

# DENON AVR control protocol

Ver.8.6.0

Application model : AVR-1713/AVR-1613

Application terminal: Ethernet

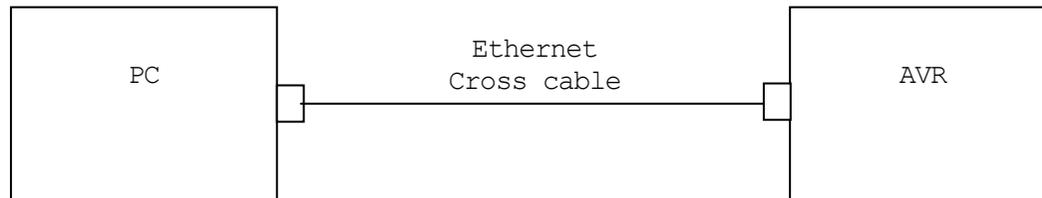
| Version | Date       | Contents | Page |
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| 8.6.0   | 24.Feb.'12 | Original |      |
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|         |            |          |      |
|         |            |          |      |

## Connector specification

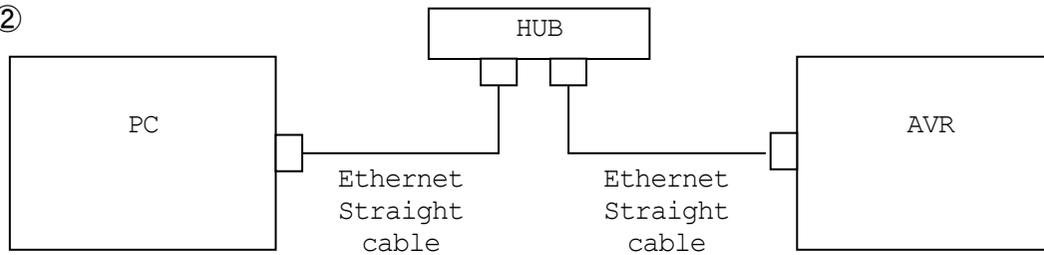
### I. Ethernet

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-1713/1613

### **>Procedure of Network Setup mode.**

(1) Press SETUP MENU button, then Menu appears on FL-display (and GUI)

(2) Select "Setup Menu > 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: IP Control>

(1) Press SETUP MENU button, then Menu appears on FL-display (and GUI)

(2) Select "Setup Menu > Network > IP Control"

(3) Set parameters described below.

"Always On"---Use this setting when using the AVR-1713/1613 Connected in a network.

"Off In Standby"--- Use this setting when not using the AVR-1713/1613 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(AVR) 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)  
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)  
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  
              MS : surround Mode Setting  
              MV : Master Volume setting  
              PW : system PoWer setting

PARAMETER : ASCII CODE ( up to 25 characters)

ex.           DVD : function 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

MSSTEREO<CR> : surround Mode Set to STEREO

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 & CHANNEL VOLUME set with 0.5dB step, the **PARAMETER** (with **COMMAND** and **RESPONSE, EVENT**) defines three ASCII characters as bellows.

```
Ex.  MASTER VOLUME =  +18.0dB :  MV98<CR>
                        |      |
                        +1.0dB :  MV81<CR>
                        +0.5dB :  MV805<CR>
                        0dB :  MV80<CR>
                        -0.5dB :  MV795<CR>
                        -1.0dB :  MV79<CR>
                        |      |
                        -79.5dB :  MV005<CR>
                        --- :  MV00<CR>
```

