DENON AVR/AVC control protocol

Ver. 4.37.2

Application model : AVR-5805CI/Upgraded AVR-5805/AVC-A1XVA/Upgraded AVC-A1XV
Application terminal : RS-232C/ Ethernet

Connector specification

1. 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)

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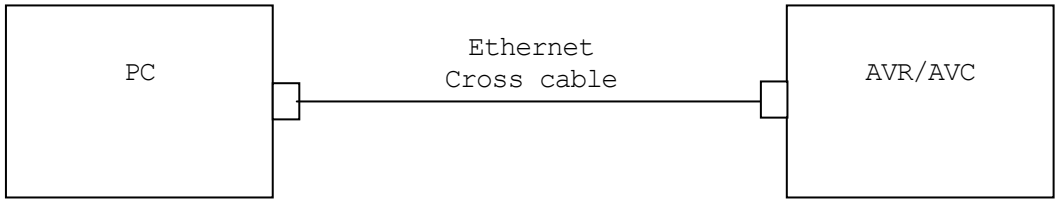
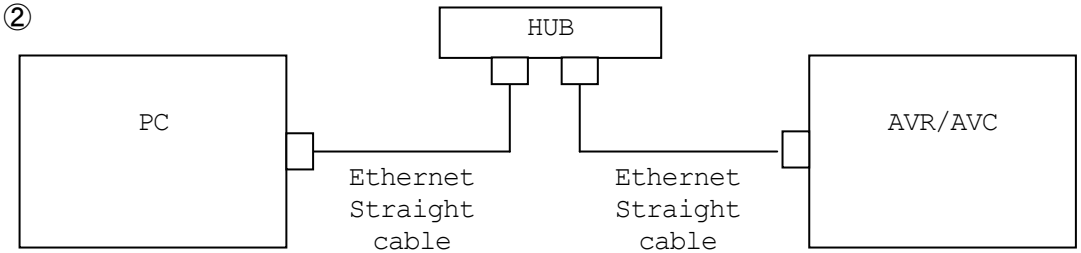
2. Ethernet

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

Example ①



Example ②



Communication format :

Communication system	: A half duplex
Communication speed	: 10Mbps/100Mbps
Communication port	: TCP port 23 (telnet)
Communication data length	: 135bytes (maximum)

NETWORK SETUP of AVR-5805UPG/AVC-A1XVA

>Procedure of Network Setup mode.
(1)Press SYSTEM SETUP button, then System Setup Menu appears on FL-display(and OSD)
(2)Select Option Setup and select Network Setup.
(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:Standby Mode Power Saving>
"OFF"---Use this setting when using the AVR-5805UPG/AVC-A1XVA connected in a network.
"ON"--- Use this setting when not using the AVR-5805UPG/AVC-A1XVA connected in a network.
This setting is reducing the power consumption in the standby mode.

Protocol specification

The following three data forms is defined.

COMMAND : The message sent to a system(AVR/AVC) 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(AVR/AVC)
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(AVR/AVC)
if the 'request command' (***COMMAND***+**?**+CR(0x0D)) has came 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
MS : surround Mode Setting
MV : Master Volume setting
PW : system PoWer setting
PARAMETER : ASCII CODE (up to 25 characters)
ex. DVD : function name
CDR/TAPE : function name
THX SURROUND EX : surround mode name
SUPER STADIUM : surround mode name
*Special Parameter--- ? : for request command

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

SIDVD<CR> : Select Input source DVD

MSTHX SURROUND EX<CR> : surround Mode Set to THX SURROUND EX

MVUP<CR> : Master Volume UP

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) Since CHANNEL VOLUME changes simultaneously when the SURROUND MODE changes, the value of the channel volume of all channels returns as ***EVENT***.

C) CHANNEL VOLUME returns the data of ALL channels by the present SURROUND MODE also including an intact channel. In this case, the data of an intact channel is set to "50".

D) Since SURROUND MODE changes simultaneously when the INPUT source changes, the SURROUND MODE (and also the value of the channel volume of all channels , It described in B)) returns as ***EVENT***.

E) When SURROUND MODE is the same in between INPUT source change before and after, ***EVENT*** of SURROUND MODE and CHANNEL VOLUME does NOT return.

F) Although ***EVENT*** of SURROUND MODE returns when the present SURROUND MODE is set up again, CHANNEL VOLUME does NOT return.

G) When SURROUND MODE is changed, before returning SURROUND MODE after change as ***EVENT***, the present SURROUND MODE is returned.

H) 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. SV command).

I) The ***PARAMETER*** (with ***COMMAND*** and ***RESPONSE***, ***EVENT***) of minimum level of MASTER VOLUME defines “99”.

J) If the MASTER VOLUME & ZONE2 VOLUME (ZONE2 THEATER:5.1ch or 7.1ch system) & CHANNEL VOLUME set with 0.5dB step, the ***PARAMETER*** (with ***COMMAND*** and ***RESPONSE***, ***EVENT***) defines three ASCII characters as bellows.

ex. MASTER VOLUME = +1.0dB : MV81<CR>
+0.5dB : MV805<CR>
0dB : MV80<CR>
-0.5dB : MV795<CR>
-1.0dB : MV79<CR>
| |
-79.5dB : MV005<CR>
-80.0dB : MV00<CR>
--- : MV99<CR>

* At the **.0dB step, only uses two ASCII characters as ***PARAMETER***, same as usual.

K) Six seconds later, please transmit the next ***COMMAND*** after transmitting a power on ***COMMAND*** (PWON) .

COMMAND and PARAMETER list

COMMAND	***PARAMETER***	function	example
PW	ON	POWER ON/STANDBY change	PWON<CR>
	STANDBY		PWSTANDBY<CR>
	?	Request PW Status	PW?<CR>
MV	UP	MASTER VOLUME UP/DOWN , direct change to ***dB	MVUP<CR>
	DOWN		MVDOWN<CR>
	**	**:00 to 99 by ASCII , 80=0dB, 99=---(MIN)	MV80<CR>
	?	Request MV Status	MV?<CR>
CV	FL UP	CHANNEL VOLUME UP/DOWN , direct change to ***dB	CVFL UP<CR>
	FL DOWN	---FRONT Lch	CVFL DOWN<CR>
	FL **	**:38 to 62 by ASCII , 50=0dB	CVFL 50<CR>
	FR UP		CVFR UP<CR>
	FR DOWN	---FRONT Rch	CVFR DOWN<CR>
	FR **	**:38 to 62 by ASCII , 50=0dB	CVFR 50<CR>
	C UP		CVC UP<CR>
	C DOWN	---CENTER ch	CVC DOWN<CR>
	C **	**:38 to 62 by ASCII , 50=0dB	CVC 50<CR>
	SW1 UP	---SWLeft or SWFront or SWMain ch (SWch 2 or 3SP)	CVSW1 UP<CR>
	SW1 DOWN	---SUBWOOFER (When SWch is 1SP)	CVSW1 DOWN<CR>
	SW1 **	**:00,38 to 62 by ASCII , 50=0dB, 00=OFF	CVSW1 50<CR>
	SW2 UP		CVSW2 UP<CR>
	SW2 DOWN	---SWRight or SWBack ch (SWch 2 or 3SP)	CVSW2 DOWN<CR>
	SW2 **	**:00,38 to 62 by ASCII , 50=0dB, 00=OFF	CVSW2 50<CR>
	LFE UP		CVLFE UP<CR>
	LFE DOWN	---LFEch (SWch 2 or 3SP)	CVLFE DOWN<CR>
	LFE **	**:00,38 to 62 by ASCII , 50=0dB, 00=OFF	CVLFE 50<CR>
	SLA UP		CVSLA UP<CR>
	SLA DOWN	---SURROUND L(A)ch	CVSLA DOWN<CR>
	SLA **	**:38 to 62 by ASCII , 50=0dB	CVSLA 50<CR>
	SRA UP		CVSRA UP<CR>
	SRA DOWN	---SURROUND R(A)ch	CVSRA DOWN<CR>
	SRA **	**:38 to 62 by ASCII , 50=0dB	CVSRA 50<CR>

