Roland

AR-3000SD

Command Reference

AR-3000SD (Ver.1.02) Command Reference (03)

Copyright © 2015 **Roland Corporation**

- Contents -

Section 1 Introduction

This manual describes the procedures for using RS-232C or LAN (TCP/IP protocol) to control AR-3000SD. For information regarding the AR-3000SD itself, please refer to the AR-3000SD Owner's Manual. This manual is intended for users who are generally familiar with network issues. Refer to other available literature and documentation for more detailed information on computer terminology and the use and handling of computers.

The content herein is subject to alteration without prior notice.
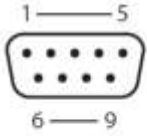
Section 2 Setup

2.1 RS-232C Setup

RS-232C is a standardized type of serial interface. The connections which are used by the AR-3000SD are discussed below.

2.1.1 Connector and Cable

Connector specifications		Cable specifications	

<div>

Connector specifications

Pin No.	Signal Name	Pin Connection
1	NC	
2	RXD	
3	TXD	
4	DTR	1 ——— 5
5	GND	
6	DSR	
7	RTS	6 ——— 9
8	CTS	
9	NC	

</div>

Cable specifications

```
AR-3000SD          Computer
1 : NC             1 :
2 : RXD      ╲    2 : RXD
3 : TXD       ╲   3 : TXD
4 : DTR           4 :
5 : GND    ——————  5 : GND
6 : DSR           6 :
7 : RTS           7 :
8 : CTS           8 :
9 : NC             9 :
```

* These are already connected in inside of the AR-3000SD. (4–6 and 7–8)
* At least three lines (RXD, TXD and GND) should be connected as shown in a figure.

2.1.2 Handshaking

If the AR-3000SD's processing speed is slower than the speed at which data is transmitted from the computer, measures must be taken to avoid data loss. Conversely, data loss will also occur if data is transmitted from the AR-3000SD faster than the computer can process it. For these reasons, the AR-3000SD uses "Xon/Xoff" handshaking. The external computer can control transmission from the AR-3000SD in the same way.

The ASCII code signal name for Xon is DC1, which is 11h.
The ASCII code signal name for Xoff is DC3, which is 13h.

2.1.3 Setup Procedure
Here is the procedure for setting up the external computer and the AR-3000SD.

1) Connections with the computer
   Use an RS-232C cable to connect the two devices. Refer to "2.1.4 Connections with the computer."
2) Turn on the power for the AR-3000SD and the computer
3) Computer settings
   Set the communication parameters. Refer to "2.1.5 Computer settings."
4) AR-3000SD settings
   Set the communication parameters. Refer to "2.1.6 AR-3000SD settings."
5) Operate the AR-3000SD
   Transmit data between the external computer and the AR-3000SD.

2.1.4 Connections with the Computer
1) Turn off the power of the AR-3000SD and the computer.
2) Use the appropriate cable to connect the RS-232C -compatible connector of the computer to the RS-232C connector located on the rear panel of the AR-3000SD. Refer to "2.1.1 Connector and Cable" for the appropriate cable to use.

2.1.5 Computer Settings

1) Communication parameters for the computer
   Communication method   start - stop system (asynchronous) full duplex
   Baud rate   4,800 / 9,600 / 14,400 / 19,200 / 31,250 / 38,400 / 57,600 / 115,200 bps
                             Select the same setting as on the AR-3000SD.
   Parity   none
   Data length   8 bits
   Stop bit   1 bit
   Code set   ASCII
   Xon/Xoff   on

2.1.6 AR-3000SD Settings

When using the AR-3000SD via RS-232C, the baud rate must be specified. Also, in order for it to be controlled via RS-232C, the AR-3000SD must not be in the MENU function (the MENU indicator must not be lit).

2.1.7 Baud Rate

If the AR-3000SD's power is turned on when a card is not inserted, the baud rate will default to 9,600 bps. If a card is then inserted, the settings will change to the settings which are contained in the card. However this will occur only for the first-inserted card, and subsequently inserted cards will be ignored. If you wish to modify the baud rate during operation, use the following procedure on the AR-3000SD to change it.

Baud Rate Settings

Set the baud rate to the desired value.
1) Press the MENU button.
2) Rotate the SELECT knob to select "7.1 Baud Rate."
3) Press the SELECT knob.
4) Rotate the SELECT knob to select the baud rate.
   Baud Rate = 4,800 / 9,600 / 14,400 / 19,200 / 31,250 / 38,400 / 57,600 / 115,200 bps
   Select the same setting as on the computer.
5) Press the SELECT knob. Rotate the SELECT knob to select "YES"
   Press the ENTER button to set the baud rate.
6) Press the MENU button.

2.1.8   Examples of control using the terminal program

This describes examples of control using a general terminal program.

Referring to the example below, make the port setting for the terminal program.

Baud rate	Communication speed set on the AR-3000SD
Data bit length	8
Parity	None
Stop bits	1
Flow control	Xon/Xoff

Making the setting to perform local echo makes it possible to use the terminal program to view commands sent to the AR-3000SD.

Prepare a card on which some phrase is recorded as the first phrase.

When cable connections and settings are correct, then inserting a card into the AR-3000SD, the terminal program displays "stxCC:1,0;" as shown below. "stx" is an ASCII-code signal name. It is a control code indicating the start of a transmission, and is 02h in hexadecimal. The method used to display control codes varies according to the terminal program. Depending on the terminal program, it might not be displayed.

    stxCC:1,0;

If this is not displayed, check the cable connections and the selected port. If text corruption occurs, it is possible that the baud rate setting is incorrect.

When a PL command (stxPL;) is sent from the computer to the AR-3000SD, the first phrase is played back. The method used to send the stx command varies according to the terminal program. In a typical terminal program, stx can be sent by holding down "Ctrl" on the keyboard and pressing the "B" key. Type in "Ctrl + B", "P", "L", ";". Type "P" and "L" as upper-case letters.

    stxPL;

When a PL command is received, the AR-3000SD returns "ack" to the computer. "ack" is an ASCII-code signal name. It is a control code indicating correct reception, and is 06h in hexadecimal.

    ack

When phrase playback ends, the AR-3000SD returns an ST command (stxST:0;) to the computer.

    stxST:0;

2.2 LAN Setup

Port Specifications

Item		Specification
Standard		Conforming to IEEE 802.3u (100 Base-TX)
Speed Settings		100M bit/s (Full duplex)
Connection Specifications	Transmission Distance	100 meters maximum
	Connector	RJ45 modular Jack

Cable Specifications

Item	Specifications
Connector Cable	UTP cable Category 5 or higher -Use crossover cable between PC and AR -Use straight cable between AR and hub 　(may differ according to hub specifications) * Use special/separate cable.

Note: **If traffic on the network to which the AR-3000SD is connected is excessively high, the AR-3000SD might be unable to operate correctly. Take corrective action as described below as required.**

- Separate the network for AR-3000SD control and the network for other equipment.
- Reduce broadcast packet traffic.
- Reduce ping commands and other such packet traffic addressed to the AR-3000SD.

2.2.1 AR-3000SD Settings

This setting is made using "10.1 Net. Address" on MENU on the AR-3000SD.

Static:
This makes static network settings. You use this when operating the AR-3000SD at a fixed IP address.

DHCP Client:
This obtains the network settings automatically from the router or other DHCP server. Any values set for IP, GATE or MASK are ignored. You use this in cases such as when connecting the AR-3000SD and a Wi-Fi router using a LAN cable and accessing the device from a web browser on a tablet computer.

DHCP Server:
This makes the AR-3000SD function as a DHCP server. The IP address of the AR-3000SD is set to "192.168.10.1". Any values set for IP, GATE or MASK are ignored. You use this in cases such as when connecting the AR-3000SD and a computer using a LAN cable and accessing the device from a web browser on the computer.

You can verify the IP address of the AR-3000SD by going to MENU and selecting "12.2 Network Info".

Use the following procedure to set up the control PC and AR-3000SD.

1) Confirm that the AR-3000SD's power is turned off.
2) Connect a UTP cable to the AR-3000SD (insert the cable firmly until the connector makes an audible "click" sound).
3) Connect the other end of the UTP cable to the hub or other LAN device, or directly to the control PC.
4) Turn on the power to the AR-3000SD.
5) Start operations to the AR-3000SD.
　　Control PC -> Start of data transmission to AR-3000SD

2.2.2 Network Settings

What is an IP Address?
An IP address is a number that represents a 32-bit address used to identify a specific host on a network according to the TCP/IP protocol. Accordingly, each IP address on the network must have its own unique, fixed address.

What is the Subnet Mask?
The subnet mask is used to "mask" part of the IP address so as to enable the TCP/IP protocol to distinguish between the network ID and the host ID.

Example)
IP Address	111.18.10.2
Subnet Mask	255.255.240.0
Network ID	111.18.0
Host ID	10.2

What is the Gateway?
A gateway acts to convert protocols and relay data between two or more connected networks.
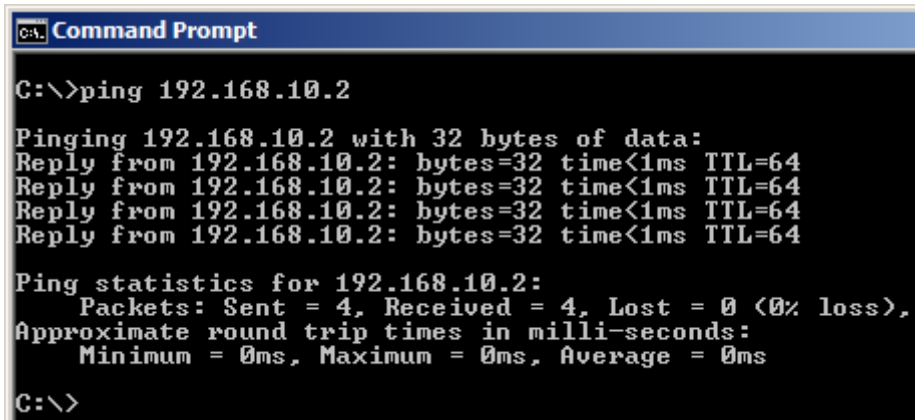
2.2.3 Verifying network connections

This describes how to use ping commands to verify the network connection between the computer and the AR unit.

Go to "Start" - "All Programs" - "Accessories" - "Command Prompt". If the IP address set for the AR-3000SD is 192.168.10.2, type in the following.

```
ping 192.168.10.2
```

If the network connection has been made correctly, a response like the following is returned, and a result of "0% loss" is obtained.
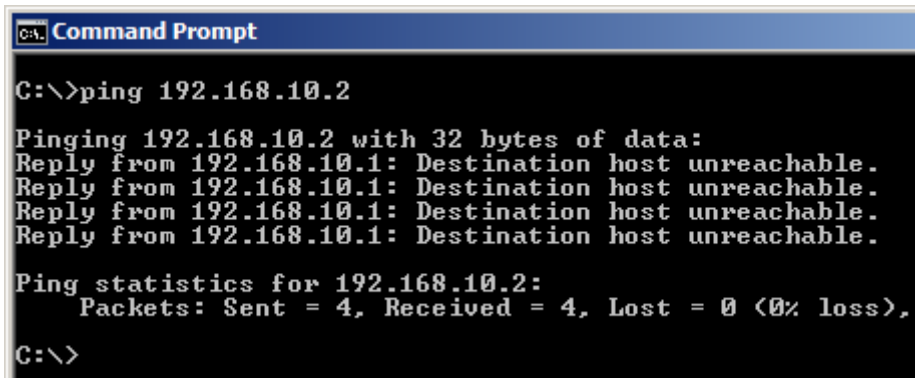
```
Command Prompt

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:
Reply from 192.168.10.2: bytes=32 time<1ms TTL=64
Reply from 192.168.10.2: bytes=32 time<1ms TTL=64
Reply from 192.168.10.2: bytes=32 time<1ms TTL=64
Reply from 192.168.10.2: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

If the network connection has not been made correctly, then a response like the following is returned.

```
Command Prompt

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

C:\>
```

If the results of the ping command indicate that the network connection has not been made correctly, check the following.

  ・ Is the power to the AR-3000SD turned on?
  ・ Is the power to the hub turned on?
  ・ Is the UTP cable connection without any problems?
  ・ Is the type of UTP cable correct (straight or crossover)?
  ・ Is there a conflict with the IP address assigned to another device?
  ・ Are the subnet mask and gateway settings correct?

If a proxy server is on the LAN, then depending on the proxy settings, establishing a connection might not be possible unless further steps are performed. To establish a connection, try one of the following methods.

1) Use the Internet option to make the settings for connecting directly to the Internet and not via the proxy server.

2) Use the Internet option to register the IP address assigned to the AR-3000SD as not to use the proxy.

3) Contact your network administrator to register the IP address of the AR-3000SD in the DNS database.

2.2.4 Firewall settings

If a firewall or other security software is in use, establishing correct communication between the computer and the AR unit might be difficult. In such cases, refer to the following examples and specify the client program and port numbers as exceptions.

Service	Port number
TELNET	23
FTP (control)	21
FTP (data transmission)	20
HTTP	80

2.3 Telnet Server Functions

The AR-3000SD supports Telnet server functions. Logging in from a PC that features Telnet client functionality permits remote operation of AR-3000SD units.

> **Note:** **The AR-3000SD does not support Telnet client functions. You cannot log in on another Telnet server from the AR-3000SD.**

2.3.1 Telnet Server Function Operating Specifications

Telnet Function Specifications

Item	Specification
Control Mode	Character mode (character-at-a-time mode)
Echo Control	Remote echo
Termination Key	Processing reception CR, LF, or CR-LF Processing transmission CR-LF
Support Options	Echo

* If a PC that does not support the above options is used, characters that are input may appear twice in the display.

2.3.2 Non-Telnet Functions

1) Limitations on Remote Operation
   - Allowable number of logins: one control PC may log into a single AR-3000SD at any one time. Because of this, no login name is entered when logging on.

2) Password Functions
   - Passwords can be set with the AR-3000SD (from five to eight characters).
   - The default value is set to "no password." If a password has been set, the "password:" prompt appears when the user logs in; log in with the set password.

2.3.3 Login Instructions/Example of Command Input

Before Logging In
Connecting to the AR-3000SD via Telnet requires that the IP address be set and other settings for the AR-3000SD be made.

Note: **Changes in the IP address are reflected the next time the AR-3000SD's power is turned on. For this reason, even though the IP address has been changed, the IP address shown in the LCD screen will differ from the actual address until the power is turned off, then on again.**

Here is a case outlining logging in and entering commands, with an example of logging on using Telnet from a command prompt connection with the conditions shown below.
For more detailed information about the actual commands, refer to Section 3 on.

1) When using Windows, select [Start]-[Run]; a text box opens.
　　(a) Enter the Telnet IP address.
　　　　When the AR-3000SD's IP address is 192.168.10.2

Telnet 192.168.10.2

2) Start up the Telnet software included with Windows.
　　(a) The login screen appears.
　　(b) If a password has been set, the "password:" prompt appears at login.
　　(c) After entering the password, the "AR>" prompt appears in the display.
　　　　Enter the "pl" command to play back Phrase #1. If there is a Phrase #1, then playback begins and OK appears in the screen.
　　(d) Enter the exit command to end the session.
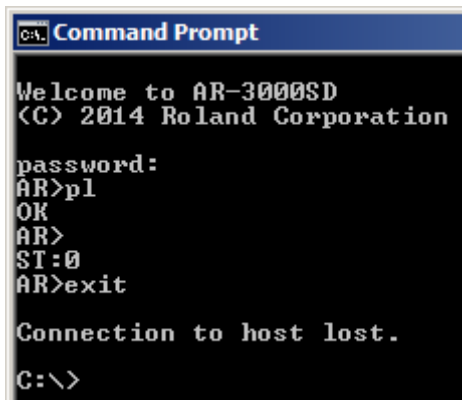
```
Command Prompt

Welcome to AR-3000SD
(C) 2014 Roland Corporation

password:
AR>pl
OK
AR>
ST:0
AR>exit

Connection to host lost.

C:\>
```

- When entering text, you can use the Backspace key to delete the immediately preceding character.
- Both uppercase and lowercase alphabetical characters may be used in commands.

* If unable to log in, check the following.
- In Windows, select [Start]-[Run], then enter the following text in the text box and execute.

ping 192.168.10.2

If OK is returned from the AR-3000SD, check the application settings.
If the AR-3000SD does not return an OK, check the following.
- Has the power to the AR-3000SD been cut off?
- Has the power to the hub been cut?
- Poorly connected UTP cables
- Is the wrong type of UTP cable (straight, crossover) being used?
- Incorrect subnet mask setting
- Multiple IP address settings
- Incorrect gateway address

If the above steps do not result in a good connection, turn the AR-3000SD's power off, then on again.

2.4 FTP Server Functions

The AR-3000SD supports FTP server functions. You can use this file transfer function to read and write data from a PC that features FTP client functionality.

Note: **The AR-3000SD does not support FTP client functions.**
You cannot log into another FTP server from the AR-3000SD.

2.4.1 FTP Server Function Operating Specifications

FTP Function Specifications

FTP Command	Function
ABOR	Cancel data transmission
TYPE	Switch the transmission mode (ASCII, BINARY)
CDUP	Change to parent directory
CWD	Change the directory
PWD	Show the current directory
DELE	Delete file
PASS	Enter password
LOGOUT	User logout
SYST	System type
LIST	List contents of current directory
NLST	Show list of file names in current directory
RETR	Retrieve a copy of the file from the server file system and save it to client file system (GET).
STOR	Transfer a copy of the specified file from the client to the server (PUT).
STOU	Specify name of file and transfer it to the server.

2.4.2 Non-FTP Functions

1) Timeout during FTP Transfer
   If no access is made for a set time (60 seconds) during FTP transfer, the AR-3000SD forcibly ends the FTP connection.

2) Limitations of the FTP Connection
   - Allowable number of FTP connections: one FTP client may be connected to a single AR-3000SD at one time.

3) Password Functions
   - Passwords can be set with the AR-3000SD (from 5 to 8 characters).
   - The default value is set to "no password."
     Since not setting any password presents a security issue, it is recommended that the AR-3000SD not be connected in a manner that permits direct access via the Internet in this case.

2.4.3 Login Instructions

<u>Before Logging In</u>
Connecting to the AR-3000SD via FTP requires that the IP address be set and other settings for the AR-3000SD be made.

> **Note:** **The IP address, subnet mask, and gateway settings become effective the next time the AR-3000SD's power is turned on; thus once the IP address is changed, the IP address appearing in the LCD screen differs from the actual IP address until the power is turned off and then on again.**

Here is an example of an FTP connection with the conditions as shown below.

Conditions
Web browser:	Internet Explorer
AR-3000SD IP address:	192.168.10.2
Login name:	anonymous (Login name is fixed)
Password:	None (initial setting) or ABCDEFGH
Port No.:	20 and 21

1) Enter the IP address as the URL in the browser, as shown below.
   (a) When the AR-3000SD is set to "no password"
   Enter as ftp://[IP address].

   ## ftp://192.168.10.2
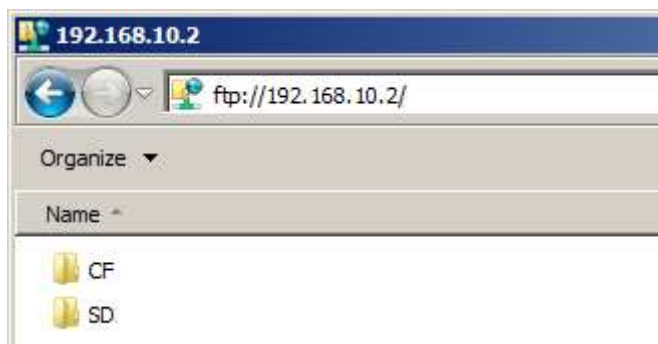
   (b) When "ABCDEFGH" is set as the password
   Enter as ftp://anonymous:[password]@[IP address].

   ## ftp://anonymous:ABCDEFGH@192.168.10.2

2) The AR's file list appears in the web browser.
   Initially, the transfer mode is set to BINARY.

3) Drag and drop to transfer files.

* If unable to connect, check the following.

- In Windows, select [Start]-[Run], then enter the following text in the text box and execute.