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

- K) 1 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> |
|         | ?                | Return PW Status  | PW?<CR>       |
| MV      | UP               | MASTER VOLUME UP/DOWN , direct change to **(**dB)             | MVUP<CR>      |
|         | DOWN             |   | MVDOWN<CR>    |
|         | **               | **: <b>00 to 98</b> by ASCII , 80=80(0dB) , 00=-0(--dB) (MIN) | MV80<CR>      |
|         | ?                | Return 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 **            | **: <b>38 to 62</b> by ASCII , 50=0dB                         | CVFL 50<CR>   |
|         | FR UP            |   | CVFR UP<CR>   |
|         | FR DOWN          | ---FRONT Rch  | CVFR DOWN<CR> |
|         | FR **            | **: <b>38 to 62</b> by ASCII , 50=0dB                         | CVFR 50<CR>   |
|         | C UP             |   | CVC UP<CR>    |
|         | C DOWN           | ---CENTERch   | CVC DOWN<CR>  |
|         | C **             | **: <b>38 to 62</b> by ASCII , 50=0dB                         | CVC 50<CR>    |
|         | SW UP            |   | CVSW UP<CR>   |
|         | SW DOWN          | ---SUBWOOFERch  | CVSW DOWN<CR> |
|         | SW **            | **: <b>38 to 62</b> by ASCII , 50=0dB,00=OFF                  | CVSW 50<CR>   |
|         | SL UP            |   | CVSL UP<CR>   |
|         | SL DOWN          | ---SURROUND Lch   | CVSL DOWN<CR> |
|         | SL **            | **: <b>38 to 62</b> by ASCII , 50=0dB                         | CVSL 50<CR>   |
|         | SR UP            |   | CVSR UP<CR>   |
|         | SR DOWN          | ---SURROUND Rch   | CVSR DOWN<CR> |
|         | SR **            | **: <b>38 to 62</b> by ASCII , 50=0dB                         | CVSR 50<CR>   |
| ?       | Return CV Status | CV?<CR>   |               |

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

| <b>COMMAND</b> | <b>PARAMETER</b>   | function  | example                     |
|----------------|--|---|-----------------------------|
| MU             | ON   | VOLUME MUTE ON/OFF change                                     | MUON<CR>                    |
|                | OFF  |   | MUOFF<CR>                   |
|                | ?  | Return MU Status  | MU?<CR>                     |
| SI             | TUNER  | ---FM TUNER   | SITUNER<CR>                 |
|                | DVD  |   | SIDVD<CR>                   |
|                | BD   | ---Blu-ray  | SIBD<CR>                    |
|                | TV   | ---TV AUDIO   | SITV<CR>                    |
|                | SAT/CBL  | ---CBL/SAT  | SISAT/CBL<CR>               |
|                | <b>MPLAY</b>   | ---MEDIA PLAYER(AVR-1713 NA only)                             | <b>SISMPLAY &lt;CR&gt;</b>  |
|                | GAME   |   | SIGAME<CR>                  |
|                | <b>AUX1</b>  | ---AUX  | <b>SIAUX1&lt;CR&gt;</b>     |
|                | NET  | ---NETWORK  | SINET<CR>                   |
|                | PANDORA  | (North America model Only)                                    | SIPANDORA<CR>               |
|                | <b>SIRIUSXM</b>  | (North America model Only)                                    | <b>SISIRIUSXM&lt;CR&gt;</b> |
|                | LASTFM   | (Europe model Only)   | SILASTFM<CR>                |
|                | FLICKR   |   | SIFLICKR<CR>                |
|                | FAVORITES  |   | SIFAVORITES<CR>             |
|                | IRADIO   |   | SIIRADIO<CR>                |
|                | SERVER   |   | SISERVER<CR>                |
|                | USB/IPOD   | Select iPod/USB   | SIUSB/IPOD<CR>              |
|                | USB  | Select INPUT source iPod/USB and USB Start Playback           | SIUSB<CR>                   |
|                | IPD  | Select INPUT source iPod/USB and iPod Direct Start Playback   | SIIPD<CR>                   |
|                | IRP  | Select INPUT source NETWORK and Internet Radio Start Playback | SIIRP<CR>                   |
| FVP            | Select INPUT source NETWORK and Favorites Start Playback | SIFVP<CR>   |                             |
| ?              | Return SI Status   | SI?<CR>   |                             |

