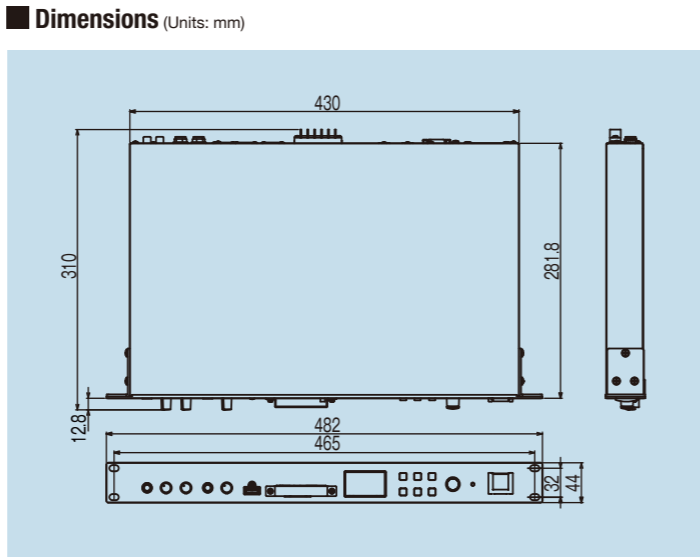


Specifications	
Recorder Part	
Data Type (Recording)	<ul style="list-style-type: none"> <li>• <b>WAV</b> Sampling frequency: 32 k, 44.1 k, 48 k, 96 kHz Bit depth: 16, 24 bits Channels: mono, stereo</li> <li>• <b>MP3 (MPEG-1 audio layer 3)</b> Sampling frequency: 32 k, 44.1 k, 48 kHz Bit rate: 128 k, 192kbps, 320 kbps Channels: stereo</li> <li>• <b>MP3 (MPEG-1 audio layer 3)</b> Sampling frequency: 32 k, 44.1 k, 48 kHz Bit rate: 64 k, 96kps, 160 kbps Channels: mono</li> <li>• <b>Standard MIDI Files (Format 0)</b></li> </ul>
Data Type (Playback)	<ul style="list-style-type: none"> <li>• <b>WAV</b> Sampling frequency: 8 k, 16 k, 22.05 k, 32 k, 44.1 k, 48 k, 96 kHz Bit depth: 16, 24 bits Channels: mono, stereo</li> <li>• <b>MP3 (MPEG-1 audio layer 3)</b> Sampling Frequency: 32 k, 44.1 k, 48 kHz Bit rate: 32 k--320 kbps or VBR (Variable Bit Rate) Channels: mono, stereo</li> <li>• <b>RDAC (Roland Digital Audio Coding)</b> RDAC Grade (Sampling frequency): 8 k, 16 k, 22.05 k, 32 k, 44.1 k, 48 kHz RDAC Mode: MODE1, MODE2, MODE3, LINEAR (16-bit linear), H-LINEAR (24-bit linear) RDAC Type (Channels): mono, stereo</li> <li>• <b>Standard MIDI Files (Format 0)</b></li> <li>• <b>RS-232C command</b></li> </ul>
Number of phrases	Maximum 4000 phrases (using 1000 x 2 phrases format CF card and SD/SDHC memory card)
Recording Media	CF Card: up to 32 GB, SDHC Memory Card: 4--32 GB, SD Memory Card: up to 2 GB
Maximum Recording Time	171 hours (using 1GB CF card and SD-04G 4GB SDHC memory card, MP3, 64 kbps, mono) * This recording time is approximate. Actual results may vary somewhat. * When recording in stereo files, the maximum recording time would be shorter than above.
Input/Output	
MIC jack	1/4-inch TRS phone type (balanced, unbalanced connection is possible) Input Sense: -43 dBu (unbalanced) Nominal Input Level: -38 dBu (INPUT VOLUME - MIC at 8 position, unbalanced) Maximum Input Level: -5 dBu (unbalanced) Input Impedance: 2 k ohms Recommended Source Impedance: 1 k ohms or less
LINE IN jacks (MONO/L, R)	RCA phono type (unbalanced) Input Sense: -15 dBu Nominal Input Level: 0 dBu (INPUT VOLUME - LINE at 5 position) Maximum Input Level: +20 dBu Input Impedance: 20 k ohms Recommended Source Impedance: 2 k ohms or less
BALANCED OUTPUT jacks (L, R)	XLR type (balanced), 1/4-inch TRS phone type (balanced) Nominal Output Level: +10 dBu (OUTPUT VOLUME at 5 position) Maximum Output Level: +22 dBu Output Impedance: 600 ohms Recommended Load Impedance: 10 k ohms or greater
MONO OUT (CONTROL INPUT/ OUTPUT B connector)	DB-25 type (unbalanced) Nominal Output Level: +4 dBu Maximum Output Level: +16 dBu Output Impedance: 300 ohms Recommended Load Impedance: 10 k ohms or greater
PHONES jack	Stereo 1/4-inch phone type Maximum Output Level: 90 mW + 90 mW (1 kHz, 40 ohms load, typ.) Output Impedance: 100 ohms Recommended Load Impedance: 30 ohms or greater
AES/EBU OUT jack	XLR type (conforms to IEC 60958-4)
Other Terminals	<ul style="list-style-type: none"> <li>• CONTROL INPUT/OUTPUT A connector: 5 pin terminal block with M3 screws</li> <li>• CONTROL INPUT/OUTPUT B connector: DB-25 type</li> <li>• LAN port: RJ45 type Standard: IEEE802.3u (100BASE-TX), Transmission Speed: 100 Mbps</li> <li>• MIDI (OUT/THRU, IN) connector</li> <li>• RS-232C connector: DB-9 type Transmission method: Start-Stop synchronous system (Asynchronous) Duplex Baud rate: 4800, 9600, 14400, 19200, 31250, 38400, 57600, 115200 bps Parity: none, Data length: 8 bits, Stop bit length: 1 bit, Code set: ASCII</li> <li>• USB port: USB Type A USB 1.1, USB Mass Storage Class, USB HID Class * USB HDD cannot be used.</li> </ul>
Residual Noise Level	BALANCED OUTPUT: -80 dBu or less (Input short, INPUT VOLUME - MIC at 0 position, INPUT VOLUME - LINE at 5 position, OUTPUT VOLUME at 5 position, IHF-A, typ.)
Display	Graphic LCD 128 x 64 dots
Power Consumption	18 W
Dimensions	482 (W) x 310 (D) x 44 (H) mm 19 (W) x 12-1/4 (D) x 1-3/4 (H) inches, (EIA-1U rack mountable)
Weight	3.3 kg 6 lbs 14 oz
Operating Free-air Temperature Range	0 - 40 degrees Celsius, 32 - 104 degrees Fahrenheit
Accessories	Owner's Manual, Power cord, Rubber Foot x 4, Card Protector x 1 (with 2 Screws)