```
ping 192.168.10.2
```

If OK is returned from the AR-3000 SD, check the application settings.

If the AR-3000SD does not return OK, check the following.
- Has the power to the AR-3000SD been cut off?
- Has the power to the hub been cut?
- Poorly connected UTP cables
- Is the wrong type of UTP cable (straight, crossover) being used?
- Incorrect subnet mask setting
- Multiple IP address settings
- Incorrect gateway address
- If attempting to use FTP with another application, quit that other application.

- When a proxy server is connected to the LAN, the proxy settings may be preventing the connection. Try the following procedure to establish the connection.
  1. In your browser, select [Edit]-[Preferences...]-[Advanced]-[Proxies]-[Direct connection to the Internet].
  2. In your browser, select [Edit]-[Preferences...]-[Advanced]-[Proxies]-[Manual proxy configuration]-[Configure...], then in the "No Proxy for:" box headed by "You may provide a list of domains that Netscape should access directly, rather than via the proxy:", enter the AR's IP address.
  3. Contact the LAN administrator to add the AR's IP address to the DNS registry.

  If the above steps do not result in a good connection, turn the AR-3000SD's power off, then on again.

If other programs are being used, try connecting again after referring to the user's guide for each of the applications.

2.5 WEB Server Functions (Browser Control)

The AR-3000SD has an internal web server. The web server in the AR-3000SD can be accessed by specifying the AR-3000SD's IP address in a web browser on a computer or tablet device.

You can verify the IP address of the AR-3000SD by going to MENU and selecting "12.2 Network Info".

2.5.1 Top Page

This is provided with buttons for navigating between pages.
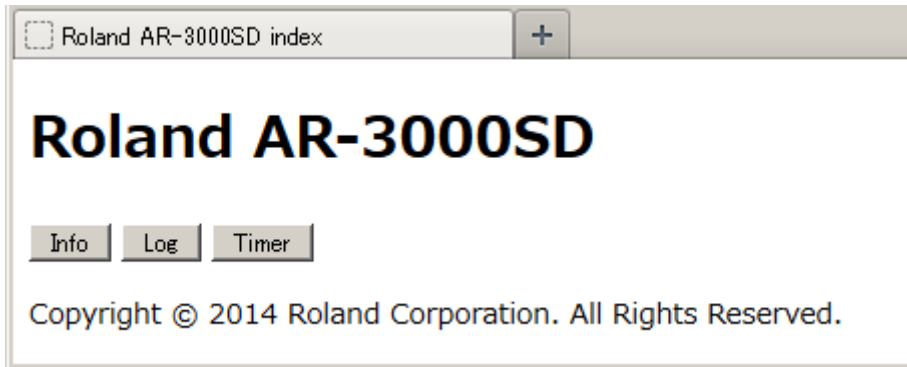
2.5.2 Info Page
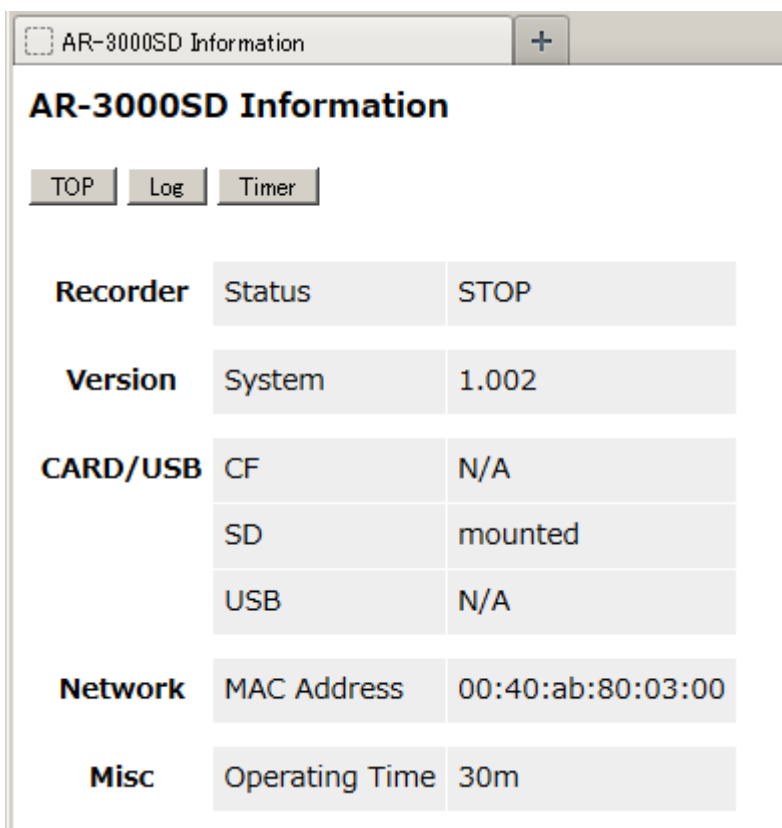
Recorder:	This indicates the current status of recording or playback.
Version:	This displays the version number of the AR-3000SD.
CARD/USB:	This indicates the status of any mounted CF or SD card or USB flash drive.
Network:	This displays the AR-3000SD's MAC address.
Misc:	This displays the amount of time elapsed since starting the AR-3000SD.

2.5.2 Log Page

This displays the history of phrase playback and stoppage.
This page is reloaded every 2 seconds.
Clicking the "Clear Log" button clears the history log.

```
Log                                    +

 TOP    Info    Timer

This page is reloaded every 2 seconds.

 Clear Log
_____

May 26 13:36:08: Play Phrase B0001.
May 26 13:36:12: Stop Phrase B0001.
```
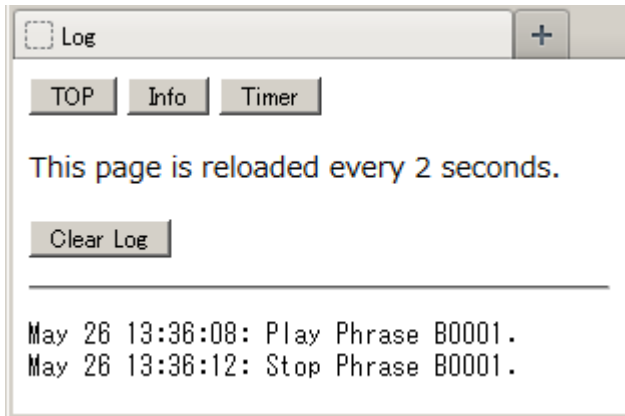
2.5.3 Programmable Timer Pages

The programmable timer can be used to perform such operations as starting and stopping phrase playback at preset times. Programmable timer settings are read in from the system card.

> **Note:** **Operating the programmable timer requires setting the current time on the AR-3000SD (Owner's Manual p. 11, "Setting the Date and Time").**

●Single-day Schedule (14 patterns)

Time	Phrase No.	Controlling
9:00	A0001	Play
12:00	A0002	Play
18:00	A0003	Play
23:50		Time Adjustment

A

Time	Phrase No.	Controlling
9:00	A0001	Play
12:00	A0002	Play
23:50		Time Adjustment

B

Time	Phrase No.	Controlling
9:00	A0500	Play
18:00	A0500	Stop
23:50		Time Adjustment

N

50 events/day × 14 patterns

●Weekly Schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
B	A	A	A	A	A	B

●Yearly Schedule

April, 2014

1	2	3	4	5	6	7	....	29	30
Tue	Wed	Thu	Fri	Sat	Sun	Mon	....	Tue	Wed
			N				....		

The programmable timer can be used to set the following operations (events) to occur at any specified time.

- Phrase playback
- Phrase recording
- Stopping phrase playback or recording
- Adjusting phrase volume level
- BUSY OUT signal output
- CONTROL OUT signal output
- Time adjustment using an NTP time server
- AR-3000SD control commands

A single-day schedule can combine up to 50 events. You can create up to 14 schedule patterns.

You can save a different schedule for each day of the week (weekly schedule).

You can replace the schedule for a specific desired date with a special schedule (yearly schedule of up to 200 days).

> **Note:** **Schedule settings cannot be made on the AR-3000SD itself.**
> **Use a web browser or the ARE-3000 computer program.**

> **Accuracy of the internal clock:**
> **The AR-3000SD is equipped with an internal clock for programmable-timer operation, but use jointly with an NTP time server is assumed. Accordingly, the accuracy of the time kept by the internal clock when using the AR-3000SD alone is not assured.**

Main Setup

Programmable Timer: Main Setup

Main Setup ▼

Mode: ○ Off ◉ Normal ○ Every Day
Every Day's Schedule: No Schedule ▼
Only Today's Schedule: No Schedule ▼

Apply

Operation according to a weekly schedule or yearly schedule
 From the main pull-down menu, select "Main Setup."
 The "Main Setup" screen appears.
 For "Mode:", select "Normal."
 Click "Apply."
 The programmable timer operates according to the weekly schedule and yearly schedule.

Operation according to the same schedule every day
 From the main pull-down menu, select "Main Setup."
 The "Main Setup" screen appears.
 For "Mode:", select "Every Day."
 From the "Every Day's Schedule:" pull-down menu, select Schedule.
 Click "Apply."
 Every day, the programmable timer operates according to the schedule set in "Every Day's Schedule."

Operation that today only is different from the usual schedule
 From the main pull-down menu, select "Main Setup."
 The "Main Setup" screen appears.
 For "Mode:", select "Normal" or "Every Day."
 From the pull-down menu for "Only Today's Schedule:", select Schedule.
 Click "Apply."
 For today only, the programmable timer operates according to the schedule set in "Only Today's Schedule."

Stopping the programmable timer
 From the main pull-down menu, select "Main Setup."
 The "Main Setup" screen appears.
 For "Mode:", select "Off."
 Click "Apply."
 The programmable timer stops.
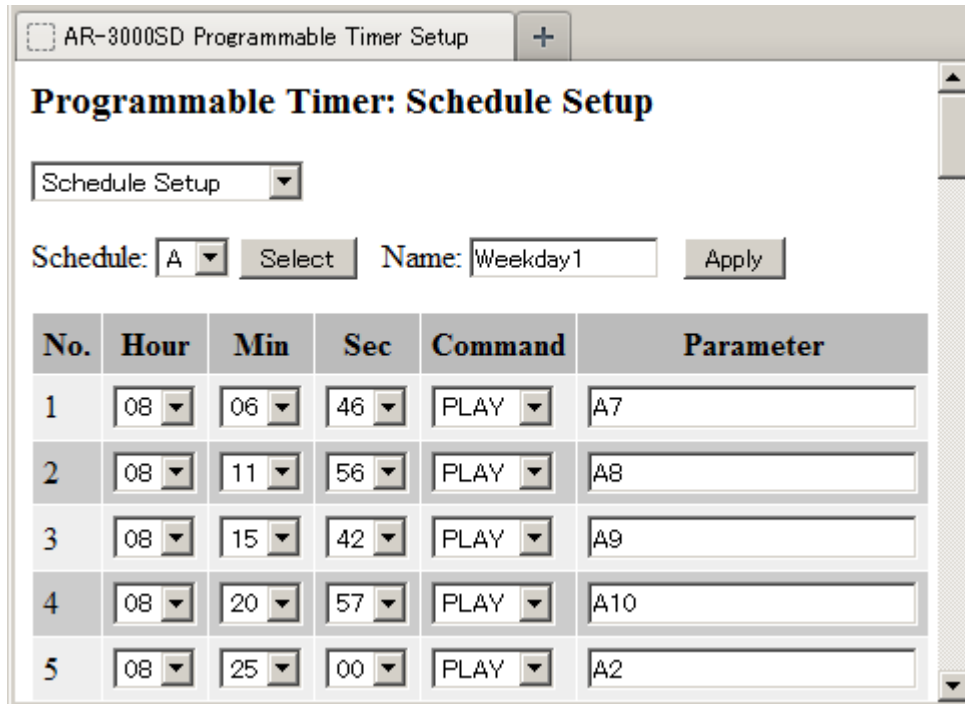
Schedule Setup

Programmable Timer: Schedule Setup

AR-3000SD Programmable Timer Setup   +

Schedule Setup ▼

Schedule: A ▼ Select   Name: Weekday1   Apply

No.	Hour	Min	Sec	Command	Parameter
1	08 ▼	06 ▼	46 ▼	PLAY ▼	A7
2	08 ▼	11 ▼	56 ▼	PLAY ▼	A8
3	08 ▼	15 ▼	42 ▼	PLAY ▼	A9
4	08 ▼	20 ▼	57 ▼	PLAY ▼	A10
5	08 ▼	25 ▼	00 ▼	PLAY ▼	A2

This sets the single-day schedule assigned to the respective day of the week or date.

From the main pull-down menu, select "Schedule Setup."
The "Schedule Setup" screen appears.
From the "Schedule:" pull-down menu, choose a schedule (A through N).
Click "Select".
The contents of the selected schedule are displayed.

About operations and parameters

Command	Parameter	Function
NOP	None	Nothing is done (unconfigured schedule)
PLAY	Phrase number (A0001 --- D1000)	The phrase is played.
REC	Phrase number (A0001 --- D1000)	The phrase is recorded; if a phrase number is absent, recording is automatically made at an empty phrase.
STOP	None	Phrase playback or recording stopped
VOL	Phrase volume level (10 --- 100)	Playback volume level
BUSY	ON (1)/OFF (0)	BUSY OUT signal output on/off
CONT	ON (1)/OFF (0)	CONTROL OUT signal output on/off
NTP	None	Time synchronization with an NTP server
USR	Control command (TELNET format)	Control commands

Assigning a name
　　Type in a name for the schedule in the "Name:" text box.
　　(Input is limited to single-byte alphanumeric characters.)
　　Click "Apply". The name is changed.

Adding a schedule
　　At the line for an unconfigured schedule, select "Hour", "Min" and "Sec" for the time at which the operation is to be executed.
　　Select the "Command" pull-down menu.
　　In the "Parameter" text box, enter the required parameters.

Click "Apply."
The schedule is added.

Changing the time for a schedule
At the line for the schedule whose time you want to change, select "Hour", "Min" and "Sec" for the new time setting.
Click "Apply."
The schedule's start time is changed.

Deleting a schedule
At the line for the schedule you want to delete, go to the "Command" pull-down menu and choose "NOP."
Click "Apply."
The schedule is deleted.

Weekly Setup

This assigns a schedule to each day of the week.

From the main pull-down menu, select "Weekly Setup."
The "Weekly Setup" screen appears.

For each day of the week, from the "Schedule" pull-down menu, choose a schedule (A through N).
If you don't want to set a schedule, choose "No Schedule."
Click "Apply."
The schedules are assigned.

Yearly Setup
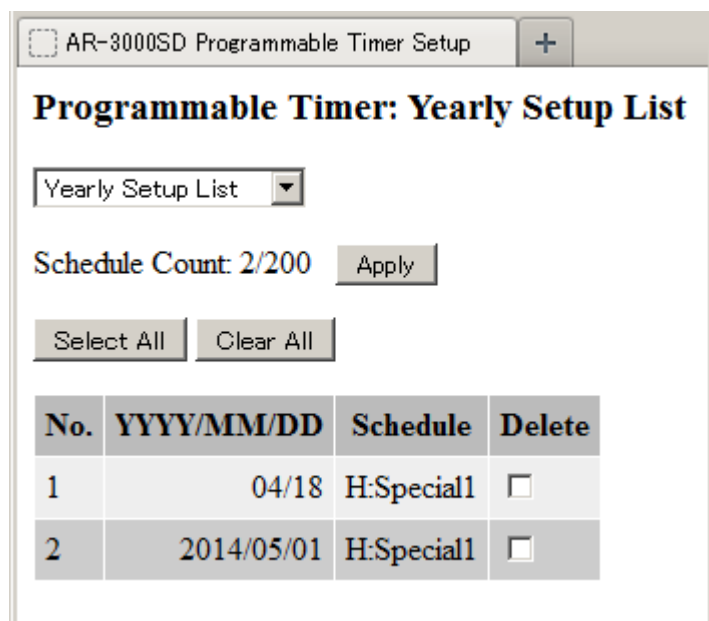
This assigns a single-day schedule set using "Set a Single-day Schedule" to a desired date.

From the main pull-down menu, select "Yearly Setup."
The "Yearly Setup" screen appears.

Use Year [<<] [>>] and Month [<] [>] to select the year and month to set.
From the "Schedule" pull-down menu for the day you want to set, choose a schedule (A through N).
If you want to assign a schedule that has been assigned to a weekly schedule, choose "Weekly Schedule."
If you want to make the assignment for this year only, select the "Only This Year" check box.
Click "Apply."
The schedule is assigned.

Yearly Setup List

Checking the yearly schedule
    From the main pull-down menu, select "Yearly Setup List."
    The "Yearly Setup List" screen appears.
    If "month/day" only are displayed in the date column (YYYY/MM/DD), the schedule is executed on that day every year.
    If "year/month/day" are displayed in the date column (YYYY/MM/DD), the schedule is executed that year only.

Deleting a yearly schedule
    From the main pull-down menu, select "Yearly Setup List."
    The "Yearly Setup List" screen appears.
    Select the "Delete" check box in the line of the date (YYYY/MM/DD) you want to delete.
    Clicking "Select All" selects "Delete" for all lists.
    Clicking "Clear All" clears the "Delete" selection for all lists.
    Click "Apply."
    Schedule assignments whose "Delete" check boxes have been selected are deleted.

Section 3 Overview of Commands

The AR-3000SD and the control PC communicate by means of commands. There are a number of different types of commands. The commands used to control the AR-3000SD vary according to the intended purpose.

3.1 Summary of Commands (RS-232C)

Commands consist of STX (02H) + two uppercase characters.
However, the Type 0 commands listed later are exceptions to this.

Depending on the command, four types of communication protocol are used between the computer and the AR-3000SD. As also explained in chapter 4, the ACK referred to in this document is ASCII code 06H (ACK), and the ER command is a command that transmits/receives an error.

3.2 Summary of Commands (Telnet)

Commands are basically formed as strings of ASCII code consisting of two alphabetic characters followed by a colon (":"), a parameter (a numerical value), and a comma (",").
The two alphabetic characters represent the type of command. However, some commands may have more than one forms (refer to "3.1.2 About Command Formats").
Either uppercase or lowercase characters may be used in commands.

> Example: pl   PL
> Example: pe   PE

3.3 Communication Protocol

Depending on the command, four types of communication protocol are used between the computer and the AR-3000SD.

1) When telling the AR-3000SD to perform an operation or make a setting.
   This is done using the "4.2.1 Control" and "4.2.3 Setting commands" explained in Section 4.
   Commands use the following procedure.