MV , CV ***COMMAND*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

COMMAND	***PARAMETER***	function	example
CV	SLB UP		CVSLB UP<CR>
	SLB DOWN	---SURROUND L(B)ch	CVSLB DOWN<CR>
	SLB **	**:38 to 62 by ASCII , 50=0dB	CVSLB 50<CR>
	SRB UP		CVSRB UP<CR>
	SRB DOWN	---SURROUND R(B)ch	CVSRB DOWN<CR>
	SRB **	**:38 to 62 by ASCII , 50=0dB	CVSRB 50<CR>
	SBL UP		CVSBL UP<CR>
	SBL DOWN	---SURROUND BACK Lch (SBch 2SP)	CVSBL DOWN<CR>
	SBL **	**:38 to 62 by ASCII , 50=0dB	CVSBL 50<CR>
	SBR UP		CVSBR UP<CR>
	SBR DOWN	---SURROUND BACK Rch (SBch 2SP)	CVSBR DOWN<CR>
	SBR **	**:38 to 62 by ASCII , 50=0dB	CVSBR 50<CR>
	SB UP		CVSBL UP<CR>
	SB DOWN	---SURROUND BACKch (SBch 1SP)	CVSBL DOWN<CR>
	SB **	**:38 to 62 by ASCII , 50=0dB	CVSBL 50<CR>
	?	Request CV Status	CV?<CR>
MU	ON	OUTPUT MUTE ON/OFF change	MUON<CR>
	OFF		MUOFF<CR>
	?	Request MU Status	MU?<CR>

CV ***COMMAND*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

COMMAND	***PARAMETER***	function	example
SI	PHONO	Select INPUT source	SIPHONO<CR>
	CD		SICD<CR>
	TUNER		SITUNER<CR>
	DVD		SIDVD<CR>
	VDP		SIVDP<CR>
	TV		SITV<CR>
	DBS		SIDBS<CR>
	VCR-1		SIVCR-1<CR>
	VCR-2		SIVCR-2<CR>
	VCR-3		SIVCR-3<CR>
	VCR-4		SIVCR-4<CR>
	V.AUX		SIV.AUX<CR>
	CDR/TAPE		SICDR/TAPE<CR>
	AUX		SIAUX<CR>
	?	Request SI Status	SI?<CR>
ZM	ON	MAIN-ZONE ON/OFF change	ZMON<CR>
	OFF		ZMOFF<CR>
	?	Request ZM Status	ZM?<CR>
SV	DVD	VIDEO SELECT mode set , and select source	SVDVD<CR>
	VDP		SVVDP<CR>
	TV		SVTV<CR>
	DBS		SVDBS<CR>
	VCR-1		SVVCR-1<CR>
	VCR-2		SVVCR-2<CR>
	VCR-3		SVVCR-3<CR>
	VCR-4		SVVCR-4<CR>
	V.AUX		SVV.AUX<CR>
	SOURCE	VIDEO SELECT mode cancel	SVSOURCE<CR>
	?	Request SV Status	SV?<CR>

COMMAND	***PARAMETER***	function	example
SD	AUTO	set DIGITAL INPUT AUTO mode	SDAUTO<CR>
	PCM	set DIGITAL INPUT force PCM mode	SDPCM<CR>
	DTS	set DIGITAL INPUT force DTS mode	SDDTS<CR>
	ANALOG	set force ANALOG INPUT mode	SDANALOG<CR>
	EXT.IN-1	set EXT.IN-1 mode	SDEXT.IN-1<CR>
	EXT.IN-2	set EXT.IN-2 mode	SDEXT.IN-2<CR>
	?	Request SD Status	SD?<CR>
MS	DIRECT	SURROUND mode set	MSDIRECT<CR>
	PURE DIRECT		MSPURE DIRECT<CR>
	STEREO		MSSTEREO<CR>
	MULTI CH IN	---This is received as "SATNDARD".	MSMULTI CH IN<CR>
	MULTI CH DIRECT		MSMULTI CH DIRECT<CR>
	MULTI CH PURE D		MSMULTI CH PURE D<CR>
	DOLBY PRO LOGIC	All are received as "STANDARD" ,	MSDOLBY PRO LOGIC<CR>
	DOLBY PL2	the surround mode which changed return as ***EVENT***.	MSDOLBY PL2<CR>
	DOLBY PL2x		MSDOLBY PL2X<CR>
	DOLBY DIGITAL		MSDOLBY DIGITAL<CR>
	DOLBY D EX		MSDOLBY D EX<CR>
	DTS NEO:6		MSDTS NEO:6<CR>
	DTS SURROUND		MSDTS SURROUND<CR>
	DTS ES DSCRT6.1		MSDTS ES DSCRT6.1<CR>
	DTS ES MTRX6.1		MSDTS ES MTRX6.1<CR>
	DOLBY H/P		MSDOLBY H/P<CR>
	DTS+DOLBY H/P		MSDTS+DOLBY H/P<CR>
	HOME THX CINEMA	All are received as "THX SURROUND" ,	MSHOME THX CINEMA<CR>
	THX5.1	the surround mode which changed return as ***EVENT***.	MSTHX5.1<CR>
	THX U2 CINEMA		MSTHX U2 CINEMA<CR>
	THX MUSIC MODE		MSTHX MUSIC MODE<CR>
	THX GAMES MODE		MSTHX GAMES MODE<CR>
	THX6.1	---Operate as Matrix6.1 or Discrete6.1	MSTHX6.1<CR>
	THX SURROUND EX		MSTHX SURROUND EX<CR>
	WIDE SCREEN		MSWIDE SCREEN<CR>