| <i>COMMAND</i> | <i>PARAMETER</i>            | function                         | example                             |
|----------------|-----------------------------|----------------------------------|-------------------------------------|
| ZM             | ON                          | MAIN ZONE ON/OFF change          | ZMON<CR>                            |
|                | OFF                         |                                  | ZMOFF<CR>                           |
|                | ?                           | Return ZM Status                 | ZM?<CR>                             |
|                | <b>FAVORITE1</b>            | FAVORITE STATION 1-3 MODE SELECT | <b>ZMFAVORITE1&lt;CR&gt;</b>        |
|                | <b>FAVORITE2</b>            |                                  | <b>ZMFAVORITE2&lt;CR&gt;</b>        |
|                | <b>FAVORITE3</b>            |                                  | <b>ZMFAVORITE3&lt;CR&gt;</b>        |
|                | <b>FAVORITE1<br/>MEMORY</b> | FAVORITE STATION 1-3 MODE MEMORY | <b>ZMFAVORITE1 MEMORY&lt;CR&gt;</b> |
|                | <b>FAVORITE2<br/>MEMORY</b> |                                  | <b>ZMFAVORITE2 MEMORY&lt;CR&gt;</b> |
|                | <b>FAVORITE3<br/>MEMORY</b> |                                  | <b>ZMFAVORITE3 MEMORY&lt;CR&gt;</b> |

| <b>COMMAND</b> | <b>PARAMETER</b> | <b>function</b>                                | <b>example</b> |
|----------------|------------------|--|----------------|
| SD             | AUTO             | set AUTO mode (Priority:HDMI>>DIGITAL>>ANALOG) | SDAUTO<CR>     |
|                | HDMI             | set force HDMI INPUT mode                      | SDHDMI<CR>     |
|                | DIGITAL          | set force DIGITAL INPUT (Optical,Coaxial)mode  | SDDIGITAL<CR>  |
|                | ANALOG           | set force ANALOG INPUT mode                    | SDANALOG<CR>   |
|                | ?                | Return SD Status                               | SD?<CR>        |
| DC             | AUTO             | set DIGITAL INPUT AUTO mode                    | DCAUTO<CR>     |
|                | PCM              | set DIGITAL INPUT force PCM mode               | DCPCM<CR>      |
|                | DTS              | set DIGITAL INPUT force DTS mode               | DCDTS<CR>      |
|                | ?                | Return DC Status                               | DC?<CR>        |
| SV             | DVD              | VIDEO SELECT mode set , and select source      | SVDVD<CR>      |
|                | SAT/CBL          | ---CBL/SAT                                     | SVSAT/CBL<CR>  |
|                | SOURCE           | VIDEO SELECT mode cancel                       | SVSOURCE<CR>   |
|                | ?                | Return SV Status                               | SV?<CR>        |
| SLP            | OFF              | MAIN ZONE SLEEP TIMER setting                  | SLPOFF<CR>     |
|                | ***              | ***:001 to 120 by ASCII , 010=10min            | SLP120<CR>     |
|                | ?                | Return SLP Status                              | SLP?<CR>       |