```
                        a. command
     COMPUTER    ─────────────────────────►    AR-3000SD
                    b. ack/OK or ER command
                 ◄─────────────────────────
```
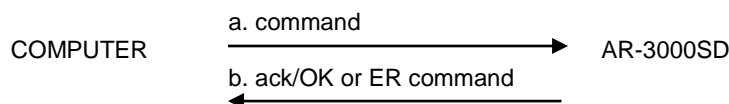
   a. The command is sent from the computer to the AR-3000SD.
   b. If the command is received correctly, the AR-3000SD will transmit an ack/OK command. If not, it will transmit an ER command.

2) To verify the settings of the AR-3000SD
This is done using the 4.2.4 Request command explained in Section 4. The command to check the setting status of the AR-3000SD uses the following procedure.

```
                        a. command
     COMPUTER    ─────────────────────────►    AR-3000SD
                    b. command or ER command
                 ◄─────────────────────────
                    c. ack/OK or ER command
                 ─────────────────────────►
```
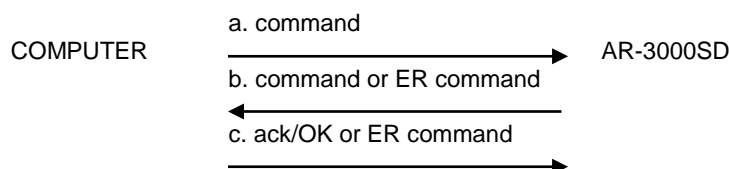
   a. The command is sent from the computer to the AR-3000SD.
   b. If the command was received correctly, the AR-3000SD will transmit its settings as the Setting output command. If the command was received incorrectly, the AR-3000SD will transmit an ER command.
   c. If the output from the AR-3000SD is received correctly, send an ack/OK command. This OK may be omitted, and is not absolutely necessary. If not correctly, an ER command "ER:0" can be sent to the AR-3000SD. The AR-3000SD will re-transmit the Setting output command that was

output instep "b". This command may also be omitted, and is not absolutely necessary. You may instead re-do the sequence from step "a".

3) Commands originating automatically from the AR-3000SD
Some commands are transmitted automatically from the AR-3000SD. The two commands CC (card insertion status output) and %% (completion status output when a card operation takes place) fall in this category, and use the following procedure.

<div align="center">
a. command
COMPUTER ⟶ AR-3000SD
</div>
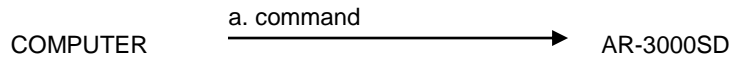
a. The AR-3000SD will automatically transmit the command.
There is no need to return an ack/OK, etc.

4) Commands accompanied by confirmation
The 4.2.2 Edit command explained in Section 4 is of this type. To prevent accidental erasure of data, edit commands are executed after entering Delete mode. Commands use the following procedure.

<div align="center">
a. command
COMPUTER ⟶ AR-3000SD
b. ack/OK or ER command ⟵
c. Edit command ⟶
d. Edit command (same as step "c.") ⟵
e. ack/OK or ER command ⟶
</div>
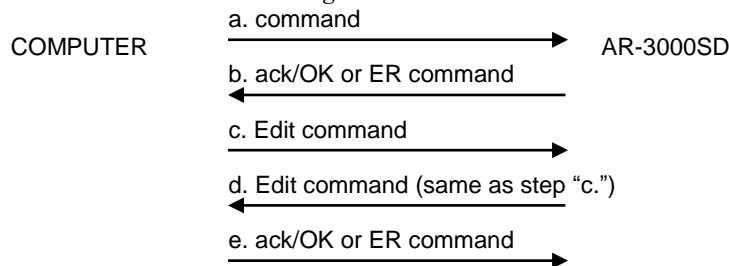
a. Transmit the DM command. The AR-3000SD will enter Delete mode.
b. If the DM command is received correctly, an ack/OK will be returned. If there is a command error, the ER command will be returned and the AR-3000SD will automatically exit Delete mode.
c. If no error has occurred, transmit the command you wish to execute.
d. To confirm, the AR-3000SD will send back the command that it received in step "c".
e. If the command is correct, send an ack/OK. This will cause the command to be executed. Then, after receiving the command, the AR-3000SD will automatically exit Delete mode. If the command is an error, you can send an ER command "ER:1". The command will be canceled, and the AR-3000SD will exit Delete mode.

3.4 Command Format

Commands (control signals) have several formats.
Type 0: Those consisting only of a control code.
semicolon ';' etc. is not attached. These consist only of a control code.
Example)   ack
Type 1: Commands with no parameters
Example)   ST
Type 2: Commands with parameters.
Command: parameter, parameter . . .
Command and parameter are separated by a colon ':'
Parameter and parameter are separated by a comma ','

3.5 About Input Parameters

1) Generally, parameters use decimal notation, and are variable length.
Example)   DC:10   DC:5
Example)   MP:A1,30   MP:A20,255
2) Characters in a card name etc. are enclosed in double quotation marks (").
Example)   CV:0,"ABCDEFGH",0
3) The phrase and the card slot are specified together.
Example)   PA:A1   (plays back phrase 1 of card A)
-        A01, A001 or A0001 is the same as A1.

3.6 About Output Parameters

1) Generally, parameters use decimal notation, and are variable length. But phrase name and time are fixed length.
      Example)   phrase name (A1 – A999, B1 – B999): A001, A020, A300, _.
      Example)   phrase name (A1000, B1000): A1000, B1000
      Example)   Time: 00H00M06S14F7S, 05M40S, 00S04F, 30S0 _.

3.7 Precautions

1) After you make settings, erase, or copy, we recommend that you call up the AR-3000SD internal memory data and check the contents.

2) While the computer and the AR-3000SD are communicating, please avoid the following actions, which could result in destruction of the data in the card.
      - Inserting or removing the memory card.
      - Moving the protect switch of the card.
      - Disconnecting the UTP cable. ...etc.

Section 4 Details of each Command

4.1 Commands Transmitted from the External Device (Computer) to the AR-3000SD

The following 5 types of command are transmitted from the external device to the AR-3000SD. "External" in these explanations refers to the computer. "AR" refers to the AR-3000SD.

1) Control (execute) commands
   These command signals cause the AR-3000SD to operate; e.g., playback or record.
   The player functions use mostly these commands.

2) Editing commands
   To prevent accidental erasure of data, edit commands are executed after entering Delete mode.
   Commands are executed using the following procedure.

   1. External to AR
      The DM command is sent, and the AR-3000SD enters Delete mode.
   2. AR to External
      When the command is received correctly, an ack/OK is returned. If the command is not correct, an error code is returned, and Delete mode is automatically exited.
      * When no command is received for two minutes, the Delete mode is automatically exited.
   3. External to AR
      If no error has occurred, transmit the command to be executed.
   4. AR to External
      The command transmitted in step 3 will be re-transmitted for confirmation.
   5. External to AR
      If the command is correct, transmit an ack/OK command. The command will be executed, and Delete mode will be exited automatically. If the command is an error, transmit an ER command "ER:1". Delete mode will be exited automatically.

   Commands valid when in Delete mode (External to AR)

   > PD: Delete Phrase
   > PC: Copy Phrase
   > FM: Format Card
   > CD: Delete Card
   > CP: Copy Card
   > SP: System Copy
   > LS: Recorded phrase protect mode
   > LW: Recorded phrase protect mode

   - In Delete mode, when a command other than an Edit command is received by the AR-3000SD, it will automatically exit Delete mode, and execute that command. If the AR-3000SD receives an Edit command when not in Delete mode, it will transmit an ER command, and ignore the Edit command that was received.

3) Setting commands
   These commands are used to set AR-3000SD parameters from the external device.

4) Request commands
   This command causes the AR-3000SD to output the status of its current settings. When a Request command is transmitted to the AR-3000SD, the AR-3000SD will transmit the requested contents as the Setting output command. In this case, an OK will not be returned. However for the AC and AQ commands, an OK will be output. If the command was not correct, an ER command will be returned.

5) Reply commands
   Reply commands are necessary for communication control, for example to notify that a command was received correctly.

4.2 Details of Commands Sent from the External Device (Computer) to the AR-3000SD

4.2.1 Control Commands

Playback Commands

PA   Specifying the Playback Phrase

Function: Specifying the playback phrase
Syntax: **stxPA:a,a, ... ,a;**   (RS-232C, Command format: Type 2)
Syntax: **PA:a,a, ... ,a**   (Telnet, Command format: Type 2)

a: Phrase number

Example)   **PA:A1,A3,B5**
Specify A0001 and A0003 and B0005 as the playback phrases.
The specified phrases are consecutively played back from the left.

Note: A maximum of 100 phrases can be specified in one line.
Be sure that the phrase numbers are registered (i.e., for which data exists).

PL   Playback Start

Function1: Playback start (without Specifying the Playback Phrase)

Syntax: **stxPL;**   (RS-232C, Command format: Type 1)
Syntax: **PL**   (Telnet, Command format: Type 1)

Note: If the playback phrase has not been specified, the default value (A0001) will be used. The phrases specified by the PA command will be played back consecutively.

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by the PA command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently.

Example) **PA:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with the PA command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

Function2: Playback start (with Specifying the Playback Phrase)

Syntax: **stxPL:a,a, ... ,a;**   (RS-232C, Command format: Type 2)
Syntax: **PL:a,a, ... ,a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: The phrases specified by this command will be played back consecutively.

Note: A maximum of 100 phrases can be specified in one line.
            Be sure that the phrase numbers are registered (i.e., for which data exists).

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by this command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently.

Example) **PL:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with this command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

* The function 2 of PL command was added from the AR-3000SD system version 1.02.

PLB   Playback Start (During Phrase Play Busy Out On)

Function1: Playback Start (without specifying the playback phrase, during phrase play busy out on)
Syntax: **stxPLB;**   (RS-232C, Command format: Type 1)
Syntax: **PLB**   (Telnet, Command format: Type 1)

Note: If the playback phrase has not been specified, the default value (A0001) will be used. The phrases specified by the PA command will be played back consecutively. When multiple phrases are played back in sequence, Busy Out signals are also output during intervals between phrases.

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by the PA command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently. Compatible with mono phrases. Not compatible with stereo phrases. For more details, refer to the AR-3000SD Owner's Manual.

Example)   **PA:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with the PA command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

Function2: Playback Start (with specifying the playback phrase, during phrase play busy out on)
Syntax: **stxPLB:a,a, ... ,a;**   (RS-232C, Command format: Type 2)
Syntax: **PLB:a,a, ... ,a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: The phrases specified by this command will be played back consecutively. When multiple phrases are played back in sequence, Busy Out signals are also output during intervals between phrases.

Note: A maximum of 100 phrases can be specified in one line.
              Be sure that the phrase numbers are registered (i.e., for which data exists).

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by this command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently. Compatible with mono phrases. Not compatible with stereo phrases. For more details, refer to the AR-3000SD Owner's Manual.

Example)   **PLB:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with this command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

* The function 2 of PLB command was added from the AR-3000SD system version 1.02.

PLL   Playback Start - Left Channel (Dual Mono Mode)

Function: Playback Start of the left channel
Syntax: **stxPLL;**   (RS-232C, Command format: Type 1)
Syntax: **PLL**   (Telnet, Command format: Type 1)

Example)   **PA:A0001,A0003,A0007,A0006,A0010**
When Dual Mono Mode is on and the above phrases are specified with the PA command, phrases A0001, A0003 and A0007 are played back in sequence through the left channel.

Note: Odd-numbered phrases specified with the PA command are played back in sequence through the left channel. If no playback phrase is specified with the PA command, phrase A0001 is assigned and played back. (* If no phrases are available, the ER command is output.)
Compatible with mono phrases. Not compatible with stereo phrases.
For more details, refer to the AR-3000SD Owner's Manual.

Caution: **If the AR-3000SD is not set to Dual Mono Mode, the ER command is output.**

PLR   Playback Start - Right Channel (Dual Mono Mode)

Function: Playback start of the right channel
Syntax: **stxPLR;**   (RS-232C, Command format: Type 1)
Syntax: **PLR**   (Telnet, Command format: Type 1)

Example)   **PA:A0001,A0003,A0007,A0006,A0010**
When Dual Mono Mode is on and the above phrases are specified with the PA command, phrases A0006 and A0010 are played back in sequence through the right channel.

Note: Even-numbered phrases specified with the PA command are played back in sequence through the right channel. If no playback phrase is specified with the PA command, phrase A0001 is assigned and played back. (* If no phrases are available, the ER command is output.)
Compatible with mono phrases. Not compatible with stereo phrases.
For more details, refer to the AR-3000SD Owner's Manual.

Caution   **If the AR-3000SD is not set to Dual Mono Mode, the ER command is output.**

FP   Playback Start (with Specifying the Playback Phrase)

Function: Playback start (with Specifying the Playback Phrase)

Syntax: **stxFP:a,a, ... ,a;**   (RS-232C, Command format: Type 2)

Syntax: **FP:a,a, ... ,a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: The phrases specified by this command will be played back consecutively.

Note: A maximum of 100 phrases can be specified in one line.
Be sure that the phrase numbers are registered (i.e., for which data exists).

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by this command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently.

Example)   **FP:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with this command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

FPB   Playback Start (with Specifying the Playback Phrase, During Phrase Play Busy Out On)

Function: Playback Start (with specifying the playback phrase, during phrase play busy out on)

Syntax: **stxFPB:a,a, ... ,a;**   (RS-232C, Command format: Type 2)

Syntax: **FPB:a,a, ... ,a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: The phrases specified by this command will be played back consecutively. When multiple phrases are played back in sequence, Busy Out signals are also output during intervals between phrases.

Note: A maximum of 100 phrases can be specified in one line.
Be sure that the phrase numbers are registered (i.e., for which data exists).

* If Dual Mono Mode is ON

Since phrases will be played back from the L or the R output depending on whether they are odd or even numbered phrases, phrases specified by this command will automatically be assigned to the playback memory; odd-numbered phrases will be played back from the L output, and even-numbered phrases will be played back from the R output. It is not possible to playback the L and R channels independently. Compatible with mono phrases. Not compatible with stereo phrases. For more details, refer to the AR-3000SD Owner's Manual.

Example)   **FPB:A0001,A0003,A0007,A0006,A0010**

When Dual Mono Mode is on and the above phrases are specified with this command, the phrases are played back in sequence. Phrases A0001, A0003 and A0007 are played through the left channel and phrases A0006 and A0010 are played through the right channel.

RL   Playback from the Middle of a Phrase

Function: Playback from the Middle of a Phrase
Syntax: **stxRL:a,b;**   (RS-232C, Command format: Type 2)
Syntax: **RL:a,b**   (Telnet, Command format: Type 2)

        a: Locate Forward / Backward
           0   Backward
           1   Forward
        b: Offset Time
           0H0M0S0F – 11H59M59S**F

Example)   **RL:1,0H10M59S0F**
- After specifying a phrase: Playback begins 10 minutes 59 seconds from the beginning of the phrase of the specified number.
- While playback is paused: Playback begins from the point that is 10 minutes 59 seconds after the point where the pause was initiated.

Note: The number of digits for **F (frame) increases according to the value of MTC type.
The range in which the offset time can be specified is valid only within a single phrase.
An offset time that exceeds the recording time for the phrase cannot be specified.
(The AR-3000SD outputs an ER command.) You can play back a phrase from a point offset by a specified time before or after a paused point by sending this command while playback is paused (see the PE command).
* When "Return Specified" is issued with an offset time longer than elapsed time:
The phrase is played back from the beginning.
* When "Forward Specified" is issued with an offset time longer than the remaining time:
An ER command is output and playback is not carried out. (The paused state remains in effect, so specify a new offset time and send an RL command again.)

Caution: **The command is not compatible with the Dual Mono.**
Phrases other than audio phrases cannot be specified.
The command is not compatible with audio phrases recorded in Mode 2.

ST   Halting Playback/Recording

Function: Halting playback/recording
Syntax: **stxST;**   (RS-232C, Command format: Type 1)
Syntax: **ST**   (Telnet, Command format: Type 1)

PE   Pause and Restart Playback or Recording

Function: Pause and Restart Playback or Recording
Syntax: **stxPE;**   (RS-232C, Command format: Type 1)
Syntax: **PE**   (Telnet, Command format: Type 1)

Note: When this command is sent during phrase playback/recording, the AR-3000SD stops playback/recording and enters the paused state. Sending the PE command again releases the pause, and playback/recording resumes from where it was paused. When operation is paused with the PE command, the AR-3000SD outputs the elapsed time from the start of the phrase to the point where paused. (Refer to 4.4.1 PE command)

Caution: **The command is not compatible with the Dual Mono.**
Phrases other than audio phrases cannot be specified.
The AR-3000SD cannot respond to this command during crossfades, repeats or intervals.
The command is not compatible with audio phrases recorded in Mode 2. (AR-3000SD will transmit an ER command.)

RM   Recording Standby Mode

Function: Recording Standby Mode
Syntax: **stxRM:a,b,c,d,e,f,g;**   (RS-232C, Command format: Type 2)
Syntax: **RM:a,b,c,d,e,f,g**   (Telnet, Command format: Type 2)

a: Phrase number
b: RDAC-Grade (fs)
 3 32 kHz
 4 44.1 kHz
 5 48 kHz
 6 96 kHz
c: RDAC-Mode
 5 WAV-16
 6 WAV-24
 7 MP3-128
 8 MP3-192
 9 MP3-320
d: Recording type
 0 Mono
 1 Stereo

e: Trigger recording
 0 Off
 1 Low
 2 Mid
 3 High
f: Recording Source
 0 LINE - IN
 1 MIDI - IN
 2 LINE + MIC - IN
g: Time base
 0 192
 1 240

Example)   **RM:A1,4,5,1,0,0,0**
This sets as follows; phrase "A0001", "44.1 kHz", "WAV-16", "Stereo", Trigger recording "OFF", recording source "LINE-IN".

Note: MIDI recording refers to the recording of MIDI messages. If recording source is "MIDI-IN", it will enter recording standby mode for a MIDI phrase.

Caution: **It is not possible to specify a phrase number which has already been recorded.**
If you wish to re-record a phrase that is already recorded, use the PD command to delete the phrase, and then transmit the RM command.
The AR-3000SD cannot respond to this command during crossfades, repeats or intervals.

Caution: **The value of RDAC-Grade (fs) should be the same as system setting.**

RE   Start Recording

Function: Start recording
Syntax: **stxRE;**   (RS-232C, Command format: Type 1)
Syntax: **RE**   (Telnet, Command format: Type 1)

Note: When using the RE command, you must first use the RM command to put the unit in recording standby mode. To stop recording, use the ST command.
Recording starts when audio higher than the trigger level is input. The following four types of trigger recording settings are available.

OFF: Trigger recording is not performed.
LOW: Recording starts when audio higher than -45 dB.
MID: Recording starts when audio higher than -36 dB.
HIGH: Recording starts when audio higher than -27 dB.

AE   Starting Time-Stamped Recording

Function: Starting Time-stamped Recording

Syntax: **`stxAE:a,b,c,d,e,f,g,h,i;`**   (RS-232C, Command format: Type 2)

Syntax: **`AE:a,b,c,d,e,f,g,h,i`**   (Telnet, Command format: Type 2)

a: year (1998 – 2035)

b: month (1 – 12)

c: day (1 – 31)

d: hour (0 – 23)

e: minutes (0 – 59)

f: second (0 – 59)

g: RDAC-Grade

    3   32 kHz

    4   44.1 kHz

    5   48 kHz

    6   96 kHz

h: RDAC-Mode

    5   WAV-16

    6   WAV-24

    7   MP3-128

    8   MP3-192

    9   MP3-320

i: Recording Type

    0   Mono

    1   Stereo

Example)   **`AE:2014,3,1,8,59,5,4,1,0`**