COMMAND	***PARAMETER***	function	example
MS	5CH STEREO	Both are received as "5CH/7CH/9CH STEREO" , the surround mode which changed return as ***EVENT***.	MS5CH STEREO<CR>
	7CH STEREO		MS7CH STEREO<CR>
	9CH STEREO		MS9CH STEREO<CR>
	SUPER STADIUM		MSSUPER STADIUM<CR>
	ROCK ARENA		MSROCK ARENA<CR>
	JAZZ CLUB		MSJAZZ CLUB<CR>
	CLASSIC CONCERT		MSCLASSIC CONCERT<CR>
	MONO MOVIE		MSMONO MOVIE<CR>
	MATRIX		MSMATRIX<CR>
	VIDEO GAME		MSVIDEO GAME<CR>
	MPEG2 AAC	---Only The Model for Japan	MSMPEG2 AAC<CR>
	AAC+DOLBY EX	---Only The Model for Japan	MSAAC+DOLBY EX<CR>
	?	Request MS Status	MS?<CR>
	USER1	USER1-3 MODE SELECT	MSUSER1<CR>
	USER2		MSUSER2<CR>
	USER3		MSUSER3<CR>
	USER ?	Request MSUSER Status	MSUSER ?<CR>
	USER1 MEMORY	USER1-3 MODE MEMORY	MSUSER1 MEMORY<CR>
	USER2 MEMORY		MSUSER2 MEMORY<CR>
	USER3 MEMORY		MSUSER3 MEMORY<CR>

COMMAND	***PARAMETER***	function	example
PS	TONE DEFEAT ON	PARAMETER setting TONE DEFEAT ON/OFF	PSTONE DEFEAT ON<CR>
	TONE DEFEAT OFF		PSTONE DEFEAT OFF<CR>
	TONE DEFEAT ?	Request PSTONE DEFEAT Status	PSTONE DEFEAT ?<CR>
	SB:MTRX ON	SURROUND BACK SP MODE set	PSSB:MTRX ON<CR>
	SB:NON MTRX	---MTRX ON = SURR.EX ON = DSCRT ON	PSSB:NON MTRX<CR>
	SB:PL2X CINEMA	(@THX) (@ES DSCRT)	PSSB:PL2X CINEMA<CR>
	SB:PL2X MUSIC		PSSB:PL2X MUSIC<CR>
	SB:OFF		PSSB:OFF<CR>
	SB: ?	Request PSSB: Status	PSSB: ?<CR>
	CINEMA EQ.ON	CINEMA EQ. ON/OFF	PSCINEMA EQ.ON<CR>
	CINEMA EQ.OFF		PSCINEMA EQ.OFF<CR>
	CINEMA EQ. ?	Request PSCINEMA EQ. Status	PSCINEMA EQ. ?<CR>
	MODE:MUSIC	CINEMA / MUSIC / GAME / PL mode change	PSMODE:MUSIC<CR>
	MODE:CINEMA	(This parameter can change DOLBY PL2,PL2x,NEO:6 mode.)	PSMODE:CINEMA<CR>
	MODE:GAME	---SB=ON : PL2x mode / SB=OFF : PL2 mode	PSMODE:GAME<CR>
	MODE:PRO LOGIC	--- GAME can change DOLBY PL2 & PL2x mode --- PL can change ONLY DOLBY PL2 mode	PSMODE:PRO LOGIC<CR>
	MODE: ?	Request PSMODE: Status	PSMODE: ?<CR>
	ROOM EQ:AUDYSSEY	ROOM EQ mode direct change	PSROOM EQ:AUDYSSEY<CR>
	ROOM EQ:FRONT		PSROOM EQ:FRONT<CR>
	ROOM EQ:FLAT		PSROOM EQ:FLAT<CR>
	ROOM EQ:MANUAL		PSROOM EQ:MANUAL<CR>
	ROOM EQ:OFF		PSROOM EQ:OFF<CR>
	ROOM EQ: ?	Request PSROOM EQ: Status	PSROOM EQ: ?<CR>
	DELAY UP	AUDIO DELAY UP/DOWN , direct change to ***dB	PSDELAY UP<CR>
	DELAY DOWN	***:000 to 999 by ASCII , 000=0ms, 200=200ms	PSDELAY DOWN<CR>
	DELAY ***	---AVR5805UPG can be operated from 0 to 200	PSDELAY 200<CR>
	NIGHT:ON	NIGHT MODE ON/OFF	PSNIGHT:ON<CR>
	NIGHT:OFF	(This parameter can change DOLBY DIGITAL SIGNAL)	PSNIGHT:OFF<CR>

COMMAND	***PARAMETER***	function	example
TF	UP	TUNER Frequency UP/DOWN , direct change	TFUP<CR>
	DOWN		TFDOWN<CR>
	****** (6 digits)	--- ****.** kHz at AM band (>050000 is AM.) ****.** MHz at FM band (<050000 is FM.)	TF105000<CR> (1050.00kHz at AM)
	?	Request TF Status	TF?<CR>
TP	UP	TUNER PRESET CH UP/DOWN , direct change to No.**	TPUP<CR>
	DOWN		TPDOWN<CR>
	**(PRESET No.)		TPA1<CR> (PRESET No.”A1”)
	?	Request TP Status	TP?<CR>
	MEMORY	TUNER PRESET MEMORY	TPMEMORY<CR>
TM		TUNER BAND , MODE Select	
	AM	---Band set to AM	TMAM<CR>
	FM	---Band set to FM	TMFM<CR>
	AUTO	---Tuning mode set to AUTO mode	TMAUTO<CR>
	MANUAL	---Tuning mode set to MANUAL mode	TMMANUAL<CR>
	?	Request TM Status	TM?<CR>
VS	MONITORSEL	HDMI/DVI MONITOR OUT CHANGE	VSMONITORSEL<CR>
	MONITORHDM	set MONITOR OUT :HDMI	VSMONITORHDM<CR>
	MONITORDVI	set MONITOR OUT :DVI	VSMONITORDVI<CR>
	MONITOR?	Request VSMONITOR Status	VSMONITOR?<CR>
	SCALESEL	SCALER MODE CHANGE	VSSCALESEL<CR>
	SCALE48P	set SCALE MODE:480p/576p	VSSCALE48P<CR>
	SCALE10I	set SCALE MODE:1080i	VSSCALE10I<CR>
	SCALE72P	set SCALE MODE:720p	VSSCALE72P<CR>
	SCALE10P	set SCALE MODE:1080p	VSSCALE10P<CR>
	SCALETHR	set SCALE MODE:THROUGH	VSSCALETHR<CR>
	SCALE?	Request VSMONITOR Status	VSSCALE?<CR>