Recording Times (Units h:m:s)						
SD-04G (4GB)						
Format	Bit depth	Channels	Sampling frequency			
			96kHz	48kHz	44.1kHz	32kHz
WAV	24bits	Stereo	01:54:00	05:48:00	04:09:00	05:43:00
WAV	24bits	Mono	03:48:00	07:37:00	08:18:00	11:26:00
WAV	16bits	Stereo	02:51:00	05:43:00	06:13:00	08:34:00
WAV	16bits	Mono	05:43:00	11:26:00	12:27:00	17:09:00
MP3	320kbps	Stereo	27:27:00			
MP3	160kbps	Mono	54:55:00			
MP3	128kbps	Stereo	68:38:00			
MP3	64kbps	Mono	137:17:00			

\* These recording times are approximate. Actual results may vary somewhat.  
\* If more than one recorded file exists, the total recordable time will be less.



A dependable digital audio recorder/player featuring programmable timer and LAN control.



# AR-3000SD

## AUDIO RECORDER

# New advances in sound quality and features, with expanded compatibility.



## AR-3000SD AUDIO RECORDER

### 24-bit recording and playback at 96 kHz for higher sound quality

Support for 24-bit, 96-kHz audio achieves even higher sound quality for both recording and playback. Use of AES/EBU output connectors also enables high-quality digital output. XLR connectors have been added for audio output, enabling worry-free use in a wide array of applications.

For storage, in addition to Compact Flash memory, the AR-3000SD is also equipped with a slot for an SD memory card. Using a single memory card as two virtual cards lets you record up to 2,000 phrases. You can even back up and restore data using a USB flash drive.

In addition to uncompressed WAV, MP3 format has been added for use in recording and playback. By accommodating a full range of formats without sacrificing compatibility, the AR-3000SD meets a diverse array of needs and setups.

### A full range of flexible editing features

Editing operations are simple and intuitive. The AR-3000SD offers nondestructive editing features that allow for editing phrases just the way you want. These functions include Truncate for cutting unneeded portions before and after phrases, and Phrase Combine for joining multiple phrases into a single new one.

#### AR Series Card Data Editor ARE-3000 for Windows



- Displays the settings data and phrase information stored on the AR series unit's memory card on a single screen. Editing is accomplished with ease, using the mouse and keyboard.
  - AR data on a memory card can be backed up to the computer and restored from it just as easily.
  - Features a simple player that lets you check recorded audio.
  - Lets you convert WAV files to AR phrase data (RDAC) and AR phrase data to WAV files.
  - The software can be downloaded free of charge from the Roland website, [www.rolandsystemsgroup.net](http://www.rolandsystemsgroup.net).
- \*Use an AR series device to format the card.