| <b>COMMAND</b> | <b>PARAMETER</b>      | <b>function</b>                                | <b>example</b>          |                  |
|----------------|-----------------------|--|-------------------------|------------------|
| MS             | MOVIE                 | Select SURROUND mode<br><br>(AVR-1713 NA only) | MSMOVIE<CR>             |                  |
|                | MUSIC                 |  | MSMUSIC<CR>             |                  |
|                | GAME                  |  | MSGAME<CR>              |                  |
|                | DIRECT                |  | MSDIRECT<CR>            |                  |
|                | PURE DIRECT           |  | MSPURE DIRECT<CR>       |                  |
|                | STEREO                |  | MSSTEREO<CR>            |                  |
|                | STANDARD              |  | MSSTANDARD<CR>          |                  |
|                | DOLBY DIGITAL         |  | MSDOLBY DIGITAL<CR>     |                  |
|                | DTS SUROUND           |  | MSDTS SURROUND<CR>      |                  |
|                | MCH STEREO            |  | ---MULTI CH STEREO mode | MSMCH STEREO<CR> |
|                | ROCK ARENA            |  |                         | MSROCK ARENA<CR> |
|                | JAZZ CLUB             |  |                         | MSJAZZ CLUB<CR>  |
|                | MONO MOVIE            |  |                         | MSMONO MOVIE<CR> |
|                | MATRIX                |  |                         | MSMATRIX<CR>     |
|                | VIDEO GAME            |  |                         | MSVIDEO GAME<CR> |
|                | VIRTUAL               |  |                         | MSVIRTUAL<CR>    |
|                | ?                     |  | Return MS Status        | MS?<CR>          |
|                | QUICK1                | QUICK SELECT 1-5 MODE SELECT                   | MSQUICK1<CR>            |                  |
|                | QUICK2                |  | MSQUICK2<CR>            |                  |
|                | QUICK3                |  | MSQUICK3<CR>            |                  |
|                | QUICK4                |  | MSQUICK4<CR>            |                  |
|                | QUICK5                |  | MSQUICK5<CR>            |                  |
|                | QUICK1 MEMORY         | QUICK SELECT 1-5 MODE MEMORY                   | MSQUICK1 MEMORY<CR>     |                  |
|                | QUICK2 MEMORY         |  | MSQUICK2 MEMORY<CR>     |                  |
|                | QUICK3 MEMORY         |  | MSQUICK3 MEMORY<CR>     |                  |
|                | QUICK4 MEMORY         |  | MSQUICK4 MEMORY<CR>     |                  |
|                | QUICK5 MEMORY         |  | MSQUICK5 MEMORY<CR>     |                  |
| QUICK ?        | Return MSQUICK Status | MSQUICK ?<CR>                                  |                         |                  |

| <b>COMMAND</b> | <b>PARAMETER</b> | function   | example                    |
|----------------|------------------|--|----------------------------|
| PS             | TONE CTRL OFF    | PARAMETER setting  | PSTONE CTRL OFF<CR>        |
|                | TONE CTRL ON     | TONE CONTROL ON/OFF  | PSTONE CTRL OFF<CR>        |
|                | TONE CTRL ?      | Return PSTONE CONTROL Status   | PSTONE CTRL ?<CR>          |
|                | CINEMA EQ.ON     | CINEMA EQ. ON/OFF  | PSCINEMA EQ.ON<CR>         |
|                | CINEMA EQ.OFF    |  | PSCINEMA EQ.OFF<CR>        |
|                | CINEMA EQ. ?     | Return 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<br>--- PL can change ONLY DOLBY PL2 mode | PSMODE:PRO LOGIC<CR>       |
|                | MODE: ?          | Return PSMODE: Status  | PSMODE: ?<CR>              |
|                | <b>LOM ON</b>    | Loudness Management ON/OFF Control   | <b>PSLOM ON&lt;CR&gt;</b>  |
|                | <b>LOM OFF</b>   |  | <b>PSLOM OFF&lt;CR&gt;</b> |
|                | <b>LOM ?</b>     |  | <b>PSLOM ? &lt;CR&gt;</b>  |

