MODE ON<CR>
FOLDER MODE OFF	"Folder Mode Off"	BDFOLDER MODE OFF<CR>	
FOLDER MODE	"Folder Mode On/Off" Toggle	BDFOLDER MODE<CR>	
FOLDER NAME?	"FOLDER NAME"Request	BDFOLDER NAME?<CR>	
FILE NAME?	"FILE NAME"Request	BDFILE NAME?<CR>	
ARTIST NAME?	"ARTIST NAME"Request	BDARTIST NAME?<CR>	
ALBUM NAME?	"ALBUM NAME"Request	BDALBUM NAME?<CR>	

SONG NAME?	"SONG NAME"Request	BDSONG NAME?<CR>
STATUS?	Acquires system status (such as the entire player and transfer unit).	BDSTATUS?<CR>
FOLDER +	"Folder Plus" Control	BDFOLDER +<CR>
FOLDER -	"Folder Minus" Control	BDFOLDER -<CR>
1	1	BDKEY 1<CR>
2	2	BDKEY 2<CR>
3	3	BDKEY 3<CR>
4	4	BDKEY 4<CR>
5	5	BDKEY 5<CR>
6	6	BDKEY 6<CR>
7	7	BDKEY 7<CR>
8	8	BDKEY 8<CR>
9	9	BDKEY 9<CR>
0	0	BDKEY 0<CR>
+10	+10	BDKEY 10<CR>
CLEAR	CLEAR	BDCLEAR<CR>

## EVENT(or RESPONSE) and PARAMETER list

### ※SYSTEM

EVENT	PARAMETER	Function	example
PW	ON	POWER ON/STANDBY change	PWON<CR>
	STANDBY		PWSTANDBY<CR>
MV	**	MASTER VOLUME change , ** : 00 to 60 by ASCII	MV80<CR>
MU	ON	OUTPUT MUTE ON/OFF change	MUON<CR>
	OFF		MUOFF<CR>
SI	IRADIO	Internet Radio	SIIRADIO<CR>
	SERVER	Music Server	SISERVER<CR>
	LASTFM	Last.fm(EU only)	SILASTFM<CR>
	PANDORA	Pandora(NA only)	SIPANDORA<CR>
	SIRIUSXM	SiriusXM(NA only)	SISIRIUSXM<CR>
	SPOTIFY	Spotify	SISPOTIFY<CR>
	BLUETOOTH	Bluetooth	SIBLUETOOTH<CR>
	DEEZER	Deezer	SIDEEZER<CR>
	USB	USB	SIUSB<CR>
	PC	PC(USB-DAC)	SIPC<CR>
	COAXIAL	Coaxial	SICOAXIAL<CR>
	OPTICAL	Optical	SIOPTICAL<CR>
	DIGITALIN1	RCD-N9 : Digital In 1 DRA-N4 : AUX:Digital In	SIDIGITALIN1<CR>
	DIGITALIN2	Digital In 2	SIDIGITALIN2<CR>
	ANALOGIN	RCD-N9 : Analog In DRA-N4 : AUX Analog In	SIANALOGIN<CR>
	CD	CD	SICD<CR>
TUNER	TUNER	SITUNER<CR>	
FM	FM	SIFM<CR>	
SLP	OFF	MAIN ZONE SLEEP TIMER setting change	SLPOFF<CR>
	***		SLP090<CR>



※ALARM (DRA-N4/RCD-N9)