### Built-in yearly programmable timer

In response to wide demand, a scheduler has become a standard feature, eliminating the need to connect an external timer. This allows control by time or calendar. Time adjustment using Network Time Protocol (NTP) client functionality is also possible, for precisely timed automation announcements at fixed intervals. Using just the AR-3000SD, you can create yearly programs for important announcements for tasks that must be played back at set intervals and times.

#### ■ Single-day schedules

Time	Phrase Number	Controlling
09:00	A0001	Play
10:00	B0010	Play
11:30	B0010	Stop
12:00	A0002	Play
15:00	A0010	Play
18:00	A0003	Play
23:50		Time adjustment

Time	Phrase Number	Controlling
09:00	A0010	Play
10:00	B0100	Play
11:30	B0100	Stop
12:00	A0020	Play
23:50		Time adjustment

Time	Phrase Number	Controlling
09:00	A0500	Play
18:00	A0500	Stop
23:50		Time adjustment

#### ■ Weekly schedule

Sun	Mon	Tue	Wed	Thu	Fri	Sat
2	1	1	1	1	1	2

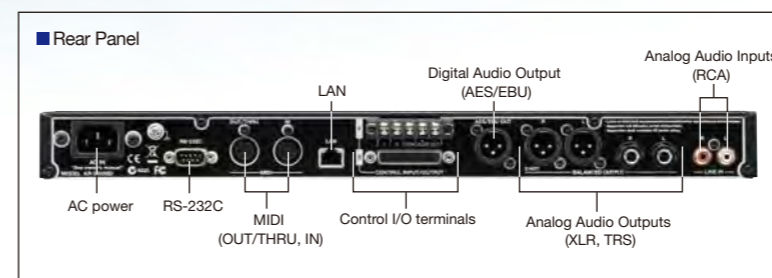
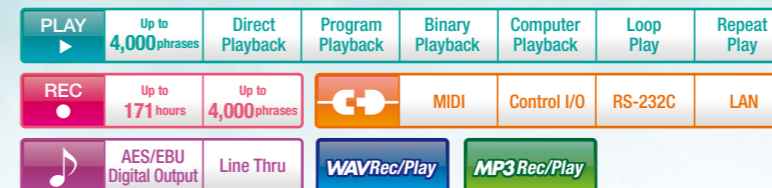
#### ■ Yearly schedule

April, 2014												
1	2	3	4	5	6	7	8	9	...	29	30	
Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	...	Tue	Wed	
				14								

The programmable timer feature can store in memory 14 days worth of single-day schedules containing 50 tasks each. This lets you do things like assign single-day schedules to different days of the week to create a weekly schedule, or assign them to specific months and days and create a yearly schedule.

### Endless control and performance possibilities using MIDI and RS-232C

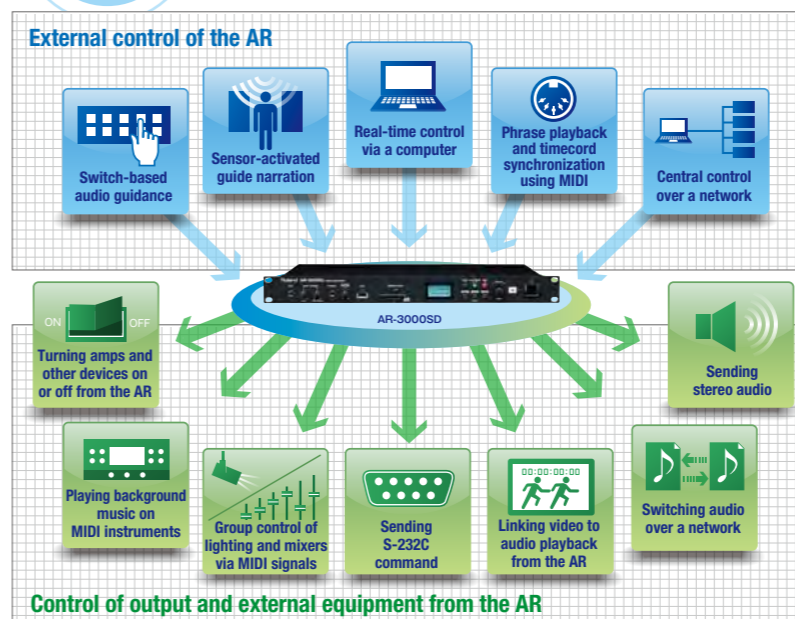
MIDI data can be played back and captured as well as playback of RS-232C commands. Using the AR-3000SD in combination with an external sound module or synthesizer, for instance, let's you reproduce performances that are direct, with total control. With direct playback of RS-232C commands the AR-3000SD can control V-Mixers, video switchers like the Roland V-800HD, and a host of other audio, video and lighting equipment. This along with MIDI control enables the AR-3000SD to be the nucleus of a full production environment.