Add a time stamp for "2014" "March" "1" "8:59:00" and start recording with "44.1 kHz" "WAV-16" "Mono."

Note: The time information given in the command can be stored in the recorded phrase as a time stamp.

The AR-3000SD starts recording immediately when it receives an AE command. However, when you have made the trigger recording setting, the waits for audio input higher than the trigger level (the volume level at which recording starts), then starts recording. (It is not necessary to send an RE command. Levels in trigger recording settings may change depending on the immediately preceding recording action and the card settings.)

The phrase number is automatically assigned to a free number where nothing is recorded. Use the ST command to stop recording.

Also, the AR-3000SD automatically returns the total number of phrases recorded on the card when it receives an AE command. (Refer to 4.4.1 AE command)

Caution: **The recording source of the AE command is fixed to the LINE-IN.**

Caution: **The value of RDAC-Grade (fs) should be the same as system setting.**

RS   Start Recording

Function1:   Start Recording (without Specifying the Recording Phrase)
Syntax: **stxRS;**   (RS-232C, Command format: Type 1)
Syntax: **RS**   (Telnet, Command format: Type 1)

Note: The AR-3000SD starts recording immediately when it receives RS command. However, when you have made the trigger recording setting, the waits for audio input higher than the trigger level (the volume level at which recording starts), then starts recording. (It is not necessary to send an RE command. Levels in trigger recording settings may change depending on the immediately preceding recording action and the card settings.)
The phrase number is automatically assigned to a free number where nothing is recorded. Use the ST command to stop recording.
Also, the AR-3000SD automatically returns the total number of phrases recorded on the card when it receives an AE command. (Refer to 4.4.1 AE command)

Function2:   Start Recording (with Specifying the Recording Phrase)
Syntax: **stxRS:a;**   (RS-232C, Command format: Type 2)
Syntax: **RS:a**   (Telnet, Command format: Type 2)

             a: Phrase number

Note: The AR-3000SD starts recording immediately when it receives RS command. However, when you have made the trigger recording setting, the waits for audio input higher than the trigger level (the volume level at which recording starts), then starts recording. (It is not necessary to send an RE command. Levels in trigger recording settings may change depending on the immediately preceding recording action and the card settings.)
The phrase number is automatically assigned to a free number where nothing is recorded. Use the ST command to stop recording.
Also, the AR-3000SD does not return the total number of phrases recorded on the card when it receives RS command with Specifying the Recording Phrase.

Control

VL   Playback Volume Control

Function: Play Volume Control
Syntax: **stxVL:a;**   (RS-232C, Command format: Type 2)
Syntax: **VL:a**   (Telnet, Command format: Type 2)

             a: Playback Volume % (10 - 100)

OB   BUSY Control

Function: BUSY Control
Syntax: **stxOB:a;**   (RS-232C, Command format: Type 2)
Syntax: **OB:a**   (Telnet, Command format: Type 2)

             a: BUSY
                 0   OFF
                 1   ON

OC   CONT Control
Function: CONT Control
Syntax: **stxOC:a;**   (RS-232C, Command format: Type 2)
Syntax: **OC:a**   (Telnet, Command format: Type 2)

a: CONT
    0   OFF
    1   ON

TA   Execute NTP
Function: Execute NTP
Syntax: **stxTA;**   (RS-232C, Command format: Type 1)
Syntax: **TA**   (Telnet, Command format: Type 1)

4.2.2   Editing Commands

DM   Enable Execution of Editing Commands
Function: Enable execution of editing commands
Syntax: **stxDM;**   (RS-232C, Command format: Type 1)
Syntax: **DM**   (Telnet, Command format: Type 1)

Note: In order for editing commands to be executed, the DM command must be used to put the unit into Delete mode. For the communication protocol, refer to 4.1 2) Editing commands.

Caution: When Delete mode is exited, the AR-3000SD will automatically output a CC command. The AR-3000SD automatically escapes from the Delete mode two minutes after the DM command is issued. To run editing commands, send a DM command again to enter the Delete mode.

Phrase Editing

PD   Delete Phrase
Function: Delete phrase
Syntax: **stxDM;**
    stxPD:a;   (RS-232C, Command format: Type 2)
Syntax: **DM**
    PD:a   (Telnet, Command format: Type 2)

a: Phrase number

PC   Copy Phrase
Function: Copy phrase
Syntax: **stxDM;**
    stxPC:a,b;   (RS-232C, Command format: Type 2)
Syntax: **DM**
    PC:a,b   (Telnet, Command format: Type 2)

a: Phrase number of the copy source
b: Phrase number of the copy destination

Example)   **PC:A1,A3**
This copies the contents of phrase "A0001" to phrase "A0003".

Card Editing

FM   Format Card

Function: Format Card
Syntax: **stxDM;**
             stxFM:a,b,c;   (RS-232C, Command format: Type 2)
Syntax: **DM**
             FM:a,b,c   (Telnet, Command format: Type 2)

             a: Card in slot
                  0   Card in slot A
                  1   Card in slot B
                  2   Card in slot C
                  3   Card in slot D
             b: Maximum number of phrase
                  0   250
                  1   500
                  2   1000
             c: Reserved (0 or 1)

Example)   **FM:0,1,0**
             The card in slot A is formatted as follows; the maximum number of phrases "500".

Note: The type and capacity of the card is detected automatically.
             Use only cards which the AR-3000SD is able to use.

CD   Delete Card

Function: Delete Card
Syntax: **stxDM;**
             stxCD:a;   (RS-232C, Command format: Type 2)
Syntax: **DM**
             CD:a   (Telnet, Command format: Type 2)

             a: Card in slot
                  0   Card in slot A
                  1   Card in slot B
                  2   Card in slot C
                  3   Card in slot D

Example)   **CD:0**
             Erase all phrases from a card in slot A.

CP   Copy Card

Function: Copy Card
Syntax: **stxDM;**
             stxCP;   (RS-232C, Command format: Type 1)
Syntax: **DM**
             CP   (Telnet, Command format: Type 1)

Note: This copies the contents of the card in slot A to the card in slot B.

SP   System Copy

Function: System copy
Syntax: **stxDM;**
             stxSP;   (RS-232C, Command format: Type 1)
Syntax: **DM**
                 SP   (Telnet, Command format: Type 1)

Note: This copies the settings of the card in slot A to the card in slot B.

LS   Recorded Phrase Protect Mode

Function: Recorded phrase protect mode
Syntax: **stxDM;**
             stxLS:a;   (RS-232C, Command format: Type 2)
Syntax: **DM**
                 LS:a   (Telnet, Command format: Type 2)

             a: Select ON/OFF
                 0   OFF
                 1   ON

Note: Recorded Phrase Protect setting must be made using card slot A.
             (This setting cannot be made for card slot B.)

LW   Recorded Phrase Protect Mode

Function: Recorded phrase protect mode
Syntax: **stxDM;**
             stxLW:a,b; (RS-232C, Command format: Type 2)
Syntax: **DM**
                 LW:a,b   (Telnet, Command format: Type 2)

             a: Card Slot
                 0   Card in slot A
                 1   Card in slot B
                 2   Card in slot C
                 3   Card in slot D
             b: Select ON/OFF
                 0   OFF
                 1   ON

4.2.3   Setting Commands

Phrase Settings

SU   Phrase Settings
Function: Phrase settings
Syntax: **stxSU:a,"b",c,d,e,f,g,h,i,j;**   (RS-232C, Command format: Type 2)
Syntax: **SU:a,"b",c,d,e,f,g,h,i,j**   (Telnet, Command format: Type 2)

- a: Phrase number
- b: Phrase name (up to 12 characters)
- c: Playback Volume (10 - 100)
- d: Delay Time (0S0 - 59S9)
- e: Repeat Playback
      0 OFF
      1 ON
- f: Repeat interval (0M0S - 59M59S)
- g: Control Output
      0 OFF
      1 ON
- h: Offset time of control output (0M0S - 59M59S)
- i: Tempo (5 - 260)
- j: Reserved (Only '0')

Example)   **SU:A001,"ABCDEFGHIJK",100,10S5,1,5M0S,1,5M10S,120,0**
For phrase number "A001", this sets as follows; Phrase name "ABCDEFGHIJK",
Playback Volume "100%", Delay Time "10.5 seconds", Repeat Playback "ON", Repeat
interval "5 minutes",
Control Output "ON", Offset time of control output "5 min 10 sec", and Tempo "120".

Note: Be sure to specify an already recorded phrase as the phrase number.

VM   Play Volume Settings
Function: play Volume settings
Syntax: **stxVM:a,b;** (RS-232C, Command format: Type 2)
Syntax: **VM:a,b**   (Telnet, Command format: Type 2)

a: Phrase number
b: Play Volume % (10 - 100)

PY   Delay Time Settings
Function: Delay Time settings
Syntax: **stxPY:a,b;** (RS-232C, Command format: Type 2)
Syntax: **PY:a,b**   (Telnet, Command format: Type 2)

a: Phrase number
b: Delay Time (0S0F - 59S**F)

Note: The number of digits for **F (frame) increases according to the value of MTC type.

PP   Playback Point Settings

Function: Playback Point settings
Syntax: **stxPP:a,b,c;**   (RS-232C, Command format: Type 2)
Syntax: **PP:a,b,c**   (Telnet, Command format: Type 2)

a: Phrase number
b: Start   (0H0M0S0F0S - 23H59M59S**F9S)
c: End   (0H0M0S0F0S - 23H59M59S**F9S)

Note: The number of digits for **F (frame) increases according to the value of MTC type.

Caution: The AR-3000SD cannot respond to this command during crossfades, repeats or intervals.

PR   Phrase Repeat Settings

Function: Phrase Repeat settings
Syntax: **stxPR:a,b,c,d;**   (RS-232C, Command format: Type 2)
Syntax: **PR:a,b,c,d**   (Telnet, Command format: Type 2)

a: Phrase number
b: Repeat
    0   OFF
    1   ON
c: The number of repetitions
    0   ENDLESS
    1   1
    | |
    99 99
d: Repeat interval (0M0S - 59M59S)

LP   Loop Play Settings

Function: Loop Play settings
Syntax: **stxLP:a,b,c,d,e;**   (RS-232C, Command format: Type 2)
Syntax: **LP:a,b,c,d,e**   (Telnet, Command format: Type 2)

a: Phrase number
b: Loop Play
    0   OFF
    1   ON
c: The number of loops
    0   ENDLESS
    1   1
    | |
    99 99
d: Loop 1 position
    (0H0M0S0F0S - 23H59M59S**F9S)
e: Loop 2 position
    (0H0M0S0F0S - 23H59M59S**F9S)

Note: The number of digits for **F (frame) increases according to the value of MTC type.

**Caution   The command is not compatible with pattern phrases and song phrases.
The command is not compatible with audio phrases recorded in Mode 2.**

FD   Fade In and Fade Out Settings

Function: Fade In and Fade Out settings
Syntax: **stxFD:a,b,c,d,e;** (RS-232C, Command format: Type 2)
Syntax: **FD:a,b,c,d,e**   (Telnet, Command format: Type 2)

a: Phrase number
b: Fade In Type
  0   OFF
  1   Time 1
  2   Time 2
  3   Time 3
  4   (0S1 - 59S9)
c: Fade In Time (0S1 - 59S9)
  * This parameter is ignored when fade out type is 0 to 3.
  Please send one value of 0S1-59S9.
d: Fade Out Type
  0   OFF
  1   Time 1
  2   Time 2
  3   Time 3
  4   (0S1 - 59S9)
e: Fade Out Time (0S1 - 59S9)
  * This parameter is ignored when fade out type is 0 to 3.
  Please send one value of 0S1-59S9

Caution   The command is not compatible with pattern phrases and song phrases.

PO   Control Out Settings

Function: Control Out settings
Syntax: **stxPO:a,b,c;**   (RS-232C, Command format: Type 2)
Syntax: **PO:a,b,c**   (Telnet, Command format: Type 2)

a: Phrase number
b: Control Out
  0   OFF
  1   ON
c: Offset Time (0M0S - 59M59S)

MP   Playback Tempo for MIDI Settings

Function: Playback tempo for MIDI settings
Syntax: **stxMP:a,b;** (RS-232C, Command format: Type 2)
Syntax: **MP:a,b**   (Telnet, Command format: Type 2)

a: Phrase number
b: MIDI tempo (5 - 260)

PN   Phrase Name Settings

Function: Phrase Name settings
Syntax   **stxPN:a,"b";**   (RS-232C, Command format: Type 2)
Syntax   **PN:a,"b"**   (Telnet, Command format: Type 2)

a: Phrase number
b: Phrase name (up to 12 characters)

TT   Time Stamp Settings

Function: Time Stamp settings
Syntax: `stxTT:a,b,c,d,e,f,g;`   (RS-232C, Command format: Type 2)
Syntax: `TT:a,b,c,d,e,f,g`   (Telnet, Command format: Type 2)

a: Phrase number
b: year (1998 - 2035)
c: month (1 - 12)
d: day (1 - 31)
e: hour (0 - 23)
f: minute (0 - 59)
g: second (0 - 59)

PU   Pattern Phrase Settings

Function: Pattern Phrase settings
Syntax: `stxPU:a,b,c,d, .... ,c,d;`   (RS-232C, Command format: Type 2)
Syntax: `PU:a,b,c,d, .... ,c,d`   (Telnet, Command format: Type 2)

a: Pattern Phrase number
b: Pattern Phrase Playback mode
       0 Sequence
       1 Random
c: Phrase number to be played back
d: Delay Time (0S0 - 59S9)

Example)   `PU:A1,0,A5,5S0,A10,15S1,B151,10S0`
For phrase number "A0001", this registers a "Sequential playback" pattern phrase consisting of the following; phrase number "A0005", a delay of "5 seconds", phrase number "A0010", a delay of "15.1 seconds", phrase number "B0151", and a delay of "10 seconds".

Note: A maximum of 100 phrases can be specified in one line.
For the pattern phrase number, specify a phrase number where nothing is recorded.
For the playback phrase number, Audio phrases, MIDI phrases, and pattern phrases can be specified.

PS   Pattern Phrase Settings

Function: Pattern Phrase settings
Syntax 1:   (Sequence or Random 1)
        `stxPS:a,b,c,d,e,f,g,d,e,f,g, .... ,d,e,f,g;`
           (RS-232C, Command format: Type 2)
         `PS:a,b,c,d,e,f,g,d,e,f,g, .... ,d,e,f,g`
           (Telnet, Command format: Type 2)

        a: Pattern Phrase number
        b: Pattern Phrase Playback mode
            0   Sequence
            1   Random 1
        c: Reserved (Only '0')
        d: Playback Sequence
        e: Phrase number to be played back
        f: Playback Volume (10 – 100 : 10% - 100%)
        g: Delay Time (0S0 - 59S9)

Syntax 2:   (Random 2 or Random 3)
        `stxPS:a,b,c,d,e,f,g,d,e,f,g, .... ,d,e,f,g;`
           (RS-232C, Command format: Type 2)
         `PS:a,b,c,d,e,f,g,d,e,f,g, .... ,d,e,f,g`
           (Telnet, Command format: Type 2)

        a: Pattern Phrase number
        b: Pattern Phrase Playback mode
            2   Random 2
            3   Random 3
        c: Interrupt phrase interval (1 – 25)
        d: Playback Sequence (1 – 100 : phrases , 101 – 128 : interrupt phrases)
        e: Phrase number to be played back
        f: Playback Volume (10 – 100 : 10% - 100%)
        g: Delay Time (0S0 - 59S9)
           *On specification, delay time cannot be set for interrupt phrase. Please send one value of 0S0-59S9.

Note: A maximum of 128 phrases can be specified in one line.
        For the pattern phrase number, specify a phrase number where nothing is recorded.
        For the playback phrase number, Audio phrases, MIDI phrases, and pattern phrases can be specified.

SS   Song Phrase Settings

Function: Song Phrase settings
Syntax: `stxSS:a,b,c,b,c, .... ,b,c;`   (RS-232C, Command format: Type 2)
       `stxSS:a,b,c,b,c, .... ,STOP, c;`   (RS-232C, Command format: Type 2)
Syntax: `SS:a,b,c,b,c, .... ,b,c`   (Telnet, Command format: Type 2)
       `SS:a,b,c,b,c, .... ,STOP, c`   (Telnet, Command format: Type 2)

        a: Song Phrase number (A1-A1000, B1-B1000)
        b: Phrase number to be played back / STOP (To specify the ending point)
        c: Start point of phrase / End point of song phrase

Note: A maximum of 100 phrases can be specified in one line.
        For the song phrase number, specify a phrase number where nothing is recorded.
        For the playback phrase number, Audio phrases can be specified.
        The number of digits for **F (frame) increases according to the value of MTC type.

Card Settings

CV   Card Name Settings

Function: Card name setting
Syntax: **stxCV:a,"b",c;**   (RS-232C, Command format: Type 2)
Syntax: **CV:a,"b",c**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Card name (up to 8 characters)
c: Reserved (Only '0')

Example)   **CV:0,"ABCDEFGH",0**
This specifies a name of "ABCDEFGH" for the card in slot A.

System Settings

SM   System Settings

Function: System settings
Syntax: **stxSM:a,b,c,d,e,f;**   (RS-232C, Command format: Type 2)
Syntax: **SM:a,b,c,d,e,f**   (Telnet, Command format: Type 2)

  a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
  b: Line Input select
    0   Mute: Line Thru ON, Volume 0%
    1   Mix: Line Thru ON, Volume 100%
    2   OFF: Line Thru OFF
  c: Channel Playback (Dual Mono mode)
    0   OFF
    1   ON
  d: Control Input select
    0   Normal playback: for Direct Playback
    1   Last-In playback: for Direct Playback
    2   Sequence playback: for Direct Playback
    3   Program (Count) playback
    4   Binary playback
  e: Binary Playback Input Trigger
    0   Level: Level On, Edge Off
    1   Edge: Level Off, Edge On
  f: Busy Output
    0   All On: Delay Time On, Phrase Playback On, Repeat Interval On
    1   Delay On: Delay Time On, Phrase Playback On, Repeat Interval Off
    2   Repeat On: Delay Time Off, Phrase Playback On, Repeat Interval On
    3   All Off: Delay Time Off, Phrase Playback On, Repeat Interval Off

Example) **SM:0,0,0,0,1,0**
System settings will be made for Line Input select "MUTE", Channel Playback "OFF",
Control Input select "Normal playback", Binary Playback Input Trigger Mode "Edge",
and Busy Output "All On."

Note: Use LS to protect a recorded phrase.

CI   Control Input Mode Settings

Function: Control Input Mode setting
Syntax: **stxCI:a,b,c,d,e,f;**   (RS-232C, Command format: Type 2)
Syntax: **CI:a,b,c,d,e,f**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Control Input Mode
    0   Direct Play
    1   Program (Count Play)
    2   Binary Play
    3   Binary REC
c: Direct Playback Method
    0   Normal
    1   First In
    2   Last In
    3   Sequence
d: Binary Playback Trigger Settings Level
    0   Off
    1   On
e: Binary Playback Trigger Settings Edge
    0   Off
    1   On
f: The Method used for specifying the phrase (Binary Recording)
    0   Binary 1
    1   Binary 2

DL   Direct Playback Settings

Function: Direct Playback setting
Syntax: **stxDL:a,b,c, ... ,q,r;**   (RS-232C, Command format: Type 2)
Syntax: **DL:a,b,c, ... ,q,r**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b – q: Phrase number which you wish to assign to control input pin
    b   (CH1)
    c   (CH2)
    | |
    q   (CH16)

Example)   **DL:0,A1, ... ,A3,A4, ... ,A16,0**
The setting will be written to "Card A", and the phrases will be assigned to the control Input pin as follows; A0001 to CH1,..., A0003 to CH3, A0004 to CH4,..., and A0016 to CH16.

Note: For unused direct channels, specify "----".
If you specify "PLAY" instead of a phrase, you can playback directly the phrase shown in the display by the control input pin.

CE   Program (Count) Playback Settings

Function: Program (Count) Playback setting
Syntax: **stxCE:a,b,c,c, ... ,c;** (RS-232C, Command format: Type 2)
Syntax: **CE:a,b,c,c, ... ,c** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Program Playback pattern(1 - 5)
c: Phrase number to be played back (up to 100 phrases)

Example)   **CE:0,1,A1,A2,A3,A4,A5**
This registers A0001, A0002, A0003, A0004 and A0005 into the Program Playback pattern 1 of card A.

MS   MIDI Settings

Function: MIDI settings
Syntax: **stxMS:a,b,c,d,e;** (RS-232C, Command format: Type 2)
Syntax: **MS:a,b,c,d,e** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: MIDI Receive Channel
    0   OFF
    17   ALL
    1-16 MIDI Channel
c: MIDI OUT
    0   OUT
    1   THRU
d: MIDI Note Trigger
    0   Trigger
    1   Gate
e: Device ID (1 - 32)

ME   MIDI Settings

Function: MIDI settings
Syntax: **stxME:a,b,c,d,e;**   (RS-232C, Command format: Type 2)
Syntax: **ME:a,b,c,d,e**   (Telnet, Command format: Type 2)

     a: Card in slot
- 0   Card in slot A
- 1   Card in slot B
- 2   Card in slot C
- 3   Card in slot D

     b: MIDI Note On Velocity
- 0   OFF
- 1   ON

     c: MIDI Panpot
- 0   OFF
- 1   ON

     d: MIDI Expression
- 0   OFF
- 1   ON

     e: MIDI Note Output
- 0   OFF
- 1   ON

NM   MIDI Note Map Settings

Function: MIDI note map settings
Syntax: **stxNM:a,2, ... ,129;**   (RS-232C, Command format: Type 2)
Syntax: **NM:a,2, ... ,129**   (Telnet, Command format: Type 2)

     a: Card in slot
- 0   Card in slot A
- 1   Card in slot B
- 2   Card in slot C
- 3   Card in slot D

     2: – 129: 128 phrase numbers which you wish to assign to note numbers from C to G9
- 2   Phrase number assigned to note number C-
- | |
- 129 Phrase number assigned to note number G9

MM   MMC Mode Settings

Function: MMC Mode settings
Syntax: **stxMM:a,b;**   (RS-232C, Command format: Type 2)
Syntax: **MM:a,b**   (Telnet, Command format: Type 2)

     a: Card in slot
- 0   Card in slot A
- 1   Card in slot B
- 2   Card in slot C
- 3   Card in slot D

     b: MMC Mode
- 0   OFF
- 1   Master
- 2   Slave

MT   MTC Settings

Function: MTC settings
Syntax: **stxMT:a,b,c,d,e,f,g,h,i;**   (RS-232C, Command format: Type 2)
Syntax: **MT:a,b,c,d,e,f,g,h,i**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Sync Source