EVENT	PARAMETER	function	example														
TS	ONCE @**##-@\$% [F][N] VV [O]	ONCE TIMER TIME SET @:A or P or 2(A:AM,P:PM,2:24hour by ASCII) **## :start time(**=00~23hours,##=00~59minutes by ASCII) (Not Set : FFFF) \$\$% :stop time(\$\$=00~23hours,%=00~59minutes by ASCII) (Not Use : FFFF) [F]:Function (2bytes by ASCII)	TSONCE A0730-FFFFF CD00 05 0<CR> TSONCE P0630-FFFFF FA01 05 1<CR> TSONCE 21930-FFFFF US00 05 1<CR>														
		<table border="1"> <tr><td>FA</td><td>Favorite</td></tr> <tr><td>CD</td><td>CD</td></tr> <tr><td>AA</td><td>AUX:Analog In</td></tr> <tr><td>AD</td><td>AUX:Digital In</td></tr> <tr><td>AI</td><td>Analog In</td></tr> <tr><td>D1</td><td>Digital In 1</td></tr> <tr><td>D2</td><td>Digital In 2</td></tr> <tr><td>IU</td><td>iPod/USB</td></tr> </table> [N]:preset No.(2bytes by ASCII, except TU="00") VV:VOLUME [O]:ONCE TIMER ON/OFF(0:OFF,1:ON)	FA	Favorite	CD	CD	AA	AUX:Analog In	AD	AUX:Digital In	AI	Analog In	D1	Digital In 1	D2	Digital In 2	IU
FA	Favorite																
CD	CD																
AA	AUX:Analog In																
AD	AUX:Digital In																
AI	Analog In																
D1	Digital In 1																
D2	Digital In 2																
IU	iPod/USB																
EVERY	@**##-@\$% [F][N] VV [O]	EVERY TIMER TIME SET @:A or P or 2(A:AM,P:PM,2:24hour by ASCII) **## :start time(**=00~23hours,##=00~59minutes by ASCII) (Not Set : FFFF) \$\$% :stop time(\$\$=00~23hours,%=00~59minutes by ASCII) (Not Use : FFFF) [F]:Function (2bytes by ASCII) It is the same as that of ONCE TIMER TIME SET. [N]:preset No.(2bytes by ASCII, except TU="00") VV:VOLUME [O]:EVERY TIMER ON/OFF(0:OFF,1:ON)	TSEVERY P0630-FFFFF CD00 05 0<CR> TSEVERY P0630-FFFFF FV01 05 1<CR> TSEVERY 21830-FFFFF US00 05 1<CR>														
CLK		Request	CLK<CR>														

※FAVORITE Control

EVENT	PARAMETER	Function	example
FV	**_XX_aaaa	"FAVORITE NAME" Request *:FAVORITE No. XX:FUNCTION 0:Internet Radio 1:Music Server 2:TUNER 3:LASTFM 4:PANDORA 5:SIRIUSXM 6:SPOTIFY 7:iPod 8:USB a:Character Length(MAX32byte) _:Null **aaaa:35byte Fixed	FV25 01 FM-87.50MHz<CR>

※Tone Control (DRA-N4/RCD-N9)

EVENT	PARAMETER	Function	example
PS	BAS **	BASS change	PSBAS 50<CR>
	TRE **	TREBLE change	PSTRE 50<CR>
	BAL **	BALANCE change	PSBAL 50<CR>
	SDB ON	SDB ON/OFF	PSSDB ON<CR>
	SDB OFF		PSSDB OFF<CR>
	SDI ON	SOURCE DIRECT ON/OFF	PSSDI ON<CR>
	SDI OFF		PSSDI OFF<CR>
	FRONT SPA	Speaker Select	PSFRONT SPA<CR>
	FRONT SPB	Speaker A / Speaker B / Speaker A+B	PSFRONT SPB<CR>
FRONT A+B		PSFRONT A+B<CR>	

※ANALOG TUNER Control (DRA-N4/RCD-N9/NA6005)

EVENT	PARAMETER	function	example
TF	AN***** (6 digits)	TUNER Frequency change --- ****.** kHz at AM band ****.** MHz at FM band	TFAN105000<CR> (1050.00kHz at AM)
	ANNAME*****	RDS Station Name Request *:Station Name	TFANNAME123456878 (Station Name"12345678")
TM		TUNER BAND , MODE change	
	ANAM	---Band set to AM	TMANAM<CR>
	ANFM	---Band set to FM	TMANFM<CR>
	ANAUTO	---Tuning mode set to AUTO mode	TMANAUTO<CR>
	ANMANUAL	---Tuning mode set to MANUAL mode	TMANMANUAL<CR>