COMMAND	***PARAMETER***	function	example
Z2CV	Z2FL UP	ZONE-2 CHANNEL VOLUME UP/DOWN , direct change to **dB	Z2CVFL UP<CR>
	FL DOWN	---FRONT Lch	Z2CVFL DOWN<CR>
	FL **	**:38 to 62 by ASCII , 50=0dB	Z2CVFL 50<CR>
	FR UP		Z2CVFR UP<CR>
	FR DOWN	---FRONT Rch	Z2CVFR DOWN<CR>
	FR **	**:38 to 62 by ASCII , 50=0dB	Z2CVFR 50<CR>
	C UP		Z2CVC UP<CR>
	C DOWN	---CENTERch	Z2CVC DOWN<CR>
	C **	**:38 to 62 by ASCII , 50=0dB	Z2CVC 50<CR>
	SW UP	---SUBWOOFERch	Z2CVSW UP<CR>
	SW DOWN	**:00,38 to 62 by ASCII , 50=0dB	Z2CVSW DOWN<CR>
	SW **	00=OFF	Z2CVSW 50<CR>
	SL UP		Z2CVSL UP<CR>
	SL DOWN	---SURROUND Lch	Z2CVSL DOWN<CR>
	SL **	**:38 to 62 by ASCII , 50=0dB	Z2CVSL 50<CR>
	SR UP		Z2CVSR UP<CR>
	SR DOWN	---SURROUND Rch	Z2CVSR DOWN<CR>
	SR **	**:38 to 62 by ASCII , 50=0dB	Z2CVSR 50<CR>
	SBL UP		Z2CVSBL UP<CR>
	SBL DOWN	---SURROUND BACK Lch (SBch 2SP)	Z2CVSBL DOWN<CR>
	SBL **	**:38 to 62 by ASCII , 50=0dB	Z2CVSBL 50<CR>
	SBR UP	---SURROUND BACK Rch (SBch 2SP)	Z2CVSBR UP<CR>
	SBR DOWN		Z2CVSBR DOWN<CR>
	SBR **	**:38 to 62 by ASCII , 50=0dB	Z2CVSBR 50<CR>
	SB UP	---SURROUND BACKch (SBch 1SP)	Z2CVSB UP<CR>
	SB DOWN		Z2CVSB DOWN<CR>
	SB **	**:38 to 62 by ASCII , 50=0dB	Z2CVSB 50<CR>
	?	Request Z2CV Status	Z2CV?<CR>

Z2CV ***COMMAND*** **:** "*" parameter uses two or three ASCII characters. (see page6 (J) section)

COMMAND	***PARAMETER***	function	example

Z2	PHONO
	  |
	AUX
		ZONE-2 mode set , and select source
		---The name of PARAMETER is
		the same as that of the time of SI COMMAND.
			Z2PHONO<CR>
			  |
			Z2AUX<CR>

	SOURCE	ZONE-2 mode cancel	Z2SOURCE<CR>
	UP	ZONE-2 VOLUME UP/DOWN , direct change to ***dB	Z2UP<CR>
	DOWN		Z2DOWN<CR>
	**	**:00 to 99 by ASCII , 80=0dB, 99=---(MIN)	Z280<CR>
	ON	ZONE-2 ON/OFF change	Z2ON<CR>
	OFF		Z2OFF<CR>
	?	Request Z2 Status	Z2?<CR>
Z2MU	ON	ZONE2 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>
	?	Request Z2MU Status	Z2MU?<CR>
Z2SV	DVD	ZONE2 VIDEO SELECT mode set , and select source	Z2SVDVD<CR>
	VDP		Z2SVVDP<CR>
	TV		Z2SVTV<CR>
	DBS		Z2SVDBS<CR>
	VCR-1		Z2SVVCR-1<CR>
	VCR-2		Z2SVVCR-2<CR>
	VCR-3		Z2SVVCR-3<CR>
	VCR-4		*Z2*SVVCR-4<CR>
	V.AUX		Z2SVV.AUX<CR>
	SOURCE	ZONE2 VIDEO SELECT mode cancel	Z2SVSOURCE<CR>
	?	Request Z2SV Status	Z2SV?<CR>
Z2SD	AUTO	ZONE-2 set DIGITAL INPUT AUTO mode	Z2SDAUTO<CR>
	ANALOG	ZONE-2 set force ANALOG INPUT mode	Z2SDANALOG<CR>
	?	Request Z2SD Status	Z2SD?<CR>

Z2 ***COMMAND*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

COMMAND	***PARAMETER***	function	example
Z2MS	STEREO	SURROUND mode set	Z2MSSTEREO<CR>
	DOLBY PRO LOGIC	All are received as "STANDARD" ,	Z2MSDOLBY PROLOGIC<CR>
	DOLBY PL2	the surround mode which changed return as ***EVENT***.	Z2MSDOLBY PL2<CR>
	DOLBY PL2x		Z2MSDOLBY PL2X<CR>
	DOLBY DIGITAL		Z2MSDOLBY DIGITAL<CR>
	DOLBY D EX		Z2MSDOLBY D EX<CR>
	DTS NEO:6		Z2MSDTS NEO:6<CR>
	DTS SURROUND		Z2MSDTS SURROUND<CR>
	DTS ES DSCRT6.1		Z2MSDTS ES DSCRT6.1<CR>
	DTS ES MTRX6.1		Z2MSDTS ES MTRX6.1<CR>
	WIDE SCREEN		Z2MSWIDE SCREEN<CR>
	5CH STEREO	Both are received as "5CH/7CH STEREO" ,	Z2MS5CH STEREO<CR>
	7CH STEREO	the surround mode which changed return as ***EVENT***.	Z2MS7CH STEREO<CR>
	SUPER STADIUM		Z2MSSUPER STADIUM<CR>
	ROCK ARENA		Z2MSROCK ARENA<CR>
	JAZZ CLUB		Z2MSJAZZ CLUB<CR>
	CLASSIC CONCERT		Z2MSCLASSIC CONCERT<CR>
	MONO MOVIE		Z2MSMONO MOVIE<CR>
	MATRIX		Z2MSMATRIX<CR>
	VIDEO GAME		Z2MSVIDEO GAME<CR>
	VIRTUAL		Z2MSVIRTUAL<CR>
	MPEG2 AAC	---Only The Model for Japan	Z2MSMPEG2 AAC<CR>
	AAC+DOLBY EX	---Only The Model for Japan	Z2MSAAC+DOLBY EX<CR>
	?	Request Z2MS Status	Z2MS?<CR>
	USER1	USER mode change	Z2MSUSER1<CR>
	USER2		Z2MSUSER2<CR>
	USER3		Z2MSUSER3<CR>