    0   Internal
    1   MTC
c: Sync Out
    0   Off
    1   MTC
d: MTC Type
    0   30
    1   29N
    2   29D
    3   25
    4   24
e: MTC Error Level (0 - 10)
f: MTC Offset Hour (0 - 23)
g: MTC Offset Minute (0 - 59)
h: MTC Offset Second (0 - 59)
i: MTC Offset Frame (0 - **)

Note: The upper limit of MTC Offset Frame depends on the value of MTC type.

BR   Communication Speed Settings

Function: Communication speed setting
Syntax: **stxBR:a,b;** (RS-232C, Command format: Type 2)
Syntax: **BR:a,b**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Baud rate
    0   4,800
    1   9,600
    2   19,200
    3   38,400
    4   14,400
    5   31,250
    6   57,600
    7   115,200

DN   Dual Mono Mode Settings

Function: Dual Mono Mode setting
Syntax: **stxDN:a,b;** (RS-232C, Command format: Type 2)
Syntax: **DN:a,b** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Dual Mono Mode
    0   Off
    1   On

LT   Line Out (Thru) Settings

Function: Line Out (Thru) setting
Syntax: **stxLT:a,b,c,d,e;** (RS-232C, Command format: Type 2)
Syntax: **LT:a,b,c,d,e** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Line Thru
    0   Off
    1   On
c: Thru Volume % (0 - 100)
d: Fade Out   (0S5 - 59S9)
e: Fade In   (0S5 - 59S9)

VT   Input Volume Thru Settings

Function: Input Volume Thru setting
Syntax: **stxVT:a,b;** (RS-232C, Command format: Type 2)
Syntax: **VT:a,b** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Input Volume Thru
    0   Off
    1   On

BO   Busy Out Settings

Function: Busy Out setting
Syntax: **stxBO:a,b,c,d;**   (RS-232C, Command format: Type 2)
Syntax: **BO:a,b,c,d**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: During Delay Time
    0   Off
    1   On
c: During Phrase Play
    0   Off
    1   On
d: During Repeat Interval
    0   Off
    1   On

DO   Display Parameter Settings

Function: Display Parameter setting
Syntax: **stxDO:a,b,c,d;**   (RS-232C, Command format: Type 2)
Syntax: **DO:a,b,c,d**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: Display Sleep
    0   Off
    1   On
c: Sleep Time (0M30S - 59M59S)

DC   Display Contrast Settings

Function: Display contrast setting
Syntax: **stxDC:a;**   (RS-232C, Command format: Type 2)
Syntax: **DC:a**   (Telnet, Command format: Type 2)

a: Display contrast (-10 - +10)

NT   Network data settings

Function: Network data settings
Syntax: **stxNT:a,b,c;**   (RS-232C, Command format: Type 2)
Syntax: **NT:a,b,c**   (Telnet, Command format: Type 2)

a: IP address setting   (0.0.0.0--255.255.255.255)
b: Net mask   (0.0.0.0--255.255.255.255)
c: Gateway   (0.0.0.0--255.255.255.255)

*   The above settings values become effective once the power has been turned off, then on again.

TO   Login timeout setting

Function: Login timeout setting
Syntax: **TO:a**   (Telnet, Command format: Type 2)

a: Time Out On/Off
  0   Off
  1   On

* AR-3000SD dose not log out automatically.

TP   NTP Setting

Function: NTP Setting
Syntax: **stxTP:a;**   (RS-232C, Command format: Type 2)
Syntax: **TP:a**   (Telnet, Command format: Type 2)

a: IP address setting   (0.0.0.0--255.255.255.255)

SC   Programmable Timer Setting

Function: Programmable Timer Setting
Syntax: **stxSC:a,"b";**   (RS-232C, Command format: Type 2)
Syntax: **SC:a,"b"**   (Telnet, Command format: Type 2)

a: Set/write
  0   Set
  1   Write
b: When 0 is set for a: Sets a text string for 1 line in the programmable timer settings file (_AR3TCAL.INI).
    When 1 is set for a: Type in a space.

4.2.4   Request Commands

AQ   Reset the Phrase Output Counter

Function: Reset the Phrase Output Counter
Syntax: **stxAQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **AQ:a**   (Telnet, Command format: Type 2)

a: Card in slot
  0   Card in slot A
  1   Card in slot B
  2   Card in slot C
  3   Card in slot D

Note: This sets the Phrase Output Counter to the lowest-numbered phrase of the phrases registered in the card. Use this command before you wish to output the settings of all phrases by using the QQ command, for example when you confirm the initial settings.

PQ   Phrase Setting Contents Request

Function 1: Phrase setting contents request

Syntax: **stxPQ:a;**   (RS-232C, Command format: Type 2)

Syntax: **PQ:a**   (Telnet, Command format: Type 2)

        a: Phrase number

Note: The phrase settings for the specified phrase number will be output.
The value of the Phrase Output Counter (described below) will not change.
(---> refer to the SU command)

Function 2: If the phrase number is not specified as a parameter, the AR-3000SD will output the phrase settings for automatically incremented phrase number by the Phrase Output Counter.

Syntax: **stxPQ:;**   (RS-232C, Command format: Type 2)

Syntax: **PQ:**   (Telnet, Command format: Type 2)

Note: The incremented value will skip phrase numbers which are not recorded yet, and will be up to the next recorded phrase number. If the PQ command is used to request output even after the setting information of the last phrase has been output, the AR-3000SD will output   "ER:101".
In the case of a Pattern Phrase, you must use the separately described 3Q command to request output of the settings. (---> refer to 3Q command)

* About the Phrase Output Counter

The AR-3000SD contains the Phrase Output Counter. The maximum value of this counter is the maximum phrase number of each card. The counter is reset (i.e., to the lowest phrase number) by the AQ command. So you can request each phrase settings of all phrases in the card by sequentially using the PQ command's function 2 after resetting the counter.

QQ   Phrase Setting Contents Request

Function 1: Phrase setting contents request
Syntax: **stxQQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **QQ:a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: The phrase settings for the specified phrase number will be output.
             The value of the Phrase Output Counter (described below) will not change.
             (* refer to 4.4.1 the RU command)

Function 2: If the phrase number is not specified as a parameter, the AR-3000SD will output the
             phrase settings for automatically incremented phrase number by the Phrase Output
             Counter.

Syntax: **stxQQ:;**   (RS-232C, Command format: Type 2)
Syntax: **QQ:**   (Telnet, Command format: Type 2)

Note: The incremented value will skip phrase numbers which are not recorded yet, and will be
             up to the next recorded phrase number.
             If the QQ command is used to request output even after the setting information of the
             last phrase has been output, the AR-3000SD will output "ER:101".
             In the case of a Pattern Phrase, you must use the separately described 3Q command to
             request output of the settings. (* refer to 3Q command)

* About the Phrase Output Counter

The AR-3000SD contains the Phrase Output Counter.
The maximum value of this counter is the maximum phrase number of each card.
The counter is reset (i.e., to the lowest phrase number) by the AQ command.
So you can request each phrase settings of all phrases in the card by sequentially using
the QQ command's function 2 after resetting the counter.

2Q   Pattern Phrase Setting Contents Request

Function: Pattern Phrase setting contents request
Syntax: **stx2Q:a;**   (RS-232C, Command format: Type 2)
Syntax: **2Q:a**   (Telnet, Command format: Type 2)

a: Pattern Phrase number

Note: This is a request for when the phrase type is pattern phrase.
             (* refer to PU command)

3Q   Pattern Phrase Setting Contents Request

Function: Pattern Phrase setting contents request
Syntax: **stx3Q:a;**   (RS-232C, Command format: Type 2)
Syntax: **3Q:a**   (Telnet, Command format: Type 2)

a: Pattern Phrase number

Note: This is a request for when the phrase type is pattern phrase.
             (* refer to 4.4.1 PS command)

GQ   Song Phrase Setting Contents Request

Function: Song Phrase setting contents request
Syntax: **stxGQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **GQ:a**   (Telnet, Command format: Type 2)

a: Song Phrase number

Note: This is a request for when the phrase type is song phrase.
(* refer to 4.4.1 SS command)

TQ   Time Stamp Request

Function 1:   Time Stamp request
Syntax: **stxTQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **TQ:a**   (Telnet, Command format: Type 2)

a: Phrase number

Note: Output the recording start time information for the specified phrase. (Refer to 4.4.1 TI Command.) The AR-3000SD outputs an ER command for phrases in which time Information is not recorded.

Function 2:   Time Stamp request
If the phrase number is not specified as a parameter, the AR-3000SD will output the Time Stamp information for automatically incremented phrase number by the Phrase Output Counter.
Syntax: **stxTQ:;**   (RS-232C, Command format: Type 2)
Syntax: **TQ:**   (Telnet, Command format: Type 2)

Note: The incremented value will skip phrase numbers which are not recorded yet, and will be up to the next recorded phrase number. If the TQ command is used to request output even after the setting information of the last phrase has been output, the AR-3000SD will output "ER:101".

CQ   Card Setting Contents Request

Function: Card setting contents request
Syntax: **stxCQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **CQ:a**   (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D

Note: refer to 4.4.1 CS command

MQ   Card Remaining Capacity Request

Function: Card remaining capacity request
Syntax: **stxMQ;**   (RS-232C, Command format: Type 1)
Syntax: **MQ**   (Telnet, Command format: Type 1)

Note: refer to 4.4.1 CR command

SQ   System Setting Contents Request

Function: System setting contents request
Syntax: **stxSQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **SQ:a**   (Telnet, Command format: Type 2)

a: Card in slot
   0   Card in slot A
   1   Card in slot B
   2   Card in slot C
   3   Card in slot D

Note: refer to SM command

YQ   System Setting Contents Request

Function: System setting contents request
Syntax: **stxYQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **YQ:a**   (Telnet, Command format: Type 2)

a: Card in slot
   0   Card in slot A
   1   Card in slot B
   2   Card in slot C
   3   Card in slot D

Note: refer to 4.4.1 SY command

DQ   Direct Playback Setting Contents Request

Function: Direct Playback setting contents request
Syntax: **stxDQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **DQ:a**   (Telnet, Command format: Type 2)

a: Card in slot
   0   Card in slot A
   1   Card in slot B
   2   Card in slot C
   3   Card in slot D

Note: refer to 4.4.1 DP command

UQ   Program (Count) Playback Setting Contents Request

Function: Program (Count) Playback setting contents request
Syntax: **stxUQ:a,b;** (RS-232C, Command format: Type 2)
Syntax: **UQ:a,b**   (Telnet, Command format: Type 2)

a: Card in slot
   0   Card in slot A
   1   Card in slot B
   2   Card in slot C
   3   Card in slot D
b: Program Playback patterns(1 - 5)

Note: refer to 4.4.1 CE command

IQ   MIDI Setting Contents Request

Function: MIDI setting contents request
Syntax: **stxIQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **IQ:a**   (Telnet, Command format: Type 2)

    a: Card in slot
        0   Card in slot A
        1   Card in slot B
        2   Card in slot C
        3   Card in slot D

Note: refer to MS command

JQ   MIDI Setting Contents Request

Function: MIDI setting contents request
Syntax: **stxJQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **JQ:a**   (Telnet, Command format: Type 2)

    a: Card in slot
        0   Card in slot A
        1   Card in slot B
        2   Card in slot C
        3   Card in slot D

Note: refer to 4.4.1 ME command

NQ   MIDI Note Map Setting Contents Request

Function: MIDI note map setting contents request
Syntax: **stxNQ:a;**   (RS-232C, Command format: Type 2)
Syntax: **NQ:a**   (Telnet, Command format: Type 2)

    a: Card in slot
        0   Card in slot A
        1   Card in slot B
        2   Card in slot C
        3   Card in slot D

Note: refer to 4.4.1 NM command

LQ   Display Contrast Setting Request

Function: Display Contrast setting request
Syntax: **stxLQ;**   (RS-232C, Command format: Type 1)
Syntax: **LQ**   (Telnet, Command format: Type 1)

Note: refer to 4.4.1 DC command

KQ   Network setting contents request

Function: Network setting contents request
Syntax: **stxKQ;**   (RS-232C, Command format: Type 1)
Syntax: **KQ**   (Telnet, Command format: Type 1)

Note: refer to 4.4.1 NT command

AC   Activity Sensing (Verify AR-3000SD Unit Activity)
Function: Activity sensing (Verify AR-3000SD unit activity)
Syntax: **stxAC;**   (RS-232C, Command format: Type 1)
Syntax: **AC**   (Telnet, Command format: Type 1)

Note: Normally, an ack/OK command will be output from the AR-3000SD by using this command.
During playback, play pause, recording standby, recording or recording pause the Phrase number will be output.
(* refer to 4.4.1 AC command)

VR   Version Request
Function: Version request
Syntax: **stxVR;**   (RS-232C, Command format: Type 1)
Syntax: **VR**   (Telnet, Command format: Type 1)

Note: The AR-3000SD will output the "model name" and "version".
(* refer to the 4.4.1 VR command for the AR-3000SD)

4.2.5   Reply Commands

ack/OK   Reply signifying normal operation
Function: Reply signifying normal operation
Syntax: **ack**   (RS-232C, Command format: Type 0)
Syntax: **OK**   (Telnet, Command format: Type 0)

ER   Reply to the AR-3000SD When an Error Has Occurred
Function: Reply to the AR-3000SD when an error has occurred
Syntax: **stxER:a;**   (RS-232C, Command format: Type 2)
Syntax: **ER:a**   (Telnet, Command format: Type 2)

a: Error number
0   Send this command to the AR-3000SD when the output of the AR-3000SD could not be read (In the case of a request command, the AR-3000SD will re-transmit the Setting output command.)
1   Send this command when the output of the AR-3000SD for confirmation is incorrect in Delete mode. Then the command you transmitted will be canceled, and the AR-3000SD will automatically exit Delete mode.

Xon (11h)/Xoff (13h) Allow or Disable Transmission. Used for Handshaking
Function: Allow or disable transmission. Used for handshaking.
Syntax: **Xon** is **11h** only   (RS-232C, transmission permitted)
Xoff is **13h** only   (RS-232C, transmission disabled)

4.3 Commands Sent from the AR-3000SD to the External Device (Computer)

The following three types of commands are sent from the AR-3000SD to an external device. In this explanation, "external device" refers to the computer. "AR" refers to the AR-3000SD.

1) Setting Output Commands
   These commands output the current setting status of the AR-3000SD. They are output in response to a request command from the external device.

2) Automatic Transmission Commands

3) Reply Commands
   Reply commands are necessary for communication control, such as acknowledgment that a command was correctly received, etc.

4.4 Details of Commands Sent from the AR-3000SD to the External Device (Computer)

4.4.1 Setting Output Commands

Phrase Settings

SU   Phrase Setting Output

Function: Phrase setting output

Syntax: **stxSU:a,"b",c,d,e,f,g,h,i,j,k,l,m,n,o;**
              (RS-232C, Command format: Type 2)

Syntax: **SU:a,"b",c,d,e,f,g,h,i,j,k,l,m,n,o**
              (Telnet, Command format: Type 2)

- a: Phrase number
- b: Phrase name (up to 12 characters)
- c: Phrase type
  - 0 Phrase
  - 1 Pattern Phrase
  - 2 MIDI Phrase
  - 3 Song Phrase
  - 4 Command Phrase
- d: RDAC-Grade
  - 0 8 kHz
  - 1 16 kHz
  - 2 22.05 kHz
  - 3 32 kHz
  - 4 44.1 kHz
  - 5 48 kHz
  - 6 96 kHz
- e: RDAC-Mode
  - 0 Linear
  - 1 Mode 1
  - 2 Mode 2
  - 3 Mode 3
  - 4 H-Linear
  - 5 WAV-16
  - 6 WAV-24
  - 7 MP3
- f: Recording Type
  - 0 Mono
  - 1 Stereo
- g: Playback Volume (10 - 100)
- h: Delay Time (0S0 - 59S9)
- i: Repeat Playback
  - 0 OFF
  - 1 ON
- j: Repeat interval (0M0S - 59M59S)
- k: Control Output
  - 0 OFF
  - 1 ON
- l: Offset time of control output (0M0S - 59M59S)
- m: Tempo (5 - 260)
- n: reserved (Only '0', zero)
- o: Phrase size (unit: byte)

Note: refer to PQ command

RU   Phrase Setting Output

Function: Phrase setting output

Syntax: **stxRU:a,"b",c,d,e,f,g,h,I,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x,y;**
(RS-232C, Command format: Type 2)

Syntax: **RU:a,"b",c,d,e,f,g,h,I,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x,y**
(Telnet, Command format: Type 2)

a: Phrase number

b: Phrase name (up to 12 characters)

c: Phrase type
    0   Phrase
    1   Pattern Phrase
    2   MIDI Phrase
    3   Song Phrase
    4   Command Phrase

d: RDAC-Grade
    0   8 kHz
    1   16 kHz
    2   22.05 kHz
    3   32 kHz
    4   44.1 kHz
    5   48 kHz
    6   96 kHz

e: RDAC-Mode
    0   Linear
    1   Mode 1
    2   Mode 2
    3   Mode 3
    4   H-Linear
    5   WAV-16
    6   WAV-24
    7   MP3

f: Recording Type
    0   Mono
    1   Stereo

g: Playback Volume (10 - 100)

h: Delay Time (0S0 - 59S9)

i: Repeat Playback
    0   OFF
    1   ON

j: Repeat Count
    0   ENDLESS
    | |
    99   99

k: Repeat interval (0M0S - 59M59S)

l: Control Output
    0   OFF
    1   ON

m: Offset time of control output
    (0M0S - 59M59S)

n: Fade In Type
    0   OFF
    1   Time 1
    2   Time 2
    3   Time 3
    4   (0S1 - 59S9)

o: Fade In Time (0S1 - 59S9)

p: Fade Out Type
    0   OFF
    1   Time 1
    2   Time 2
    3   Time 3
    4   (0S1 - 59S9)

q: Fade Out Time (0S1 - 59S9)

r: Start
    (0H0M0S0F0S - 23H59M59S**F9S)

s: End
    (0H0M0S0F0S - 23H59M59S**F9S)

t: Loop Play
    0   OFF
    1   ON

u: The number of loops
    0   ENDLESS
    1   1
    | |
    99   99
    -    Loop play Off

v: Loop 1 position
    (0H0M0S0F0S - 23H59M59S**F9S)

w: Loop 2 position
    (0H0M0S0F0S - 23H59M59S**F9S)

x: Tempo (5 - 260)

y: Phrase size (unit: byte)

Note: refer to 4.2.4 QQ command
The number of digits for **F (frame) increases according to the value of MTC type.

PU   Pattern Phrase Setting Output

Function: Pattern Phrase setting output
Syntax: **stxPU:a,b,c,d, ... ,c,d;**   (RS-232C, Command format: Type 2)
Syntax: **PU:a,b,c,d, ... ,c,d**   (Telnet, Command format: Type 2)

a: Pattern Phrase number
b: Pattern Phrase Playback mode
    0 Sequence
    1 Random
c: Phrase number to be played back
d: Delay Time (00S0 - 59S9)

Note: refer to 2Q command

PS   Pattern Phrase Setting Output

Function: Pattern Phrase setting output
Syntax: **stxPS:a,b,c,d,e,f,g,d,e,f,g, ... ,d,e,f,g;**
    (RS-232C, Command format: Type 2)
Syntax: **PS:a,b,c,d,e,f,g,d,e,f,g, ... ,d,e,f,g**
    (Telnet, Command format: Type 2)

a: Pattern Phrase number
b: Pattern Phrase Playback mode
    0   Sequence
    1   Random 1
    2   Random 2
    3   Random 3
c: Interrupt phrase interval (Sequence , Random 1 : 0 / Random 2 , Random 3 : 1-25)
d: Playback Sequence
e: Phrase number to be played back
f: Playback Volume(10 - 100 : 10% - 100%)
g: Delay Time(0S0 - 59S9)

Note: refer to 4.2.4 3Q command

SS   Song Phrase Setting Output

Function: Song Phrase setting output
Syntax: **stxSS:a,b,c,b,c, ... ,b,c;**   (RS-232C, Command format: Type 2)
    stxSS:a,b,c,b,c, ... ,STOP,c; (RS-232C, Command format: Type 2)
Syntax: **SS:a,b,c,b,c, ... ,b,c**   (Telnet, Command format: Type 2)
    SS:a,b,c,b,c, ... ,STOP,c   (Telnet, Command format: Type 2)

a: Song Phrase number
b: Phrase number to be played back / STOP (To specify the ending point)
c: Start point of phrase / End point of song phrase

Note: refer to 4.2.4 GQ command
    The number of digits for **F (frame) increases according to the value of MTC type.

TI   Time Stamp Settings

Function: Time Stamp settings
Syntax: **stxTI:a,b,c,d,e,f,g;**   (RS-232C, Command format: Type 2)
Syntax: **TI:a,b,c,d,e,f,g**   (Telnet, Command format: Type 2)

        a: Phrase number
        b: year (1998 - 2035)
        c: month (1 - 12)
        d: day (1 - 31)
        e: hour (0 - 23)
        f :minute (0 - 59)
        g: second (0 - 59)

Note: refer to 4.2.4 TQ command

Card Settings

CS   Card Setting Output

Function: Card setting output
Syntax: **stxCS:a,"b",c,d,e,f,g;**   (RS-232C, Command format: Type 2)
Syntax: **CS:a,"b",c,d,e,f,g**   (Telnet, Command format: Type 2)

        a: Card in slot
          0   Card in slot A
          1   Card in slot B
          2   Card in slot C
          3   Card in slot D
        b: Card name (8 characters)
        c: Reserved
        d: Reserved
        e: Maximum number of phrase
          0   250
          1   500
          2   1000
        f: Card ID (Created automatically)
        g: Reserved

Note: refer to 4.2.4 CQ command

CR   Card Remaining Capacity Output

Function: Card remaining capacity output
Syntax: **stxCR:a,b;** (RS-232C, Command format: Type 2)
Syntax: **CR:a,b** (Telnet, Command format: Type 2)

        a: Remaining capacity of card A
        b: Remaining capacity of card B

Note: refer to 4.2.4 MQ command

System Settings

SM   System Setting Output
    Function: System setting output