※Variable Output

COMMAND	PARAMETER	Function	example
SS	VAO	Variable Output (Audio Out Menu) :Fixed	SSVAO FIX
		Variable Output (Audio Out Menu) :variable	SSVAO VAR
	VVL	Variable Output (Volume Limit) :0dB	SSVVL 000
		Variable Output (Volume Limit) :-10dB	SSVVL 010
		Variable Output (Volume Limit) :-20dB	SSVVL 020
		Volume Limit Direct	SSVVL *** (*** : Limit)

※Auto Standby

COMMAND	PARAMETER	Function	example
SS	STB	Auto Standby : ON	SSSTB ON
		Auto Standby : OFF	SSSTB OFF
		Auto Standby : 1min	SSSTB 01MIN
		Auto Standby : 5min	SSSTB 05MIN
		Auto Standby : 15min	SSSTB 15MIN
		Auto Standby Direct	SSSTB *** (*** : TIME)

※Variable Output Volume

COMMAND	PARAMETER	Function	example
MV	UP	MASTER VOLUME UP/DOWN , direct change to **dB	MVUP<CR>
	DOWN		MVDOWN<CR>
	**	** : 99 to 00 by ASCII (99 : -99dB, 00 : 00dB, FF : MUTE)	MV45<CR>

※Language setting

COMMAND	PARAMETER	Function	example
SSLAN	ENG	English	SSLAN ENG<CR>
	DEU	German	SSLAN DEU<CR>
	FRA	French	SSLAN FRA<CR>
	ITA	Italian	SSLAN ITA<CR>
	ESP	Spanish	SSLAN ESP<CR>
	NER	Dutch	SSLAN NER<CR>
	SVE	Swedish	SSLAN SVE<CR>
	JPN	Japanese	SSLAN JPN<CR>
	CHI	Chinese	SSLAN CHI<CR>
	POL	Poland	SSLAN POL<CR>
RUS	Russia	SSLAN RUS<CR>	

※AUDIO Playback format

COMMAND	PARAMETER1	PARAMETER2	Function	example
SSFMT	LPC	032	Type of playback file(LPCM:32kHz)	SSFMTLPC032<CR>
		044	Type of playback file(LPCM:44.1kHz)	SSFMTLPC044<CR>
		048	Type of playback file(LPCM:48kHz)	SSFMTLPC048<CR>
		088	Type of playback file(LPCM:88.2kHz)	SSFMTLPC088<CR>
		096	Type of playback file(LPCM:96kHz)	SSFMTLPC096<CR>
		176	Type of playback file(LPCM:176.4kHz)	SSFMTLPC176<CR>
		192	Type of playback file(LPCM:192kHz)	SSFMTLPC192<CR>
	MP3	032	Type of playback file(MP3:32kHz)	SSFMTMP3032<CR>
		044	Type of playback file(MP3:44.1kHz)	SSFMTMP3044<CR>
		048	Type of playback file(MP3:48kHz)	SSFMTMP3048<CR>
	WMA	032	Type of playback file(WMA:32kHz)	SSFMTWMA032<CR>
		044	Type of playback file(WMA:44.1kHz)	SSFMTWMA044<CR>
		048	Type of playback file(WMA:48kHz)	SSFMTWMA048<CR>
	AAC	032	Type of playback file(AAC:32kHz)	SSFMTAAC032<CR>
		044	Type of playback file(AAC:44.1kHz)	SSFMTAAC044<CR>
		048	Type of playback file(AAC:48kHz)	SSFMTAAC048<CR>
	FLC	032	Type of playback file(FLAC:32kHz)	SSFMTFLC032<CR>
		044	Type of playback file(FLAC:44.1kHz)	SSFMTFLC044<CR>
		048	Type of playback file(FLAC:48kHz)	SSFMTFLC048<CR>
		088	Type of playback file(FLAC:88.2kHz)	SSFMTFLC088<CR>
		096	Type of playback file(FLAC:96kHz)	SSFMTFLC096<CR>
		176	Type of playback file(FLAC:176.4kHz)	SSFMTFLC176<CR>
		192	Type of playback file(FLAC:192kHz)	SSFMTFLC192<CR>
	ALC	032	Type of playback file(ALAC:32kHz)	SSFMTALC032<CR>
		044	Type of playback file(ALAC:44.1kHz)	SSFMTALC044<CR>
		048	Type of playback file(ALAC:48kHz)	SSFMTALC048<CR>
		088	Type of playback file(ALAC:88.2kHz)	SSFMTALC088<CR>
		096	Type of playback file(ALAC:96kHz)	SSFMTALC096<CR>
	AIF	032	Type of playback file(AIFF:32kHz)	SSFMTAIF032<CR>
		044	Type of playback file(AIFF:44.1kHz)	SSFMTAIF044<CR>
048		Type of playback file(AIFF:48kHz)	SSFMTAIF048<CR>	
088		Type of playback file(AIFF:88.2kHz)	SSFMTAIF088<CR>	
096		Type of playback file(AIFF:96kHz)	SSFMTAIF096<CR>	
176		Type of playback file(AIFF:176.4kHz)	SSFMTAIF176<CR>	
DSD	192	Type of playback file(AIFF:192kHz)	SSFMTAIF192<CR>	
	064	Type of playback file(DSD:64MHz)	SSFMTDSD064<CR>	