| <b>COMMAND</b> | <b>PARAMETER</b>  | function                              | example                       |
|----------------|-------------------|---------------------------------------|-------------------------------|
| PS             | MULTEQ:AUDYSSEY   | MulteEQ XT/MulteEQ mode direct change | PSMULTEQ:AUDYSSEY<CR>         |
|                | MULTEQ:BYP.LR     |                                       | PSMULTEQ:BYP.LR<CR>           |
|                | MULTEQ:FLAT       |                                       | PSMULTEQ:FLAT<CR>             |
|                | MULTEQ:MANUAL     |                                       | PSMULTEQ:MANUAL<CR>           |
|                | MULTEQ:OFF        |                                       | PSMULTEQ:OFF<CR>              |
|                | MULTEQ: ?         | Return PSMULTEQ: Status               | PSMULTEQ: ?<CR>               |
|                | DYNEQ ON          | Dynamic EQ = ON                       | PSDYNEQ ON<CR>                |
|                | DYNEQ OFF         | Dynamic EQ = OFF                      | PSDYNEQ OFF<CR>               |
|                | DYNEQ ?           | Return PSDYNEQ Status                 | PSDYNEQ ?<CR>                 |
|                | REFLEV 0          | Reference Level Offset=0dB            | PSREFLEV 0<CR>                |
|                | REFLEV 5          | Reference Level Offset=5dB            | PSREFLEV 5<CR>                |
|                | REFLEV 10         | Reference Level Offset=10dB           | PSREFLEV 10<CR>               |
|                | REFLEV 15         | Reference Level Offset=15dB           | PSREFLEV 15<CR>               |
|                | REFLEV ?          | Return PSREFLEV Status                | PSREFLEV ?<CR>                |
|                | <b>DYNVOL HEV</b> | Dynamic Volume = Heavy                | <b>PSDYNVOL HEV&lt;CR&gt;</b> |
|                | <b>DYNVOL MED</b> | Dynamic Volume = Medium               | <b>PSDYNVOL MED&lt;CR&gt;</b> |
|                | <b>DYNVOL LIT</b> | Dynamic Volume = Light                | <b>PSDYNVOL LIT&lt;CR&gt;</b> |
|                | <b>DYNVOL OFF</b> | Dynamic Volume = OFF                  | <b>PSDYNVOL OFF&lt;CR&gt;</b> |
|                | DYNVOL ?          | Return PSDYNVOL Status                | PSDYNVOL ?<CR>                |

| <b>COMMAND</b> | <b>PARAMETER</b> | <b>function</b>  | <b>example</b> |
|----------------|------------------|--|----------------|
| 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 **           | ---AVR-1713/1613 can be operated from -6 to +6(44 to 56) | PSBAS 50<CR>   |
|                | BAS ?            | Return PSBAS Status                                      | PSEBAS ?<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 **           | ---AVR-1713/1613 can be operated from -6 to +6(44 to 56) | PSTRE 50<CR>   |
|                | TRE ?            | Return PSTRE Status                                      | PSTRE ?<CR>    |
|                | DRC AUTO         | Dynamic Compression direct change                        | PSDRC AUTO<CR> |
|                | DRC LOW          |  | PSDRC LOW<CR>  |
|                | DRC MID          |  | PSDRC MID<CR>  |
|                | DRC HI           |  | PSDRC HI<CR>   |
|                | DRC OFF          |  | PSDRC OFF<CR>  |
|                | DRC ?            |  | PSDRC ?<CR>    |
|                | LFE UP           | LFE UP/DOWN , direct change to **dB                      | PSLEE UP<CR>   |
|                | LFE DOWN         | ** :00 to 99 by ASCII , 00=0dB, 10=-10dB                 | PSLFE DOWN<CR> |
|                | LFE **           | ---AVR-1713/1613 can be operated from 0 to -10           | PSLFE 10<CR>   |
|                | LFE ?            | Return PSLFE Status                                      | PSLFE ? <CR>   |
|                | EFF UP           | EFFECT UP/DOWN , EFFECT LEVEL direct change to **dB      | PSEFF UP<CR>   |
|                | EFF DOWN         | ** :00 to 99 by ASCII , 00=0dB, 10=10dB                  | PSEFF DOWN<CR> |
|                | EFF **           | ---AVR-1713/1613 can be operated from 1 to 15            | PSEFF 10<CR>   |
|                | EFF ?            | Return PSEFF Status                                      | PSEFF ?<CR>    |
|                | DEL UP           | DELAY UP/DOWN , direct change to ***dB                   | PSDEL UP<CR>   |
|                | DEL DOWN         | *** :000 to 999 by ASCII , 000=0ms, 300=300ms            | PSDEL DOWN<CR> |
|                | DEL ***          | ---AVR-1713/1613 can be operated from 0 to 300           | PSDEL ***<CR>  |
|                | DEL ?            | Return PSDEL Status                                      | PSDEL ?<CR>    |