    Syntax: **stxSM:a,b,c,d,e,f;**   (RS-232C, Command format: Type 2)
    Syntax: **SM:a,b,c,d,e,f**   (Telnet, Command format: Type 2)

    a: Card in slot
       0   Card in slot A
       1   Card in slot B
       2   Card in slot C
       3   Card in slot D
    b: Line Input select
       0   Mute
       1   Mix
       2   OFF
    c: Channel Playback (Dual Mono Mode)
       0   OFF
       1   ON
    d: Control Input select
       0   Normal playback
       1   Last-In playback
       2   Sequence playback
       3   Program playback
       4   Binary playback
    e: Binary Playback Input Trigger
       0   Level
       1   Edge
    f: Busy Output
       0   All On
       1   Delay On
       2   Repeat On
       3   All Off

    Note: refer to SQ command

SY   System Setting Output

Function: System setting output

Syntax: **stxSY:a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x;**
    (RS-232C, Command format: Type 2)

Syntax: **SY:a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,t,u,v,w,x**
    (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D

b: Control Input select
    0   Direct playback
    1   Program playback
    2   Binary playback
    3   Terminal REC

c: Direct playback
    0   Normal playback
    1   First-In playback
    2   Last-In playback
    3   Sequence playback

d: Binary Playback Trigger Settings
    Level
    0   Off
    1   On

e: Binary Playback Trigger
    Settings-Edge
    0   Off
    1   On

f: The Method used for specifying the
    phrase (Terminal Recording)
    0   Binary 1
    1   Binary 2

g: AR-LINK Mode
    0   Off
    1   Master
    2   Slave

h: Dual Mono Mode
    0   OFF
    1   ON

i: Line Thru
    0   Off
    1   On

j: Line Thru Volume % (0 - 100)

k: Line Thru Fade Out (0S5 - 59S9)

l: Line Thru Fade In   (0S5 - 59S9)

m: Equalizer
    0   Off
    1   On

n: Equalizer Low Gain dB (-12 - +12)

o: Equalizer Low Frequency
    0   200 Hz
    1   400 Hz

p: Equalizer High Gain dB (-12 - +12)

q: Equalizer High Frequency
    0   3 kHz
    1   6 kHz

r: Equalizer Attenuation dB (-12 - 0)

s: Input Volume Thru
    0   Off
    1   On

t: Busy Out - During Delay Time
    0   Off
    1   On

u: Busy Out - During Phrase Play
    0   Off
    1   On

v: Busy Out - During Repeat Interval
    0   Off
    1   On

w: Display Sleep
    0   Off
    1   On

x: Display Sleep - Sleep Time
    (0M30S - 59M59S)

Note: refer to 4.2.4 YQ command

DP   Direct Playback Setting Output

Function: Direct Playback setting output

Syntax: **stxDP:a,b,c, ... ,q;**   (RS-232C, Command format: Type 2)

Syntax: **DP:a,b,c, ... ,q**   (Telnet, Command format: Type 2)

a: Card in slot
- 0   Card in slot A
- 1   Card in slot B
- 2   Card in slot C
- 3   Card in slot D

b – q: Phrase number which you assigned to control input pin
- b   CH1
- c   CH2
- | |
- q   CH16

Note: For unused direct channels, "----" is output. "PLAY" will be output for the direct channel which plays back the phrase shown in the display. (--> refer to 4.2.4 DQ command)

CE   Program (Count) Playback Setting Output

Function: Program (Count) Playback setting output

Syntax: **stxCE:a,b,c,c, ... ,c;**   (RS-232C, Command format: Type 2)

Syntax: **CE:a,b,c,c, ... ,c**   (Telnet, Command format: Type 2)

a: Card in slot
- 0   Card in slot A
- 1   Card in slot B
- 2   Card in slot C
- 3   Card in slot D

b: Program Playback patterns (1 - 5)

c: Phrase number to be played back (up to 100 phrases)

Note: refer to 4.2.4 UQ command

MS   MIDI Setting Output

Function: MIDI setting output
Syntax: **stxMS:a,b,c,d,e;** (RS-232C, Command format: Type 2)
Syntax: **MS:a,b,c,d,e** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: MIDI Receive Channel
    0   OFF
    17   ALL
    1 – 16   MIDI Channel
c: MIDI OUT
    0   OUT
    1   THRU
d: MIDI Note Trigger
    0   Trigger
    1   Gate
e: Device ID (1 - 32)

Note: refer to IQ command

ME   MIDI Setting Output

Function: MIDI setting output
Syntax: **stxME:a,b,c,d,e,f,g,h,i,j,k,l,m,n;** (RS-232C, Command format: Type 2)
Syntax: **ME:a,b,c,d,e,f,g,h,i,j,k,l,m,n** (Telnet, Command format: Type 2)

a: Card in slot
    0   Card in slot A
    1   Card in slot B
    2   Card in slot C
    3   Card in slot D
b: MIDI Receive Channel
    0   OFF
    17   ALL
    1-16 MIDI Channel
c: MIDI OUT
    0   OUT
    1   THRU
d: MIDI Note Trigger
    0   Trigger
    1   Gate
e: Device ID (1 - 32)
f: MIDI Note On Velocity
    0   OFF
    1   ON
g: MIDI Panpot
    0   OFF
    1   ON
h: MIDI Expression
    0   OFF
    1   ON

i: MIDI Note Output
    0   OFF
    1   ON
j: MMC Mode
    0   OFF
    1   Master
    2   Slave
k: Sync Source
    0   Internal
    1   MTC
l: Sync Out
    0   Off
    1   MTC
m: MTC Type
    0   30
    1   29N
    2   29D
    3   25
    4   24
n: MTC Error Level (0 - 10)

Note: refer to 4.2.4 JQ command

NM   MIDI Note Map Setting Output
Function: MIDI note map setting output
Syntax: **stxNM:a,2, ... ,129;**   (RS-232C, Command format: Type 2)
Syntax: **NM:a,2, ... ,129**   (Telnet, Command format: Type 2)

a: card in slot
  0   Card in slot A
  1   Card in slot B
  2   Card in slot C
  3   Card in slot D
2-129: 128 phrase numbers which you assigned to note numbers from C- to G9
  2   Phrase number assigned to note number C-
  | |
  129 Phrase number assigned to note number G9

Note: refer to 4.2.4 NQ command

DC   Display Contrast Setting Output
Function: Display Contrast setting output
Syntax: **stxDC:a;**   (RS-232C, Command format: Type 2)
Syntax: **DC:a**   (Telnet, Command format: Type 2)

a: Display contrast (-10 - +10)

Note: refer to 4.2.4 LQ command

NT   Output network settings
Function: Output network settings
Syntax: **stxNT:a,b,c;**   (RS-232C, Command format: Type 2)
Syntax: **NT:a,b,c**   (Telnet, Command format: Type 2)

a: IP address setting   (0.0.0.0--255.255.255.255)
b: Net mask   (0.0.0.0--255.255.255.255)
c: Gateway   (0.0.0.0--255.255.255.255)

Note: refer to 4.2.4 KQ command

AC   Active Sensing Reply
Function: Active sensing reply
Syntax: **stxAC:a,b;**   (RS-232C, Command format: Type 2)
Syntax: **AC:a,b**   (Telnet, Command format: Type 2)

a: Status of AR-3000SD
  0   During playback
  1   During recording
  2   During recording standby
  3   During playback pause
  4   During recording pause
b: Phrase number

Note: During Dual Mono Mode, this is output twice.
             refer to 4.2.4 AC command

VR　　Version Output
Function:　　Version output
Syntax:　　**stxVR:"a","b","c";**　　(RS-232C, Command format: Type 2)
Syntax:　　　**VR:"a","b","c"**　　(Telnet, Command format: Type 2)

　　　　　　a: Model name
　　　　　　b: Version
　　　　　　c: Reserved (fixed at two space characters)

4.4.2　Automatic Transmission Commands

CC　　Card Insertion Status Output
Function:　　Card insertion status output
Syntax:　　**stxCC:a,b;** (RS-232C, Command format: Type 2)
Syntax:　　　**CC:a,b** (Telnet, Command format: Type 2)

　　　　　　a: Status of card slot A
　　　　　　　0　Not inserted
　　　　　　　1　Inserted
　　　　　　b: Status of card slot B
　　　　　　　0　Not inserted
　　　　　　　1　Inserted

Note:　　　This is transmitted automatically when a card is inserted or removed. This also occurs automatically for verification after the Delete mode has been exited.

ST　　Output at Finish of Playback
Function:　　Output at Finish of Playback
Syntax:　　**stxST:a;**　　(RS-232C, Command format: Type 2)
Syntax:　　　**ST:a**　　(Telnet, Command format: Type 2)

　　　　　　a: The number showing the channel which playback finished.
　　　　　　　0　When Dual Mono mode is OFF
　　　　　　　1　L Channel when Dual Mono mode is ON
　　　　　　　2　R Channel when Dual Mono mode is ON

Note:　　　Output when playback of phrases is finished and the AR is not playing any phrase.

PE　　Output the Elapsed Time from the Start of the Phrase
Function:　　Output the elapsed time from the start of the phrase
Syntax:　　**stxPE:a;**　　(RS-232C, Command format: Type 2)
Syntax:　　　**PE:a**　　(Telnet, Command format: Type 2)

　　　　　　a: (**H**M**S**F*S)

Note:　　　When operation is paused with the PE command, the AR-3000SD outputs the elapsed time from the start of the phrase to the point where paused.
　　　　　　The number of digits for **F (frame) increases according to the value of MTC type

AE　　Output the Total Number of Phrases Recorded on the Card
Function:　　Output the total number of phrases recorded on the card
Syntax:　　**stxAE:a;**　　(RS-232C, Command format: Type 2)
Syntax:　　　**AE:a**　　(Telnet, Command format: Type 2)

　　　　　　a: the total number of phrases recorded on the card

Note:　　　This is output when AR receives an AE command.
　　　　　　"S" will be specified ahead of the total number.

%% Card Operation Progress Status Output

Function: Card operation progress status output

When a card operation is performed, this tells what percent has been completed.

Syntax: **stx%%:a;**   (RS-232C, Command format: Type 2)

Syntax: **%%:a**   (Telnet, Command format: Type 2)

a: Percent (0 - 100)

Note: OK output will terminate this.

This is transmitted automatically in response to the following commands.

PD: Delete Phrase
PC: Copy Phrase
FM: Format Card
CD: Delete Card
CP: Copy Card
SP: System Copy

4.4.3 Reply Commands

ack/OK   Reply signifying normal operation
Function: Reply signifying normal operation
Syntax: **ack**   (RS-232C, Command format: Type 0)
Syntax: **OK**   (Telnet, Command format: Type 0)

ER   Replies When an Error Has Occurred
Function: Reply signifying occurrence of a problem
Syntax: **stxER:a;**   (RS-232C, Command format: Type 2)
Syntax: **ER:a**   (Telnet, Command format: Type 2)

a: Error number
  0   Syntax error
       This error occurs when correct reception was not possible, such as when the syntax
       of the command was incorrect or inappropriate.
  1   The specified phrase does not exist, or the phrase number is incorrect. This error
       will also be output if a phrase number is specified for a card which is not inserted.
  2   Busy error. The AR-3000SD is currently recording or playing back. When the
       AR-3000SD is recording or playing back, it will process only the following
       commands.

	Control Commands	Request Commands
During Playback	PA, ST, PE, PLL, PLR, FP, FPB	AC
During Play Pause	PA, ST, PE, RL	AC
During Recording Standby	PE, ST	AC
During Recording	PA, ST, PE	AC
During Recording Pause	PA, ST, PE	AC

  3   An editing command was received when the AR-3000SD was not in Delete mode.
  4   This error occurs if a setting/delete/record command is transmitted while the write
       protect switch of the card is ON.
  5   This error occurs when the total number of phrases specified by the PA, PU, or CE
       commands exceeds the maximum value (100), or when the specified parameter
       value is outside of the limit of the maximum value.
  6   This error occurs when the characters being set for a phrase name or card name
       exceed the maximum value.
  7   This error occurs when characters other than numerals (0 - 9) are used to specify
       an integer.
  8   This error occurs when you attempt to specify a previously recorded phrase as a
       pattern phrase.
  9   This error occurs when you attempt to record or copy a phrase on an already
       recorded phrase.
  10   There is no remaining card capacity.
  20   The command could not be executed for some other reason.
  21   Unsupported card or incorrect format. Please change cards or format card. Format
        the card by panel operation.
  100   The AR-3000SD received a 2Q or 3Q command even though the specified phrase
         was not a pattern phrase.
  101   A PQ, QQ or TQ command is used to request output even after the setting
         information of the last phrase has been output.
  102   The AR-3000SD received an RE command even though it was not in recording
         standby mode.
  202   There is no time information for the specified phrase.
  300   The command is not compatible with the Dual Mono mode.
  301   Specify a time parameter within the phrase recording time.
  302   Phrases other than audio phrases cannot be specified.

303   Phrases other than MIDI phrases cannot be specified

304   Phrases other than audio phrases, MIDI phrases, and pattern phrases cannot be specified.

305   There is no blank phrase.

306   In the Delete mode, only editing commands are processed.

307   Before sending an RL command, first specify a phrase with the PA command.

309   The settings cannot be output, because it is expanded function in AR-3000SD. Please use the request command corresponding to AR-3000SD.

310   To execute the edit operation, transmit "OK". To cancel the delete operation, Transmit "ER:1" .

311   The AR-3000SD received a GQ command even though the specified phrase was not a song phrase.

312   There is no signal input from the Digital In jack. Send signals from the digitally connected equipment.

313   The command does not correspond to the selected phrase.

315   A card in AR-2000 format was inserted in either slot A or B (or both).or the syntax of the command was incorrect or inappropriate.

Note: When these commands occur, commands from the external device will be ignored.

Section 5 Appendix

5.1 AR-3000SD Commands List

Commands transmitted from the external device (computer) to the AR-3000SD

Control Commands
- Playback Commands

PA	PhrAse	Specifying the playback phrase	type 2
PL	PLay	Playback start	type 1
PLB	PLay Busy on	Playback Start (During Phrase Play Busy Out On)	type 1
PLL	PLay L ch	Playback Start - Left channel	type 1
PLR	PLay R ch	Playback Start - Right channel	type 1
FP	Force Play	Playback start	type 2
FPB	Force Play Busy on	Playback start (During Phrase Play Busy Out On)	type 2
RL	Relative time pLay	Playback from the middle of a phrase	type 2
ST	STop	Halting playback/recording	type 1
PE	PausE	Pause and restart playback or recording	type 1

- Recording Commands

RM	Recording standby Mode	Recording Standby Mode	type 2
RE	REc start	Start recording	type 1
AE	Auto inc rEc start	Starting time-stamped recording	type 2
RS	Rec Start	Start recording	type 1/2

- Control Commands

VL	playback VoLume control	Playback volume control	type 2
OB	Output Busy	BUSY control	type 2
OC	Output Cont	CONT control	type 2
TA	Time Adjust	Execute NTP	type 2

Editing Commands

DM	Delete Mode	Enable execution of editing commands	type 1

- Phrase Editing

PD	Phrase Delete	Delete phrase	type 2
PC	Phrase Copy	Copy phrase	type 2

- Card Editing

FM	ForMat	Format card	type 2
CD	Card Delete	Delete card	type 2
CP	Card coPy	Copy card	type 1
SP	Setting coPy	System copy	type 1
LS	phrase Lock Switch	Recorded phrase protect mode	type 2
LW	Lock sWitch	Recorded phrase protect mode	type 2

Setting Commands
- Phrase Settings

SU	phrase Set Up	Phrase settings	type 2
VM	phrase VoluMe set up	Phrase volume settings	type 2
PY	Phrase delaY set up	Phrase delay settings	type 2
PP	phrase Play Point set up	Phrase play point settings	type 2
PR	Phrase Repeat set up	Phrase repeat settings	type 2
LP	phrase LooP set up	Phrase loop settings	type 2
FD	phrase FaDe set up	Phrase fade settings	type 2
PO	Phrase control Out set up	Phrase control out settings	type 2
MP	Midi temPo set up	Midi tempo settings	type 2
PN	Phrase Name set up	Phrase name settings	type 2
PU	Pattern phrase set Up	Pattern phrase settings	type 2
PS	Pattern phrase Set up	Pattern phrase settings	type 2
SS	Song phrase Set up	Song phrase settings	type 2

TT	Time sTamp set up	Phrase settings	type 2

- Card Settings

CV	Card Volume label	Card name setting	type 2

- System Settings

SM	SysteM	System settings	type 2
CI	Control In set up	Control in setting	type 2
DL	Direct pLay	Direct play setting	type 2
CE	Count play sEt up	Program (Count) Playback setting	type 2
MS	Midi Set up	MIDI settings	type 2
ME	Midi sEt up	MIDI settings	type 2
NM	Note Map	MIDI note map settings	type 2
MM	MMc set up	MMC settings	type 2
MT	MTc set up	MTC settings	type 2
BR	Baud Rate	Communication speed setting	type 2
DN	Dual moNo mode set up	Dual mono mode settings	type 2
LT	Line Thru set up	Line thru setting	type 2
VT	Volume Thru set up	Volume thru setting	type 2
BO	Busy Out set up	Busy out setting	type 2
DO	Display Off set up	Display off settings	type 2
DC	Display Contrast	Display contrast setting	type 2
NT	NeTwork	Network data settings	type 2
TO	Time Out	Login timeout setting	type 2
TP	nTP setting	NTP setting	type 2
SC	SChedule setting	Programmable timer setting	type 2

Request Commands

AQ	All reQuest	Reset the phrase output counter	type 2
PQ	Phrase reQuest	Phrase setting contents request	type 2
QQ	phrase reQuest	Phrase setting contents request	type 2
2Q	pattern phrase reQuest	Pattern phrase setting contents request	type 2
3Q	pattern phrase reQuest	Pattern phrase setting contents request	type 2
GQ	sonG phrase reQuest	Song phrase setting contents request	type 2
TQ	Time stamp reQuest	Time stamp request	type 2
CQ	Card reQuest	Card setting contents request	type 2
MQ	Memory reQuest	Card remaining capacity request	type 1
SQ	System reQuest	System setting contents request	type 2
YQ	sYstem reQuest	System setting contents request	type 2
DQ	Direct playback reQuest	Direct playback setting contents request	type 2
UQ	coUnt playback reQuest	Program (Count) playback setting contents request	type 2
IQ	mIdi set up reQuest	MIDI setting contents request	type 2
JQ	midi set up reQuest	MIDI setting contents request	type 2
NQ	Note map reQuest	MIDI note map setting contents request	type 2
LQ	dispLay contrast reQuest	Display contrast setting request	type 1
KQ	networK set up reQuest	Network setting contents request	type 1
AC	ACtive	Activity sensing (Verify AR-3000SD unit activity)	type 1
VR	VeRsion	Version request	type 1

Reply Commands

OK		Reply signifying normal operation	type 0
ER	ERror	Reply to the AR-3000SD when an error has occurred	type 2

 # Commands sent from the AR-3000SD to the external device

Setting Output Commands

- Phrase Settings

SU	phrase Set Up	Phrase setting output	type 2
RU	phRase set Up	Phrase setting output	type 2

PU	Pattern phrase set Up		Pattern phrase setting output				type 2
PS	Pattern phrase Set up		Pattern phrase setting output				type 2
SS	Song phrase Set up		Song phrase setting output				type 2
TI	Time stamp Info.		Time stamp setting output				type 2

- Card Settings

CS	Card Set	Card setting output	type 2
CR	Card Remain	Card remaining capacity output	type 2

- System Settings

SM	SysteM	System setting output	type 2
SY	SYstem	System setting output	type 2
DP	Direct Play	Direct playback setting output	type 2
CE	Count playback sEt up	Program (Count) playback setting output	type 2
MS	Midi Set up	MIDI setting output	type 2
ME	Midi sEt up	MIDI setting output	type 2
NM	Note Map	MIDI note map setting output	type 2
DC	Display Contrast	Display contrast setting output	type 2
NT	NeTwork	Output network settings	type 2
AC	ACtive	Active sensing reply	type 2
VR	VeRsion	version output	type 2

Automatic Transmission Commands

CC	Card Condition	Card insertion status output	type 2
ST	STop	Output at Finish of Playback	type 2
PE	PausE	Output the elapsed time	type 2
AE	Auto inc rEc start	Output the total number of phrases	type 2
%%	%	Card operation progress status output	type 2

Reply Commands

ack/OK		Reply signifying normal operation	type 0
ER	ERror	Reply to the AR-3000SD when an error has occurred	type 2

Caution1:
Some commands have parameters with it.
In this commands list, parameters are omitted.

Caution2:
Type1: Commands with no parameters.
Type2: Commands with parameters

5.2 Characters That Can Be Used in Phrase Names and Card Names

Blank locations in this table cannot be used. However, 20H is used as a space character.

		L	o	w	e	r		4		B	i	t				
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	0																
	1																
H	2		!		#	$	%	&		(	)				-		
i	3	0	1	2	3	4	5	6	7	8	9						
g	4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
h	5	P	Q	R	S	T	U	V	W	X	Y	Z	[		]	^	_
e	6																
r	7																
	8																
4	9																
	A																
B	B																
i	C																
t	D																
	E																
	F																

5.3 Sample Algorithms
The following are some examples of processing algorithms.

5.3.1 Playing Back a Phrase
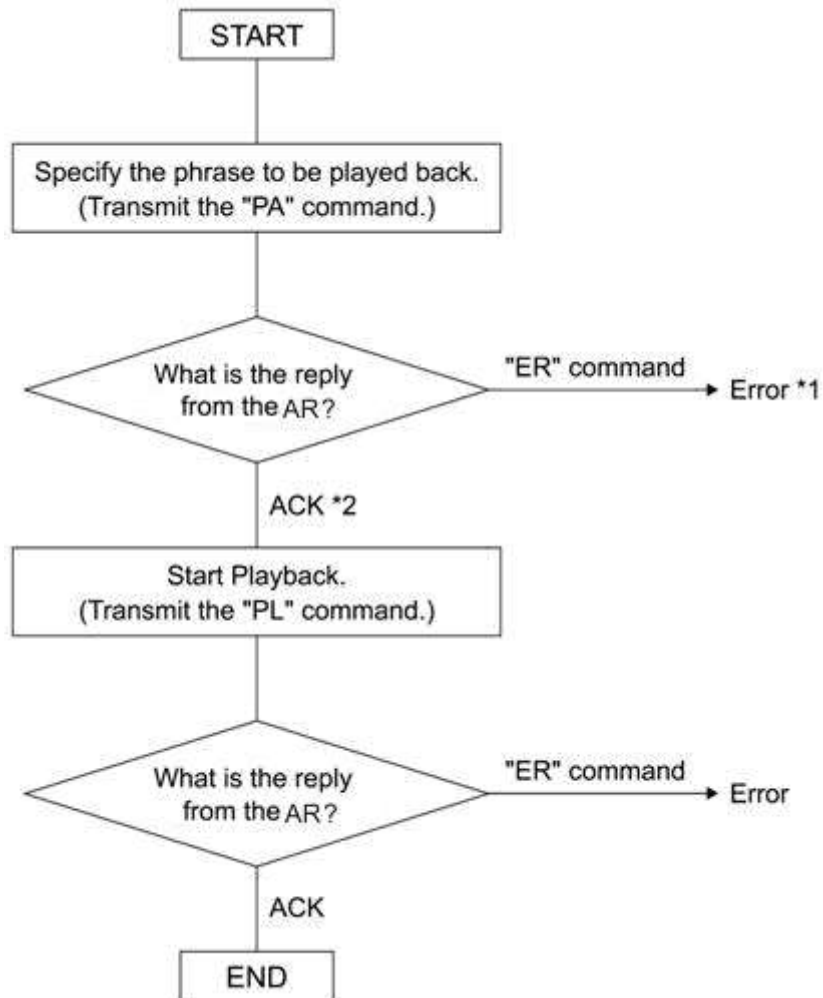
*1 Refer to the error number to determine the cause. Is the command format incorrect?
*2 "OK" will be output if the AR-3000SD correctly recognizes the command.

Note:
 - You can check the operating status by transmitting the AC command.
 - You can stop playback by transmitting the ST command.

5.3.2 Recording (Normal Recording)
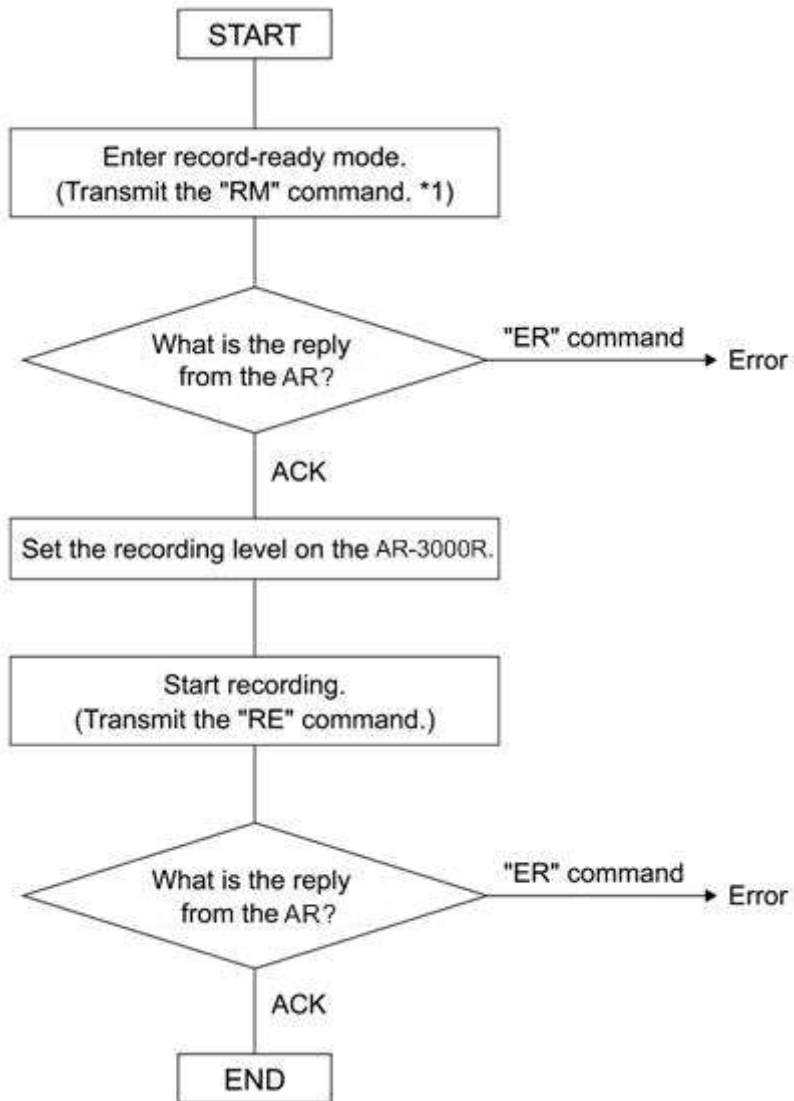
*1 Setting such as RDAC-Grade and RDAC-Mode are made by RM command parameters.

Note:
 - You can check the operating status by transmitting the AC command.
 - You can stop recording by transmitting the ST command.

5.3.3 Recording (Time-Stamped Recording)

*1 Setting such as RDAC-Grade and RDAC-Mode are made by AE command parameters.

Note:
- You can check the operating status by transmitting the AC command.

5.3.4 Verifying the Parameters (Data Settings) of All Phrases Starting with the Lowest-Numbered Phrase

