

MARANTZ SYSTEM control protocol

Application model : NA-7004

Application terminal: RS-232C/ Ethernet

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)

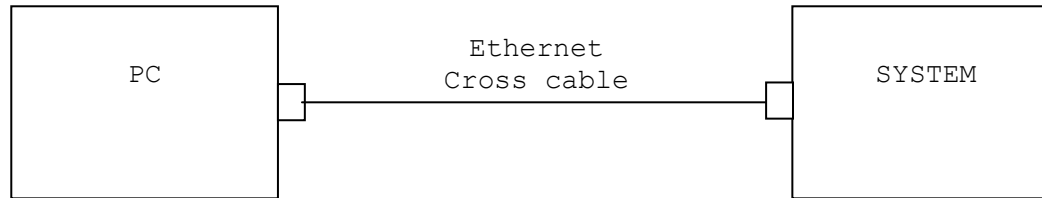
Communication format:

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)

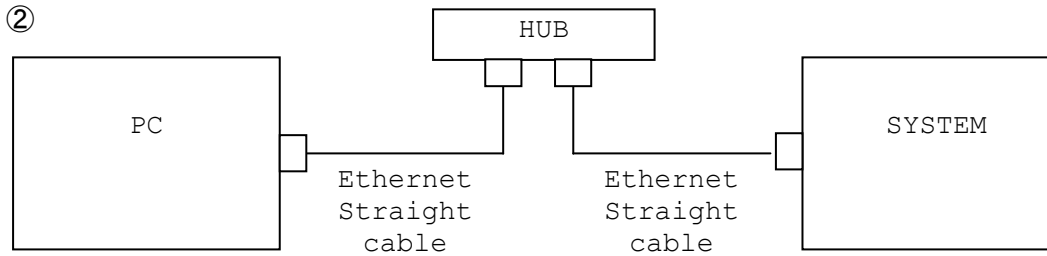
II. Ethernet

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

Example ①



Example ②



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 NA7004

>Procedure of Network Setup mode.

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

(2)Select "Network Setting > Network Connecting" .

(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 "Other > Network Standby".

(3)Set parameters described below.

"ON"---Use this setting when using the NA7004 Connected in a network.

"OFF"--- Use this setting when not using the NA7004 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 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
 MU : Mute 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.

SITUNER<CR> : Select Input source TUNER

MUON<CR> : Mute Set to On

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) 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).
- C) The **PARAMETER** (with **COMMAND** and **RESPONSE, EVENT**) of minimum level of MASTER VOLUME defines "99".
- D) 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 = +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>
 -80.5dB : MV995<CR>
 --- : MV99<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) .