### Network features supporting higher efficiency come standard.

A rich array of playback and control formats let you configure systems that are simple and intuitive. A LAN (local area network) port is standard and lets you achieve simple, efficient systems matched to individual setups. Web server functionality has been added enabling settings and control from a computer anywhere on the network. The unit also functions as a DHCP client which eliminates the trouble of obtaining and assigning IP addresses.

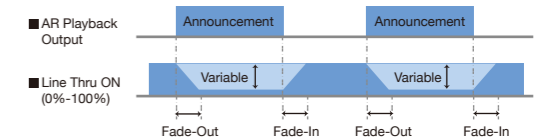
### A rich array of playback and control formats enabling the configuration of a variety of systems.



### Choose from a diverse selection of playback modes to match any need.

#### The Line Thru feature lets you mix in external audio during playback.

During audio-phrase playback, you can mix in audio from LINE IN and output the results. For instance, this lets you mix background music or other audio into in-store announcements. The volume level of audio input via LINE IN can also be adjusted independently, so you can even add fade-ins and fade-outs.



#### External control of playback using the connection terminals

The AR-3000SD lets you pick the optimal playback scheme for the application or system setup you're using. This lets you control the AR in whatever way you like from an external device attached to a control input connector or the RS-232C port on the back of the unit.

#### Direct Playback

Assigning the phrases you select to respective control connectors enables you to play the phrase assigned to each number simply by inputting a direct control signal. This is useful when you want to use switches, relays, sensors or other devices to specify a desired phrase directly.

#### Program Playback

You play back a group of phrases in a preset sequence by inputting a control signal to the START port. Because the order and duration of the phrases are predetermined, this is a convenient option when you have only one contact, such as a timer or switch, with which to trigger this action.

#### Binary Playback

In binary playback, phrases are selected by means of binary (base 2) control signals, with the selected phrases played back when control signals are input to the START port. This lets you specify all phrases with control signals (from a switch or other ON/OFF signal device) without the use of computers or other complicated equipment.

#### Computer Playback

With the AR-3000SD, you can control the unit from a computer or other external device connected to it by an RS-232C cable. The RS-232C connector is used to connect to a computer or other peripheral equipment. The AR-3000SD is equipped with a D-sub 9-pin type RS-232C connector.

#### MIDI Playback

This plays back audio and MIDI phrases using MIDI signals from an external MIDI device as control signals. Phrase playback can be controlled by the different types of MIDI messages, including Note On/Off, Note On Velocity, Panpot, and Expression. Note that MIDI phrases cannot be recorded or played back simultaneously with audio phrases or other MIDI phrases.

#### Control loop, repeat, and other styles of playback.

You can specify loop play, repeat play, and other variations in playback styles in addition to ordinary phrase playback.

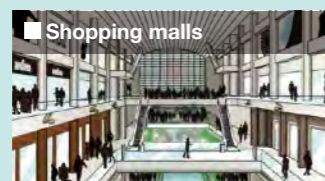
#### Loop Play

You can specify loop playback of the desired passage of a phrase by making settings on the AR unit. With loop play, playback between a set start point and end point is repeated for a specified number of times.

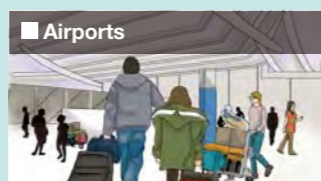
#### Repeat Play

You can specify repeating playback of a desired phrase by making settings on the AR unit. The repeated passage, repeat interval, and number of repetitions are all controllable.

### A full range of features and high reliability make the AR-3000SD perfect for any site and application.



For creating a comfortable customer-service environment through pleasant background music.



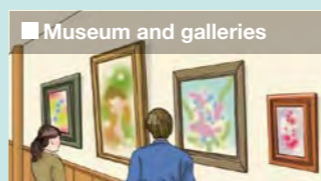
For broadcasting announcements and information at fixed intervals in airports, train stations, hospitals, care centers, and other public facilities.



For creating excitement and fun at theme parks, on rides, and other amusement facilities.



High sound quality for station-ID jingles and other applications that demand precision.



For artwork and museum navigational guidance, and to create an appropriate ambience.



For automating productions and informational narration at event venues and showrooms.