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

| COMMAND | PARAMETER  | function   | example             |
|---------|------------|--|---------------------|
| PS      | PAN ON     | PANORAMA ON/OFF  | PSPAN ON<CR>        |
|         | PAN OFF    |  | PSPAN OFF<CR>       |
|         | PAN ?      | Return PSPAN Status  | PSPAN ?<CR>         |
|         | DIM UP     | DIMENSION UP/DOWN , direct change to **dB<br>**:00 to 99 by ASCII , 00=0,<br>---AVR-1713/1613 can be operated from 0 to 6                      | PSDIM UP<CR>        |
|         | DIM DOWN   |  | PSDIM DOWN<CR>      |
|         | DIM **     |  | PSDIM **<CR>        |
|         | DIM ?      | Return PSDIM Status  | PSDIM ?<CR>         |
|         | CEN UP     | CENTER WIDTH UP/DOWN , direct change to **dB<br>**:00 to 99 by ASCII , 00=0<br>---AVR-1713/1613 can be operated from 0 to 7                    | PSCEN UP<CR>        |
|         | CEN DOWN   |  | PSCEN DOWN<CR>      |
|         | CEN **     |  | PSCEN 07<CR>        |
|         | CEN ?      | Return PSCEN Status  | PSCEN ?<CR>         |
|         | CEI UP     | CENTER IMAGE UP/DOWN , direct change to **dB<br>**:00 to 99 by ASCII , 00=0.0<br>---AVR-1713/1613 can be operated from 0.0 to 1.0              | PSCEI UP<CR>        |
|         | CEI DOWN   |  | PSCEI DOWN<CR>      |
|         | CEI **     |  | PSCEI 10<CR>        |
|         | CEI ?      | Return PSCEI Status  | OSCEI ?<CR>         |
|         | SWR ON     | SW ON/OFF  | PSSWR ON<CR>        |
|         | SWR OFF    |  | PSSWR OFF<CR>       |
|         | SWR ?      | Return PSSWR Status  | PSSWR ?<CR>         |
|         | RSZ S      | ROOM SIZE direct change  | PSRSZ S<CR>         |
|         | RSZ MS     |  | PSRSZ MS<CR>        |
|         | RSZ M      |  | PSRSZ M<CR>         |
|         | RSZ ML     |  | PSRSZ ML<CR>        |
|         | RSZ L      |  | PSRSZ L<CR>         |
|         | RSZ ?      |  | Return PSRSZ Status |
|         | DELAY UP   | AUDIO DELAY UP/DOWN , direct change to ***dB<br>***:000 to 999 by ASCII , 000=0ms, 200=200ms<br>---AVR-1713/1613 can be operated from 0 to 200 | PSDELAY UP<CR>      |
|         | DELAY DOWN |  | PSDELAY DOWN<CR>    |
|         | DELAY ***  |  | PSDELAY 200<CR>     |
|         | DELAY ?    | Return PSDELAY Status  | PSDELAY ?<CR>       |

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

| <b>COMMAND</b> | <b>PARAMETER</b> | function                     | example          |
|----------------|------------------|------------------------------|------------------|
| PS             | RSTR OFF         | AUDIO RESTORER direct change | PSRSTR OFF<CR>   |
|                | RSTR MODE1       |                              | PSRSTR MODE1<CR> |
|                | RSTR MODE2       |                              | PSRSTR MODE2<CR> |
|                | RSTR MODE3       |                              | PSRSTR MODE3<CR> |
|                | RSTR ?           | Return PSRSTR Status         | PSRSTR ?<CR>     |