	128	Type of playback file(DSD:128MHz)	SSFMTDSD128<CR>
	ULC	Signal Unlock	SSFMTULC<CR>
	USP	Unsupported	SSFMTUSP<CR>

**※DIMMER setting**

COMMAND	PARAMETER	Function	example
SSDIM	000	DIMMER : 0%	SSDIM000<CR>
	025	DIMMER : 25% (For 5 steps)	SSDIM025<CR>
	040	DIMMER : 40% (For 4 steps)	SSDIM040<CR>
	050	DIMMER : 50% (For 5 steps)	SSDIM050<CR>
	070	DIMMER : 70% (For 4 steps)	SSDIM070<CR>
	075	DIMMER : 75% (For 5 steps)	SSDIM075<CR>
	100	DIMMER : 100%	SSDIM100<CR>

**※Network Information setting**

COMMAND	PARAMETER	Function	example
NSINFFRN	*****	Friendly Name information ***** (MAX 32 characters)	NSINFFRN *****<CR>
NSINFAFF	WIRD	Wired	NSINFAFF WIRD<CR>
	WILS	Wireless	NSINFAFF WILS<CR>
NSINFSID	*****	SSID information ***** (MAX 32 characters)	NSINFSID *****<CR>
NSINFDMC	ON	DHCP On	NSINFDMC ON<CR>
	OFF	DHCP Off	NSINFDMC OFF<CR>
NSINFIPA	XXX.XXX.XXX.XXX	XXXXXXXXXXXX : IP Address (192.168.100.100 etc. Maximum: 15characters)	NSINFIPA XXX.XXX.XXX.XXX<CR>
NSINFMAC		MAC Address ***** (12 characters)	NSINFMAC:*****<CR>

※Network/Rhapsody/Napster/USB/iPod Direct Extended Control

EVENT	PARAMETER	function	example
NSA		Onscreen Display Information(mServer/iRadio) is Answered By the NSA Command.	
	0	Display Line1 Information (Ascii)	NSA0*****_?????<CR>
	1	Display Line2 Information (Ascii)	NSA1※*****_?????<CR>
	2	Display Line3 Information (Ascii)	NSA2※*****_?????<CR>
	3	Display Line4 Information (Ascii)	NSA3※*****_?????<CR>
	4	Display Line5 Information (Ascii)	NSA4※*****_?????<CR>
	5	Display Line6 Information (Ascii)	NSA5※*****_?????<CR>
	6	Display Line7 Information (Ascii)	NSA6※*****_?????<CR>
	7	Display Line8 Information (Ascii)	NSA7*****_?????<CR>
8	Display Line9 Information (Ascii)	NSA8*****_?????<CR> *: <u>Ascii</u> CODE Character(MAX95byte) _:Null ?: Don't Care (The character after Null should be disregarded) ※:Cursor&Playable Music Information Data(1Byte) Bit1:Playable Music =1 Bit2,3:Don't Care Bit4:CURSOR SELECT=1 Bit5,6,7,8:Don't Care *****_?????:96byte Fixed	
	<example>	NSA0Now Playing USB_?????<CR> NSA1※Come Away With Me_?????<CR> NSA2※Norah Jones_?????????<CR> NSA3※_?????????????????<CR> NSA4※_?????????????????<CR> NSA5※00:11 100%_?????????<CR> NSA6※_?????????????????<CR> NSA7_?????????????????<CR> NSA8_?????????????????<CR>	
NSE		Onscreen Display Information(mServer/iRadio) is Answered By the NSE Command.	
	0	Display Line1 Information	NSE0*****_?????<CR>
	1	Display Line2 Information	NSE1※*****_?????<CR>