COMMAND	***PARAMETER***	function	example
Z2PS	TONE DEFEAT ON	PARAMETER setting TONE DEFEAT ON/OFF	Z2PSTONE DEFEAT ON<CR>
	TONE DEFEAT OFF		Z2PSTONE DEFEAT OFF<CR>
	TONE DEFEAT ?	Request Z2PSTONE DEFEAT Status	Z2PSTONE DEFEAT ?<CR>
	SB:MTRX ON	SURROUND BACK SP MODE set	Z2PSSB:MTRX ON<CR>
	SB:NON MTRX	---MTRX ON = SURR.EX ON = DSCRT ON	Z2PSSB:NON MTRX<CR>
	SB:PL2xCINEMA		Z2PSSB:PL2X CINEMA<CR>
	SB:PL2xMUSIC		Z2PSSB:PL2X MUSIC<CR>
	SB:OFF		Z2PSSB:OFF<CR>
	SB:?	Request Z2PSSB: Status	Z2PSSB: ?<CR>
	CINEMA EQ.ON	CINEMA EQ. ON/OFF	Z2PSCINEMA EQ.ON<CR>
	CINEMA EQ.OFF		Z2PSCINEMA EQ.OFF<CR>
	CINEMA EQ. ?	Request Z2PSCINEMA EQ. Status	Z2PSCINEMA EQ. ?<CR>
	MODE:MUSIC	CINEMA / MUSIC / GAME / PL mode change	Z2PSMODE:MUSIC<CR>
	MODE:CINEMA	(This parameter can change DOLBY PL2,PL2x,NEO:6 mode.)	Z2PSMODE:CINEMA<CR>
	MODE:GAME	---SB=ON : PL2x mode / SB=OFF : PL2 mode	Z2PSMODE:GAME<CR>
	MODE:PRO LOGIC	--- GAME can change DOLBY PL2 & PL2x mode --- PL can change ONLY DOLBY PL2 mode	Z2PSMODE:PRO LOGIC<CR>
	MODE: ?	Request Z2PSMODE: Status	Z2PSMODE: ?<CR>
	DELAY UP	AUDIO DELAY UP/DOWN , direct change to ***dB	Z2PSDELAY UP<CR>
	DELAY DOWN	***:000 to 999 by ASCII , 000=0ms, 200=200ms	Z2PSDELAY DOWN<CR>
	DELAY ***	---AVR5805UPG can be operated from 0 to 200	Z2PSDELAY 200<CR>
	NIGHT ON	NIGHT MODE ON/OFF	Z2PSNIGHT:ON<CR>
	NIGHT OFF	(This parameter can change DOLBY DIGITAL SIGNAL)	Z2PSNIGHT:OFF<CR>

COMMAND	***PARAMETER***	function	example
Z3	PHONO | CDR/TAPE	ZONE-3 mode set , and select source ---The name of PARAMETER is the same as that of the time of SI COMMAND.	Z3PHONO<CR> | Z3CDR/TAPE<CR>
	SOURCE	ZONE-3 mode cancel	Z3SOURCE<CR>
	UP	ZONE-3 VOLUME UP/DOWN , direct change to ***dB	Z3UP<CR>
	DOWN		Z3DOWN<CR>
	**	**:00 to 99 by ASCII , 80=0dB, 99=---(MIN)	Z380<CR>
	ON	ZONE-3 ON/OFF change	Z3ON<CR>
	OFF		Z3OFF<CR>
	?	Request Z3 Status	Z3?<CR>
Z3MU	ON	ZONE3 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>
	?	Request Z3MU Status	Z3MU?<CR>
Z4	PHONO | CDR/TAPE	ZONE-4 mode set , and select source ---The name of PARAMETER is the same as that of the time of SI COMMAND.	Z4PHONO<CR> | Z4CDR/TAPE<CR>
	SOURCE	ZONE-4 mode cancel	Z4SOURCE<CR>
	UP	ZONE-4 VOLUME UP/DOWN , direct change to ***dB	Z4UP<CR>
	DOWN		Z4DOWN<CR>
	**	**:00 to 99 by ASCII , 80=0dB, 99=---(MIN)	Z480<CR>
	ON	ZONE-4 ON/OFF change	Z4ON<CR>
	OFF		Z4OFF<CR>
	?	Request Z4 Status	Z4?<CR>
Z4MU	ON	ZONE4 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>
	?	Request Z4MU Status	Z4MU?<CR>
SR	PHONO | CDR/TAPE	REC SELECT mode set , and select source ---The name of PARAMETER is the same as that of the time of SI COMMAND.	SRPHONO<CR> | SRCDR/TAPE<CR>
	SOURCE	REC SELECT mode cancel	SRSOURCE<CR>
	?	Request SR Status	SR?<CR>

Z3, Z4 ***COMMAND*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

Cursol/Enter/Setup/Parameter

COMMAND	*PARAMETER*	function	example
SS	CUP	"Cursor Up" Control	SSCUP<CR>
	CDN	"Cursor Down" Control	SSCDN<CR>
	CLT	"Cursor Left" Control	SSCLT<CR>
	CRT	"Cursor Right" Control	SSCRT<CR>
	ENT	"Enter" Control	SSENT<CR>
	MEN ON	"System Setup Menu ON" Control	SSMEN ON<CR>
	MEN OFF	"System Setup Menu OFF" Control	SSMEN OFF<CR>
PS	MEN ON	"Surround Parameter Menu ON" Control	PSMEN ON<CR>
	MEN OFF	"Surround Parameter Menu OFF" Control	PSMEN OFF<CR>

Remote Lock/Panel Lock

COMMAND	*PARAMETER*	function	example
SY	REMOTE LOCK ON	REMOTE CONTROL LOCK ON/OFF	SYREMOTE LOCK ON<CR>
	REMOTE LOCK OFF		SYREMOTE LOCK OFF<CR>
	REMOTE LOCK ?	Request SYREMOTE LOCK Status	SYREMOTE LOCK ?<CR>
	PANEL LOCK ON	PANEL BUTTON(Except MASTER VOL.)CONTROL LOCK ON	SYPANEL LOCK ON<CR>
	PANEL+V LOCK ON	PANEL BUTTON & MASTER VOL. CONTROL LOCK ON	SYPANEL+V LOCK ON<CR>
	PANEL LOCK OFF	PANEL BUTTUM & MASTER VOL. CONTROL LOCK OFF	SYPANEL LOCK OFF<CR>
	PANEL LOCK ?	Request SYPANEL LOCK Status	SYPANEL LOCK ?<CR>

mServer/iRadio Extended Control

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>
	9C	"Stop" Control	NS9C<CR>
NSA		Request Onscreen Display Information List (ASCII CODE Character)	NSA<CR> (Return NSA0-NSA8. Refer to Page 31)
NSE		Request Onscreen Display Information List (UTF-8 CODE Character)	NSE<CR> (Return NSE0-NSE8. Refer to Page 32)