| COMMAND | PARAMETER | function  | example        |
|---------|-----------|---|----------------|
| Z2      | TUNER     | ZONE2 mode set , and select source                            | Z2TUNER<CR>    |
|         |           | ---The name of PARAMETER is                                   |                |
|         | USB/IPOD  | the same as that of the time of SI COMMAND.                   | Z2USB/IPOD<CR> |
|         | USB       | Select ZONE2 source iPod/USB and USB Start Playback           | Z2USB<CR>      |
|         | IPD       | Select ZONE2 source iPod/USB and iPod Direct Start Playback   | Z2IPD<CR>      |
|         | IRP       | Select ZONE2 source NETWORK and Internet Radio Start Playback | Z2IRP<CR>      |
|         | FVP       | Select ZONE2 source NETWORK and Favorites Start Playback      | Z2FVP<CR>      |
|         | SOURCE    | ZONE2 mode cancel   | Z2SOURCE<CR>   |
|         | ON        | ZONE2 ON/OFF change   | Z2ON<CR>       |
| OFF     | Z2OFF<CR> |   |                |
|         | ?         | Return Z2 Status  | Z2?<CR>        |
| Z2MU    | ON        | ZONE2 OUTPUT MUTE ON/OFF change                               | Z2MUON<CR>     |
|         | OFF       |   | Z2MUOFF<CR>    |
|         | ?         | Return Z2MU Status  | Z2MU?<CR>      |
| Z2SLP   | OFF       | ZONE2 SLEEP TIMER setting                                     | Z2SLPOFF<CR>   |
|         | ***       | ***:001 to 120 by ASCII , 010=10min                           | Z2SLP120<CR>   |
|         | ?         | Return SLP Status   | Z2SLP?<CR>     |

Z2、Z2CV **COMMAND** : "\*" parameter uses two ASCII characters. (see page6 J) section)

**NOTE: Z2 COMMAND is valid at AVR-1913 NA model only**

| <b>COMMAND</b> | <b>PARAMETER</b>        | function                               | example                             |
|----------------|-------------------------|--|-------------------------------------|
| Z2             | <b>FAVORITE1</b>        | ZONE2 FAVORITE STATION 1-3 MODE SELECT | <b>ZMFAVORITE1&lt;CR&gt;</b>        |
|                | <b>FAVORITE2</b>        |  | <b>ZMFAVORITE2&lt;CR&gt;</b>        |
|                | <b>FAVORITE3</b>        |  | <b>ZMFAVORITE3&lt;CR&gt;</b>        |
|                | <b>FAVORITE1 MEMORY</b> | ZONE2 FAVORITE STATION 1-3 MODE MEMORY | <b>ZMFAVORITE1 MEMORY&lt;CR&gt;</b> |
|                | <b>FAVORITE2 MEMORY</b> |  | <b>ZMFAVORITE2 MEMORY&lt;CR&gt;</b> |
|                | <b>FAVORITE3 MEMORY</b> |  | <b>ZMFAVORITE3 MEMORY&lt;CR&gt;</b> |
|                | QUICK1                  | ZONE2 QUICK SELECT 1-5 MODE SELECT     | Z2QUICK1<CR>                        |
|                | QUICK2                  |  | Z2QUICK2<CR>                        |
|                | QUICK3                  |  | Z2QUICK3<CR>                        |
|                | QUICK4                  |  | Z2QUICK4<CR>                        |
|                | QUICK5                  |  | Z2QUICK5<CR>                        |
|                | QUICK1 MEMORY           | ZONE2 QUICK SELECT 1-5 MODE MEMORY     | Z2QUICK1 MEMORY<CR>                 |
|                | QUICK2 MEMORY           |  | Z2QUICK2 MEMORY<CR>                 |
|                | QUICK3 MEMORY           |  | Z2QUICK3 MEMORY<CR>                 |
|                | QUICK4 MEMORY           |  | Z2QUICK4 MEMORY<CR>                 |
|                | QUICK5 MEMORY           |  | Z2QUICK5 MEMORY<CR>                 |
|                | QUICK ?                 | Return Z2QUICK Status                  | Z2QUICK ?<CR>                       |

**NOTE: Z2 COMMAND is valid at AVR-1913 NA model only**