2	Display Line3 Information	NSE2※*****_????<CR>
3	Display Line4 Information	NSE3※*****_????<CR>
4	Display Line5 Information	NSE4※*****_????<CR>
5	Display Line6 Information	NSE5※*****_????<CR>
6	Display Line7 Information	NSE6※*****_????<CR>
7	Display Line8 Information	NSE7*****_????<CR>
8	Display Line9 Information	NSE8*****_????<CR>
	<example>	*:UTF-8 CODE Character(MAX95byte) _:Null ?: Don't Care (The character after Null should be disregarded) ※:Cursor & Playable Music Information Data(1Byte) Bit1:Playable Music =1 Bit2,3:Don't Care Bit4:CURSOR SELECT=1 Bit5,6,7,8:Don't Care *****_????:96byte Fixed NSE0Now Playing USB_????<CR> NSE1※Come Away With Me_????<CR> NSE2※Norah Jones_????????<CR> NSE3※_????????????????<CR> NSE4※_????????????????<CR> NSE5※00:11 100%_????????<CR> NSE6※_????????????????<CR> NSE7_????????????????<CR> NSE8_????????????????<CR>

※APPS→RC-5 OUT Command (NA8005/NA6005)

COMMAND	PARAMETER	Function	example
MV	UP	VOLUME UP	MVUP<CR>
	DOWN	VOLUME DOWN	MVDOWN<CR>
MVLONG	UP	VOLUME UP(Long push)	MVLONGUP<CR>
	DOWN	VOLUME DOWN(Long push)	MVLONGDOWN<CR>
	END	VOLUME(Long push END)	MVLONGEND<CR>
IRTX	1601201	AMP:(Power) On	IRTX1601201<CR>
	1601202	AMP:Standby	IRTX1601202<CR>
	20063	AMP:CD	IRTX20063<CR>



17063	AMP:LINE 1	IRTX17063<CR>
1600010	AMP:LINE 2	IRTX1600010<CR>
26063	AMP:RECORDER 1	IRTX26063<CR>
18063	AMP:RECORDER 2	IRTX18063<CR>
21063	AMP:PHONO	IRTX21063<CR>
1600020	AMP:BALANCED	IRTX1600020<CR>
1706300	AMP:TUNER	IRTX1706300<CR>
1600006	AMP:AUX	IRTX1600006<CR>
1600010	AMP:DVD	IRTX1600010<CR>
1601300	AMP:Mute on	IRTX1601300<CR>
1601301	AMP:Mute Off	IRTX1601301<CR>
2001201	CD:Power On	IRTX2001201<CR>
2001202	CD:Power Off	IRTX2001202<CR>
20045	CD:Eject	IRTX20045<CR>
20033	CD:Previous	IRTX20033<CR>
20053	CD:Play	IRTX20053<CR>
20032	CD:Next	IRTX20032<CR>
20048	CD:Pause	IRTX20048<CR>
20054	CD:Stop	IRTX20054<CR>
20029	CD:Repeat	IRTX20029<CR>
20028	CD:Shuffle	IRTX20028<CR>

※APPS\_KASEIKYO CODE (SHARP) Command (DRA-N4/RCD-N9/DNP-730)

※Remote Code (C4 Command) (NA8005/NA6005)

※CD Control (N4/N9)