EVENT(or RESPONSE) and PARAMETER list

EVENT	***PARAMETER***	function	example
PW	ON	POWER ON/STANDBY change	PWON<CR>
	STANDBY		PWSTANDBY<CR>
MV	**	MASTER VOLUME change , **:00 to 98 by ASCII 98 = +18dB(MAX) 80 = 0dB 10 = -70dB 00 = -80dB 99 = ---(MIN)	MV80<CR>
CV	FL **	CHANNEL VOLUME change , **:00 to 62 by ASCII	CVFL 50<CR>
	FR **	62 = +12dB(MAX)	CVFR 50<CR>
	C **	50 = 0dB	CVC 50<CR>
	SW1 **	38 = -12dB(MIN)	CVSW1 50<CR>
	SW2 **	00 = OFF (define ONLY SW1,SW2,LFEch)	CVSW2 50<CR>
	LFE **		CVLFE 50<CR>
	SLA **		CVSLA 50<CR>
	SRA **		CVSRA 50<CR>
	SLB **		CVSLB 50<CR>
	SRB **		CVSRB 50<CR>
	SBL **	(at SBch 2SP)	CVSBL 50<CR>
	SBR **	(at SBch 2SP)	CVSBR 50<CR>
	SB **	(at SBch 1SP)	CVSB 50<CR>

MV , CV ***COMMAND*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

EVENT	***PARAMETER***	function	example
MU	ON	OUTPUT MUTE ON/OFF change	MUON<CR>
	OFF		MUOFF<CR>
SI	PHONO	INPUT source change	SIPHONO<CR>
	CD		SICD<CR>
	TUNER		SITUNER<CR>
	DVD		SIDVD<CR>
	VDP		SIVDP<CR>
	TV		SITV<CR>
	DBS		SIDBS<CR>
	VCR-1		SIVCR-1<CR>
	VCR-2		SIVCR-2<CR>
	VCR-3		SIVCR-3<CR>
	VCR-4		SIVCR-4<CR>
	V.AUX		SIV.AUX<CR>
	CDR/TAPE		SICDR/TAPE<CR>
	AUX		SIAUX<CR>
SV	DVD	VIDEO INPUT source change	SVDVD<CR>
	VDP		SVVDP<CR>
	TV		SVTV<CR>
	DBS		SVDBS<CR>
	VCR-1		SVVCR-1<CR>
	VCR-2		SVVCR-2<CR>
	VCR-3		SVVCR-3<CR>
	VCR-4		SVVCR-4<CR>
	V.AUX		SVV.AUX<CR>
	SOURCE	VIDEO SELECT mode cancel	SVSOURCE<CR>

EVENT	***PARAMETER***	function	example
MS	DIRECT	SURROUND mode change	MSDIRECT<CR>
	PURE DIRECT		MSPURE DIRECT<CR>
	STEREO		MSSTEREO<CR>
	MULTI CH IN		MSMULTI CH IN<CR>
	M CH IN+PL2X C		MSM CH IN+PL2X C<CR>
	M CH IN+PL2X M		MSM CH IN+PL2X M<CR>
	MULTI CH IN 7.1		MSMULTI CH IN7.1<CR>
	MULTI CH DIRECT		MSMULTI CH DIRECT<CR>
	M CH DRCT+PL2X C		MSM CH DRCT+PL2X C <CR>
	M CH DRCT+PL2X M		MSM CH DRCT+PL2X M <CR>
	MULTI CH DIRECT 7.1		MSMULTI CH DIRECT7.1<CR>
	MULTI CH PURE D		MSMULTI CH PURE D<CR>
	M CH PURE D+PL2X C		MSM CH PURE D+PL2X C <CR>
	M CH PURE D+PL2X M		MSM CH PURE D+PL2X M <CR>
	MULTI CH PURE D 7.1		MSMULTI CH PURE D7.1<CR>
	DOLBY PRO LOGIC		MSDOLBY PRO LOGIC<CR>
	DOLBY PL2 C		MSDOLBY PL2 C<CR>
	DOLBY PL2 M		MSDOLBY PL2 M<CR>
	DOLBY PL2 G		MSDOLBY PL2 G<CR>
	DOLBY PL2X C		MSDOLBY PL2X C<CR>
	DOLBY PL2X M		MSDOLBY PL2X M<CR>
	DOLBY PL2X G		MSDOLBY PL2X G<CR>
	DOLBY DIGITAL		MSDOLBY DIGITAL<CR>
	DOLBY D EX		MSDOLBY D EX<CR>
	DOLBY D+PL2X C		MSDOLBY D+PL2X C<CR>
	DOLBY D+PL2X M		MSDOLBY D+PL2X M<CR>
	DTS NEO:6 C		MSDTS NEO:6 C<CR>
	DTS NEO:6 M		MSDTS NEO:6 M<CR>
	DTS SURROUND		MSDTS SURROUND<CR>
	DTS ES DSCRT6.1		MSDTS ES DSCRT6.1<CR>
	DTS ES MTRX6.1		MSDTS ES MTRX6.1<CR>
	DTS+PL2x C		MSDTS+PL2X C<CR>
	DTS+PL2x M		MSDTS+PL2X M<CR>

EVENT	***PARAMETER***	function	example
MS	DOLBY H/P		MSDOLBY H/P<CR>
	DTS+DOLBY H/P		MSDTS+DOLBY H/P<CR>
	PL2x C+THX		MSPL2X C+THX
	PL2 C+THX		MSPL2 C+THX
	PL+THX		MSPL+THX
	NEO:6 C+THX		MSNEO:6 C+THX
	THX5.1		MSTHX5.1<CR>
	THX U2 CINEMA		MSTHX U2 CINEMA<CR>
	THX MUSIC MODE		MSTHX MUSIC MODE<CR>
	THX GAMES MODE		MSTHX GAMES MODE<CR>
	THX6.1		MSTHX6.1<CR>
	THX SURROUND EX		MSTHX SURROUND EX<CR>
	M CH 7.1+THX		MSM CH 7.1+THX<CR>
	M CH 5.1+THX		MSM CH 5.1+THX<CR>
	WIDE SCREEN		MSWIDE SCREEN<CR>
	5CH STEREO		MS5CH STEREO<CR>
	7CH STEREO		MS7CH STEREO<CR>
	9CH STEREO		MS9CH STEREO<CR>
	SUPER STADIUM		MSSUPER STADIUM<CR>
	ROCK ARENA		MSROCK ARENA<CR>
	JAZZ CLUB		MSJAZZ CLUB<CR>
	CLASSIC CONCERT		MSCLASSIC CONCERT<CR>
	MONO MOVIE		MSMONO MOVIE<CR>
	MATRIX		MSMATRIX<CR>
	VIDEO GAME		MSVIDEO GAME<CR>
	MPEG2 AAC	---Only The Model for Japan	MSMPEG2 AAC<CR>
	AAC+DOLBY EX	---Only The Model for Japan	MSAAC+DOLBY EX<CR>
	AAC+PL2X C	---Only The Model for Japan	MSAAC+PL2X C<CR>
	AAC+PL2X M	---Only The Model for Japan	MSAAC+PL2X M<CR>
	DSD DIRECT		MSDSD DIRECT<CR>
	DSD PURE DIRECT		MSDSD PURE DIRECT<CR>
	DSD MULTI DRCT		MSDSD MULTI DRCT<CR>
	DSD MULTI PURE		MSDSD MULTI PURE<CR>