```
                          ┌──────────────┐
                          │    START     │
                          └──────┬───────┘
                   ┌─────────────▼──────────────┐
                   │ Reset the phrase output counter. *1 │
                   │  (Transmit the "AQ" command.)  │
                   └─────────────┬──────────────┘
                         ◇ What is the reply ◇──"ER" command──▶ Error
                         ◇  from the AR?    ◇
                              │ OK
                   ┌──────────▼──────────────┐
                   │ Request phrase parameters.      │
                   │ (Transmit the "QQ" command using function2.*2) │
                   └──────────┬──────────────┘
                  ◇ Was an error returned ◇──YES──▶ ◇ Is the error ◇──NO──▶ Error
                  ◇   from the AR?       ◇           ◇ number 101? ◇
                         │ NO                             │ YES
                   ┌─────▼──────────────┐
                   │ Verify the phrase parameters. │
                   └─────┬──────────────┘
                ◇ Is the phrase Type 1? ◇──NO──▶
                ◇ (It is a Pattern Phrase?) ◇
                         │ YES
                   ┌─────▼──────────────┐
                   │ Request Pattern Phrase parameters. │
                   │ (Transmit the "3Q" command.)  │
                   └─────┬──────────────┘
                  ◇ Was an error returned ◇──YES──▶ Error
                  ◇   from the AR?       ◇
                         │ NO
                   ┌─────▼──────────────┐
                   │ Verify the Pattern Phrase parameters. │
                   └─────┬──────────────┘
                          ┌──────▼───────┐
                          │     END      │
                          └──────────────┘
```
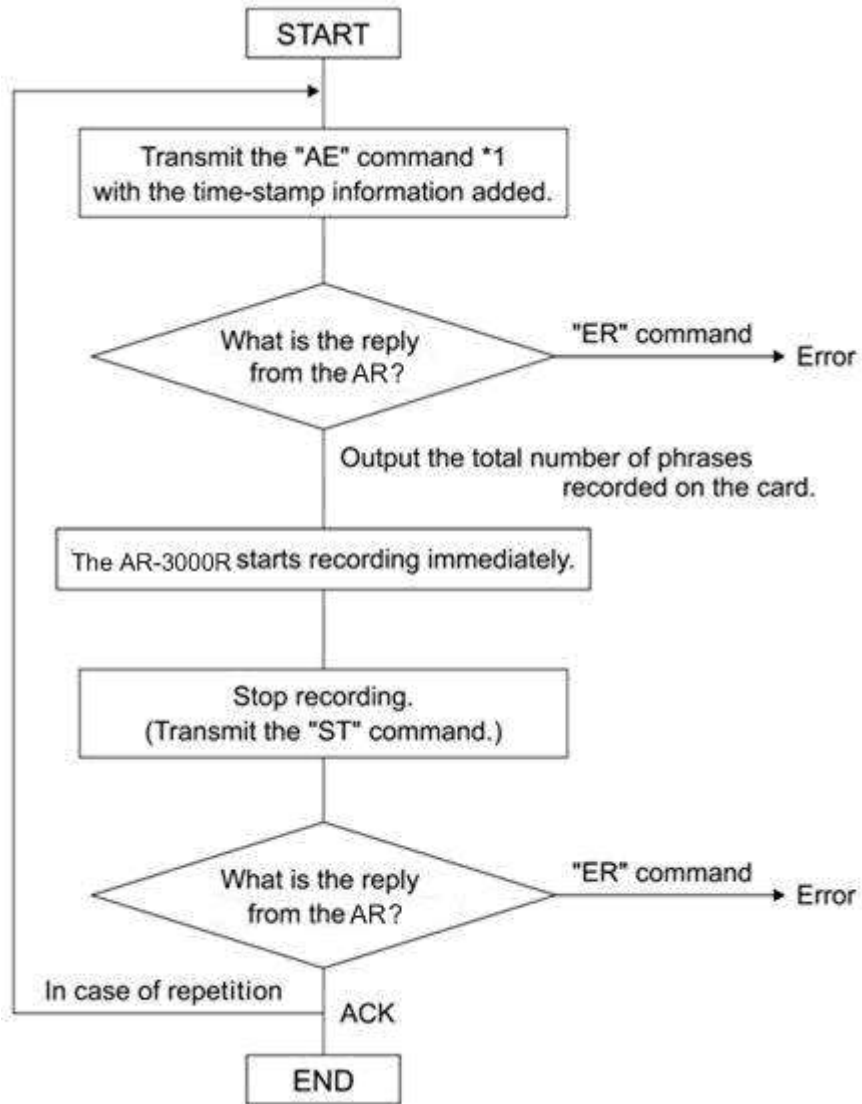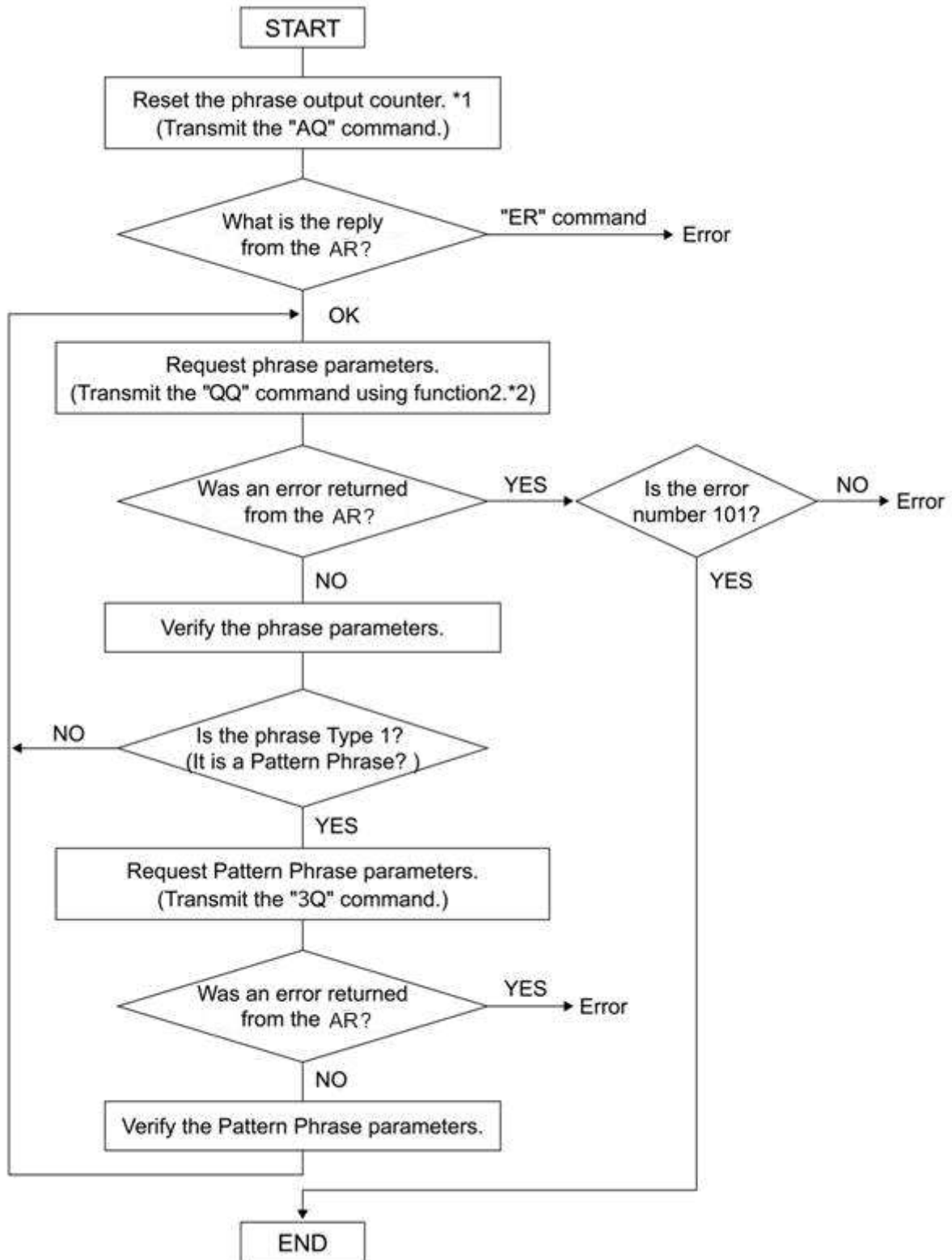
*1 What is the Phrase Output Counter?
The AR-3000SD has an internal counter for phrase output. When a phrase is output, the phrase that corresponds to the AR-3000SD's counter will be output. The maximum value will be the highest phrase number of each card. This will be reset by the AQ command (to the lowest phrase number).

*2 What is QQ Command Function 2?
If the phrase number is not specified by a parameter, the AR-3000SD will automatically increment the phrase output counter, and will output the corresponding phrase. The incremented value will skip phrase numbers which are not recorded yet, and will be up to the next recorded phrase number. If the QQ command is received to request output after the last phrase has been output, the AR-3000SD will output an ER command (Error number 101).

5.3.5 Deleting a Phrase
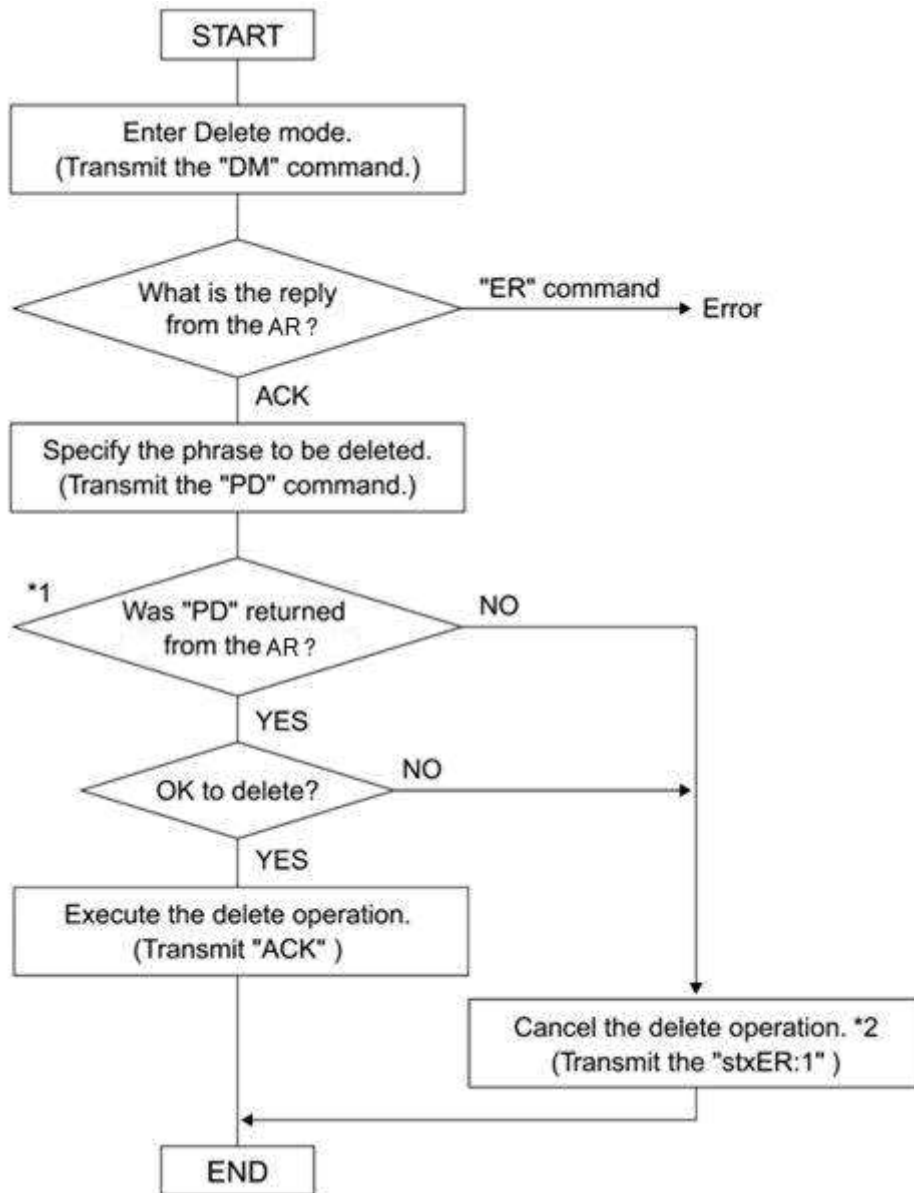
*1 The AR-3000SD will return the same PD command for confirmation.
*2 By transmitting "ER:1:" you can exit Delete mode.

Section 6 Concerning Cards Used with the AR

This section describes the card content that is required when using the FTP function to transfer data on cards used by the AR-3000SD.

6.1 Card Types Used by the AR

Usable cards include cards formatted on the AR-3000SD/3000R/3000/200S/200 in AR-3000 format, and cards formatted on the AR-2000/100 in AR-2000 format.
The cards should contain the following files.

System data files:	Settings (recording settings, control input settings, MIDI settings, RS-232C settings, and system settings)
Phrase data files:	Phrase data for each phrase
Audio phrases:	Actual phrases recorded on the AR
Pattern phrase files:	Pattern phrase registration information
Song phrase files:	Song phrase registration information
MIDI phrase files:	SMF (Standard MIDI Files) Format 0
Command phrase file:	RS-232C control file

* For more on terminology related to the content of each file, refer to the device owner's manual.

6.2 File Organization on AR-3000 Format Cards

Files on cards formatted on the AR-3000SD/3000R/3000/200S/200 are organized as shown in the figure below.