EVENT	PARAMETER	function	example
BD	STATUS *+-# /abcddeee efhhmssM	Acquires system status (such as the entire player and transfer unit). (*A) *:"SP"(20h),0 to 3 by ASCII(Answer code) ( *1 ) +:1 to ? by ASCII(Disc type code) ( *2 ) -:(Audio format code) ( *3 ) #:(Audio channel code) ( 2ch:32h (2) fixed)  :"0" /:"0" a:"0" b:(Status code) ( *6 ) c:(Play mode code) ( *5)	BDSTATUS "SP"123456731002000811223 300<CR>

	ddd:"0" eeee:(Track information) f:(Time mode) ( *4) hh:(Elapsed time hour) mm:(Elapsed time minutes) ss:(Elapsed time second) M:(Disc/USB mode) ( *7)	
PLAY *	"Play" Control *:"SP", 0 to 3 by ASCII(Answer code) ( *1 )	BDPLAY "SP"<CR>
PAUSE *	"Pause" Control(*B) *:"SP",0 to 3 by ASCII (Answer code) ( *1 )	BDPAUSE 1<CR>
STOP *	"Stop" Control *:"SP",0 to 3 by ASCII (Answer code) ( *1 )	BDSTOP 2<CR>
SKIP *-----	"Skip" Control (*C) *:"SP",0 to 3 by ASCII (Answer code) ( *1 ) +++ :0 ---- :0 to 9999 by ASCII(track number)	BDSKIP "SP"000001<CR>
MANUAL SEARCH *	Manual Search change (*D) *:"SP",0 to 3 by ASCII (Answer code) ( *1 )	BDMANUAL SEARCH "SP"<CR>
DSTRACK *++++-----	Direct Select *:"SP",0 to 3 by ASCII (Answer code) ( *1 ) +++ :000 ---- :0000 to 9999 by ASCII (track number)	BDDS TRACK "SP"000020<CR>
CURSOR *	"Cursor" Control *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDCURSOR "SP"<CR>
ENTER	"Enter" Control *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDENTER "SP"<CR>
OPEN/CLOSE *	Disc tray open / closing *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDOPEN/CLOSE "SP"<CR>
REPEAT *	"Repeat" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDREPEAT "SP"<CR>
REPEAT ONE *	"Repeat One" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDREPEAT ONE "SP"<CR>
REPEAT ALL *	"Repeat All" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDREPEAT ALL "SP"<CR>
REPEAT OFF *	"Repeat Off" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDREPEAT OFF "SP"<CR>
RANDOM *	"RANDOM" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDRANDOM "SP"<CR>
RANDOM ON *	"RANDOM ON" Setting	BDRANDOM ON "SP"<CR>

	*:"SP",0 to 3 by ASCII(Answer code) ( *1 )	
RANDOM OFF *	"RANDOM OFF" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDRANDOM OFF "SP"<CR>
FOLDER MODE ON *	"FOLDER MODE ON" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDFOLDER MODE ON "SP"<CR>
FOLDER MODE OFF *	"FOLDER MODE OFF" Setting *:"SP",0 to 3 by ASCII(Answer code) ( *1 )	BDFOLDER MODE OFF "SP"<CR>
FOLDER NAME *aaaaa_????	"FOLDER NAME" Request *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_?????:33byte Fixed	BDFOLDER NAME "SP" Norah Jones_????????????<CR>
FILE NAME *aaaaa_????	"FILE NAME" Request *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_?????:33byte Fixed	BDFILE NAME "SP" Come Away With Me.mp3_?<CR>
ARTIST NAME *aaaaa_????	"ARTIST NAME" Request *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_?????:33byte Fixed	BDARTIST NAME "SP" Norah Jones_????????????<CR>
ALBUM NAME *aaaaa_????	"ALBUM NAME" Request *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_?????:33byte Fixed	BDALBUM NAME "SP" Come Away With Me_?<CR>
SONG NAME *aaaaa_????	"SONG NAME" Request *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_?????:33byte Fixed	BDSONG NAME "SP" Come Away With Me_?<CR>
FOLDER +	"Folder Plus" Control *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null	BDFOLDER NAME *aaaaa_????<CR>