EVENT	***PARAMETER***	function	example
MS	USER1	USER mode change	MSUSER1<CR>
	USER2		MSUSER2<CR>
	USER3		MSUSER3<CR>
	USER0	---User 1(or User 2 or User 3) Change User OFF	MSUSER0<CR>
PS	TONE DEFEAT ON	TONE DEFEAT ON/OFF change	PSTONE DEFEAT ON<CR>
	TONE DEFEAT OFF		PSTONE DEFEAT OFF<CR>
	SB:MTRX ON	SURROUND BACK MODE change	PSSB:MTRX ON<CR>
	SB:NON MTRX		PSSB:NON MTRX<CR>
	SB:PL2X C		PSSB:PL2X C<CR>
	SB:PL2X M		PSSB:PL2X M<CR>
	SB:OFF		PSSB:OFF<CR>
	SB:ES DSCRT		PSSB:ES DSCRT<CR>
	SB:ES MTRX		PSSB:ES MTRX<CR>
	SB:ON		PSSB:ON<CR>
	SB:MUSIC		PSSB:MUSIC<CR>
	SB:DSCRT ON		PSSB:DSCRT ON<CR>
	SB:GAME		PSSB:GAME<CR>
	CINEMA EQ.ON	CINEMA EQ. ON/OFF Change	PSCINEMA EQ.ON<CR>
	CINEMA EQ.OFF		PSCINEMA EQ.OFF<CR>
	MODE:PL2X C	CINEMA / MUSIC / GAME / PL mode change	PSMODE:PL2X C<CR>
	MODE:PL2X M		PSMODE:PL2X M<CR>
	MODE:PL2X G		PSMODE:PL2X G<CR>
	MODE:PRO LOGIC		PSMODE:PRO LOGIC<CR>
	MODE:CINEMA		PSMODE:CINEMA<CR>
	MODE:MUSIC		PSMODE:MUSIC<CR>
	ROOM EQ:AUDYSSEY	ROOM EQ mode direct change	PSROOM EQ:AUDYSSEY<CR>
	ROOM EQ:FRONT		PSROOM EQ:FRONT<CR>
	ROOM EQ:FLAT		PSROOM EQ:FLAT<CR>
	ROOM EQ:MANUAL		PSROOM EQ:MANUAL<CR>
	ROOM EQ:OFF		PSROOM EQ:OFF<CR>
	DELAY ***	AUDIO DELAY change, ***:000 to 999 by ASCII	PSDELAY 200<CR>
	NIGHT:ON	NIGHT mode ON/OFF change	PSNIGHT:ON<CR>
	NIGHT:OFF		PSNIGHT:OFF<CR>

EVENT	***PARAMETER***	function	example
TF	****** (6 digits)	TUNER Frequency change --- ****.** kHz at AM band ****.** MHz at FM band	TF105000<CR> (1050.00kHz at AM)
TP	**(PRESET No.)	TUNER PRESET change to No.**	TPA1<CR> (PRESET No.”A1”)
TM		TUNER BAND , MODE change	
	AM	---Band set to AM	TMAM<CR>
	FM	---Band set to FM	TMFM<CR>
	AUTO	---Tuning mode set to AUTO mode	TMAUTO<CR>
	MANUAL	---Tuning mode set to MANUAL mode	TMMANUAL<CR>

EVENT	***PARAMETER***	function	example
Z2CV	FL **	ZONE-2 CHANNEL VOLUME change ,	Z2CVFL UP<CR>
	FR **	**:00,38 to 62 by ASCII	Z2CVFL DOWN<CR>
	C **	62 = +12dB(MAX)	Z2CVFL 50<CR>
	SW **	50 = 0dB	Z2CVFR UP<CR>
	SL **	38 = -12dB(MIN)	Z2CVFR DOWN<CR>
	SR **	00 = OFF (define ONLY SWch)	Z2CVFR 50<CR>
	SBL **	(at SBch 2SP)	Z2CVC UP<CR>
	SBR **	(at SBch 2SP)	Z2CVC DOWN<CR>
	SB **	(at SBch 1SP)	Z2CVC 50<CR>
Z2	PHONO | AUX	ZONE-2 source change ---The name of PARAMETER is the same as that of the time of SI COMMAND.	Z2PHONO<CR> | Z2AUX<CR>
	SOURCE	ZONE-2 mode cancel	Z2SOURCE<CR>
	**	ZONE-2 VOLUME change , **:00 to 99 by ASCII 98 = +18dB(MAX) 80 = 0dB 00 = -80dB 99 = ---(MIN)	Z280<CR>
	ON	ZONE-2 ON/OFF change	Z2ON<CR>
	OFF		Z2OFF<CR>
Z2MU	ON	ZONE2 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>
Z2SV	DVD	ZONE2 VIDEO SELECT mode set , and select source	Z2SVDVD<CR>
	VDP		Z2SVVDP<CR>
	TV		Z2SVTV<CR>
	DBS		Z2SVDBS<CR>
	VCR-1		Z2SVVCR-1<CR>
	VCR-2		Z2SVVCR-2<CR>
	VCR-3		Z2SVVCR-3<CR>
	VCR-4		Z2SVVCR-4<CR>

The ***PARAMETER*** of Z2, Z2CV ***EVENT*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

EVENT	***PARAMETER***	function	example
Z2SV	V.AUX		Z2SVV.AUX<CR>
	SOURCE	ZONE2 VIDEO SELECT mode cancel	Z2SVSOURCE<CR>
Z2MS	STEREO	ZONE2 SURROUND mode change	Z2MSSTEREO<CR>
	DOLBY PRO LOGIC		MSDOLBY PRO LOGIC<CR>
	DOLBY PL2 C		MSDOLBY PL2 C<CR>
	DOLBY PL2 M		MSDOLBY PL2 M<CR>
	DOLBY PL2 G		MSDOLBY PL2 G<CR>
	DOLBY PL2x C		MSDOLBY PL2X C<CR>
	DOLBY PL2x M		MSDOLBY PL2X M<CR>
	DOLBY PL2x G		MSDOLBY PL2X G<CR>
	DOLBY DIGITAL		Z2MSDOLBY DIGITAL<CR>
	DOLBY D EX		Z2MSDOLBY D EX<CR>
	DTS NEO:6		Z2MSDTS NEO:6<CR>
	DTS SURROUND		Z2MSDTS SURROUND<CR>
	DTS ES DSCRT6.1		Z2MSDTS ES DSCRT6.1<CR>
	DTS ES MTRX6.1		Z2MSDTS ES MTRX6.1<CR>
	WIDE SCREEN		Z2MSWIDE SCREEN<CR>
	5CH STEREO		Z2MS5CH STEREO<CR>
	7CH STEREO		Z2MS7CH STEREO<CR>
	SUPER STADIUM		Z2MSSUPER STADIUM<CR>
	ROCK ARENA		Z2MSROCK ARENA<CR>
	JAZZ CLUB		Z2MSJAZZ CLUB<CR>
	CLASSIC CONCERT		Z2MSCLASSIC CONCERT<CR>
	MONO MOVIE		Z2MSMONO MOVIE<CR>
	MATRIX		Z2MSMATRIX<CR>
	VIDEO GAME		Z2MSVIDEO GAME<CR>
	VIRTUAL		Z2MSVIRTUAL<CR>
	MPEG2 AAC	---Only The Model for Japan	Z2MSMPEG2 AAC<CR>
	AAC+DOLBY EX	---Only The Model for Japan	Z2MSAAC+DOLBY EX<CR>
	AAC+PL2x C	---Only The Model for Japan	Z2MSAAC+PL2X C<CR>
	AAC+PL2x M	---Only The Model for Japan	Z2MSAAC+PL2X M<CR>
	USER1	USER mode change	Z2MSUSER1<CR>
	USER2		Z2MSUSER2<CR>