```
/
├── _AR3TDIR.CNF ←── Folder used by the AR-3000 format card
│       ├── _AR3TSYS.CNF ←── AR-3000 format card sysyem data file
│       ├── _AR3TPHR.CNF ←── AR-3000 format card phrase data file
│       ├── _AR3TSY0.CNF ←── AR-3000SD system data file
│       ├── _AR3TCAL.INI ←── AR-3000SD Programmable Timer file
│       ├── _ARP****.TXT ←── Control phrase file
│       ├── _ARP****.PHR ←── Audio, Pattern and Song phrase file
│       ├── _ARP****.MID ←── MIDI phrase file
│       ├── _ARP****.WAV ←── WAV phrase file
│       └── _ARP****.MP3 ←── MP3 phrase file
│                                **** phrase number (0001--1000)
├── _AR3TDI0.CNF ←── Folder used by the AR-3000SD virtual slot
│       ├── _AR3TSYS.CNF ←── system data file for virtual slot
│       ⋮
├── _AR2TSYS.CNF ←── AR-2000/200/1 system data file
├── _AR2TPHR.CNF ←── AR-2000/200/1 phrase data file
├── _ARP****.PHR ←── AR-2000/200/1 Audio, Pattern and Song phrase file
└── _ARP****.PHR ←── AR-2000/200/1  MIDI phrase file
```

File Structure on AR-3000 Format Cards

Important Note

If the _AR3TSYS.CNF and _AR3TPHR.CNF files are present in the _AR3TDIR.CNF folder when an AR-3000 card is inserted in an AR-3000SD/3000R/3000/200S/200, then the _AR2TSYS.CNF and _AR2TPHR.CNF files are disregarded, and the card is recognized as an AR-3000 format card. If the _AR3TSYS.CNF and _AR3TPHR.CNF files have been deleted from the card, then the card is no longer recognized as an AR-3000 format card, so be sure not to delete the _AR3TSYS.CNF and _AR3TPHR.CNF files.

6.3 Using FTP Functions to Change the Content of a Card Inserted in an FTP-Connected Device

First, set up the same environment (same device and card with the same content) as the device connected via FTP.

* If the card does not contain the same data, then use a device identical to the one connected via FTP to create a card in the same format as that in the original device. Then, using FTP, copy the data from the card in the FTP-connected device to the newly formatted card.

Into the prepared device, insert the card which is identical in content to the one in the FTP- connected device, then perform the modifications you require. Possible modifications are described in the following.

6.3.1 Changing the Settings

Change the settings on the prepared device, then transfer the card's system data file.

6.3.2 Changing Phrase Data

Change the phrase data on the prepared device, then transfer the card's phrase data file.

6.3.3 Changing Phrase Files

Change the phrase data on the prepared device (add, erase, overwrite, etc.).

If adding or overwriting, then transfer all edited phrase files (_ARP****.PHR, _ARP****.WAV, _ARP****.MID).

If erasing data, delete the phrase file (_ARP****.PHR, _ARP****.WAV, _ARP****.MID) you want to erase on the device connected via FTP.