	?: Don't Care (The character after Null should be disregarded) *****_????:33byte Fixed	
FOLDER -	"Folder Minus" Control *:"SP",0 to 3 by ASCII(Answer code) ( *1 ) a:Character Length(MAX32byte) _:Null ?: Don't Care (The character after Null should be disregarded) *****_????:33byte Fixed	BDFOLDER NAME *aaaaa_????<CR>
1	1	BDKEY 1<CR>
2	2	BDKEY 2<CR>
3	3	BDKEY 3<CR>
4	4	BDKEY 4<CR>
5	5	BDKEY 5<CR>
6	6	BDKEY 6<CR>
7	7	BDKEY 7<CR>
8	8	BDKEY 8<CR>
9	9	BDKEY 9<CR>
0	0	BDKEY 0<CR>
+10	+10	BDKEY 10<CR>
CLEAR	CLEAR	BDCLEAR<CR>

(\*1) answer codes

No.	Status	Code(ASCII)	Description
1	Command OK	20h(SP)	Accepts the command.
2	Invalid	30h(0)	Invalid command.
3	Order Track None	32h(2)	The track , the group ,the title or the chapter you specified does not exist.

(\*2)Disc type code

Code	Disc Type
34h(4)	CD-DA
35h(5)	CD-ROM
36h(6)	UNKNOWN
40h(A)	USB
41h(B)	iPod

(\*3) Audio format code

Code	Audio Format
34h(4)	LPCM
36h(6)	UNKNOWN
3Bh( ; )	MP3
3Dh( = )	WMA

(\*4) Time Mode code

Code	Time Mode
34h(4)	TOTAL REMAIN
39h(9)	TRACK ELAPSED
3Ah( : )	TRACK REMAIN
3Bh( ; )	FOLDER NAME

(\*5) Play mode code

Code	Play Mode
31h(1)	NORMAL
32h(2)	PROGRAM
33h(3)	RANDOM
34h(4)	REPEAT ONE
35h(5)	RANDOM + REPEAT ALL
36h(6)	REPEAT ALL
37h(7)	PROGRAM + REPEAT ALL
38h(8)	PROGRAM + RANDOM
39h(9)	PROGRAM + RANDOM + REPEAT ALL
3A(:)	REPEAT FOLDER
3B(;)	NORMAL + FOLDER

(\*6) status codes

Here is a list of answer code types.

3Xh : Status of the entire system

4Xh : Status of each action mode

No.	Status	Code(ASCII)	Description
1	Stand-by	30h(0)	Stand-by
2	Disc Loading	31h(1)	Under disc loading.
3	Disc Loading Complete	32h(2)	Disc Loading complete.
4	Tray Opening	33h(3)	Disc tray open.
5	Tray Closing	34h(4)	Disc tray close.
6	No Disc	41h(A)	Disc not present
7	Stop	42h(B)	Stop
8	Play	43h(C)	Under disc playing.
9	Pause	44h(D)	Playback in process.
10	Scan Play	45h(E)	Scanning in process.
11	Scan Play(forward)	46h(F)	Scanning in process.
12	Scan Play(reverse)	47h(G)	Scanning in process.

(\*7)DISC/USB MODE

No.	Status	Code(ASCII)	Description
1	Disc	30h(0)	
2	USB	31h(1)	

## Special conditions

### (\*A) BDSTATUS

- When the disc does not set to DVD mechanism and disc loading process does not finish, group number, title number, track number, and chapter number are set ('0').
- When the disc does not set to DVD mechanism and disc loading process does not finish, elapsed time information are set ('0').
- When power condition is "STANDBY", can accept "REQUEST SYSTEM STATUS", "POWER ON KEY", "REQUEST CPU VERSION", and "REQUEST ERROR STATUS". In case of another command, returns "COMMAND FORMAT ERROR ('1')" in the "ANSWER CODE"

Note : When you need these data, you should send this command.

### (\*C) BDSKIP

- This command is valid only , when mode status data is Play (E) or Pause (F).
- The unit can skip to a maximum track with Forward (+) and to a minimum track with Reverse (-).

### (\*D) BDMANUAL SEARCH

- This command is valid only when the mode status is Play (E) or Pause (F).