	USER3		Z2MSUSER3<CR>

EVENT	***PARAMETER***	function	example
Z2PS	TONE DEFEAT ON	PARAMETER setting	Z2PSTONE DEFEAT ON<CR>
	TONE DEFEAT OFF	TONE DEFEAT ON/OFF	Z2PSTONE DEFEAT OFF<CR>
	SB:MTRX ON	SURROUND BACK SP MODE set	Z2PSSB:MTRX ON<CR>
	SB:NON MTRX	---MTRX ON = SURR.EX ON = DSCRT ON	Z2PSSB:NON MTRX<CR>
	SB:PL2X C		Z2PSSB:PL2X C<CR>
	SB:PL2X M		Z2PSSB:PL2X M<CR>
	SB:OFF		Z2PSSB:OFF<CR>
	CINEMA EQ.ON	CINEMA EQ. ON/OFF	Z2PSCINEMA EQ.ON<CR>
	CINEMA EQ.OFF		Z2PSCINEMA EQ.OFF<CR>
	MODE:MUSIC	CINEMA / MUSIC / GAME / PL mode change	Z2PSMODE:MUSIC<CR>
	MODE:CINEMA	(This parameter can change DOLBY PL2,PL2x,NEO:6 mode.)	Z2PSMODE:CINEMA<CR>
	MODE:GAME	---SB=ON : PL2x mode / SB=OFF : PL2 mode	Z2PSMODE:GAME<CR>
	MODE:PRO LOGIC	--- GAME can change DOLBY PL2 & PL2x mode	Z2PSMODE:PRO LOGIC<CR>
		--- PL can change ONLY DOLBY PL2 mode	
	DELAY ***	AUDIO DELAY change, ***:000 to 999 by ASCII	Z2PSDELAY 200<CR>
	NIGHT ON	NIGHT MODE ON/OFF	Z2PSNIGHT:ON<CR>
	NIGHT OFF	(This parameter can change DOLBY DIGITAL SIGNAL)	Z2PSNIGHT:OFF<CR>
Z3	PHONO | CDR/TAPE	ZONE-3 source change ---The name of PARAMETER is the same as that of the time of SI COMMAND.	Z3PHONO<CR> | Z3CDR/TAPE<CR>
	SOURCE	ZONE-3 mode cancel	Z3SOURCE<CR>
	**	ZONE-3 VOLUME change , **:00 to 99 by ASCII 98 = +18dB(MAX) 80 = 0dB 00 = -80dB 99 = ---(MIN)	Z380<CR>
	ON	ZONE-3 ON/OFF change	Z3ON<CR>
	OFF		Z3OFF<CR>
Z3MU	ON	ZONE3 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>

The ***PARAMETER*** of Z3 ***EVENT*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

EVENT	***PARAMETER***	function	example

Z4	PHONO
	  |
	CDR/TAPE
		ZONE-4 source change
		---The name of PARAMETER is
		the same as that of the time of SI COMMAND.
			Z4PHONO<CR>
			  |
			Z4CDR/TAPE<CR>

	SOURCE	ZONE-4 mode cancel	Z4SOURCE<CR>
	**	ZONE-4 VOLUME change , **:00 to 99 by ASCII 98 = +18dB(MAX) 80 = 0dB 00 = -80dB 99 = ---(MIN)	Z480<CR>
	ON	ZONE-4 ON/OFF change	Z4ON<CR>
	OFF		Z4OFF<CR>
Z4MU	ON	ZONE4 OUTPUT MUTE ON/OFF change	Z2MUON<CR>
	OFF		Z2MUOFF<CR>

SR	PHONO
	  |
	CDR/TAPE
		REC SELECT source change
		---The name of PARAMETER is
		the same as that of the time of SI COMMAND.
			SRPHONO<CR>
			  |
			SRCDR/TAPE<CR>

	SOURCE	REC SELECT mode cancel	SRSOURCE<CR>

The ***PARAMETER*** of Z4 ***EVENT*** : "*" parameter uses two or three ASCII characters. (see page6 (J) section)

□mServer/iRadio Extended Control

EVENT	*PARAMETER*	function	
NSA		Onscreen Display Information(mserver/iRadio) is Answered By the NSA Command.	
	0	Display Line1 Information	NSA0**********_?????<CR>
	1	Display Line3 Information	NSA1□**********_?????<CR>
	2	Display Line4 Information	NSA2□**********_?????<CR>
	3	Display Line5 Information	NSA3□**********_?????<CR>
	4	Display Line6 Information	NSA4□**********_?????<CR>
	5	Display Line7 Information	NSA5□**********_?????<CR>
	6	Display Line8 Information	NSA6□**********_?????<CR>
	7	Display Line9 Information	NSA7**********_?????<CR>
	8	Display Line10 Information	NSA8**********_?????<CR> *:ASCII CODE Character(MAX96Byte) _:Null ?:Exclusion(The character after Null should be disregarded) □:Cursor&Playable Music Infomation 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>

EVENT	***PARAMETER***	function	
NSE		Onscreen Display Information(mserver/iRadio) is Answered By the NSE Command.	
	0	Display Line1 Information	NSE0********** _?????<CR>
	1	Display Line3 Information	NSE1□********** _?????<CR>
	2	Display Line4 Information	NSE2□********** _?????<CR>
	3	Display Line5 Information	NSE3□********** _?????<CR>
	4	Display Line6 Information	NSE4□********** _?????<CR>
	5	Display Line7 Information	NSE5□********** _?????<CR>
	6	Display Line8 Information	NSE6□********** _?????<CR>
	7	Display Line9 Information	NSE7********** _?????<CR>
	8	Display Line10 Information	NSE8********** _?????<CR> *:UTF-8 CODE Character(MAX95byte) _:Null ?:Don't Care (The character after Null should be disregarded) □:Cursor&Playable Music Infomation 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> 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>