DA-6400

64-track Audio Recorder

The DA-6400 is a universal recording system for up to 64 audio tracks received from a Digital Audio Workstation or live mixing console. The recorder can be used with a variety of interface boards like MADI, Dante or AES/EBU to integrate flawlessly into virtually any environment. Moreover, Tascam plans to maintain the recorder as a living system by adapting it continuously to new interfaces and systems according to the needs of users.

The DA-6400 uses a special real-time operating system and highly reliable SSD drives for storage. A model with rundant power supply is also available (DA-6400dp).

Details

High stability and high reliability in both recording and playback

Embedded operating system for high stability and simple standalone operation

The DA-6400 uses an embedded operating system for quick startup and simple operation. Stable recording is possible when using high sampling rates with large amounts of data transmission. Furthermore, files are saved approximately every 20 seconds during recording, so file losses due to unexpected power supply interruptions are kept to a minimum.

Supports recording/playback of 64 channels at 48 kHz or 32 channels at 96 kHz

PCM recording/playback from 48 kHz to 96 kHz maximum is supported for compatibility with existing recording studio systems, PA systems and other recording situations where high sampling rates are being utilized.

Note: 32 channels are supported at 96 kHz/24-bit resolution.

Solid-state drives (SSD) as recording media

The DA-6400 uses solid-state drives (SSD), which have excellent vibration and environmental resistance and offer simple, maintenance-free operation. It includes a Tascam SSD designed and thoroughly tested using DA-6400 units. Component parts, including IC control elements, are carefully selected and constantly tested lot by lot in cooperation with the parts manufacturers to maintain quality specifications.

By installing SSDs into removable AK-CC25 storage cases and using the swappable bay in the DA-6400 unit, it is easy to switch and use multiple drives. Since the DA-6400 is hot-swappable, it is possible to remove and load SSDs stored in AK-CC25 cases even when the power is on, making rapid switching of media possible. SSDs stored in AK-CC25 cases can be connected to computers by USB and used as external drives.

Note: One AK-CC25 and one TASCAM SSD are included with each DA-6400/DA-6400dp unit. Additional cases and drives can also be purchased separately.

Stable digital signal control with 1 ppm accuracy

Because the clock generator can influence digital signal quality, the DA-6400 employs a temperature-compensated crystal oscillator (TCXO) that boasts a high precision of ±1 ppm (0.048 Hz at 48 kHz).

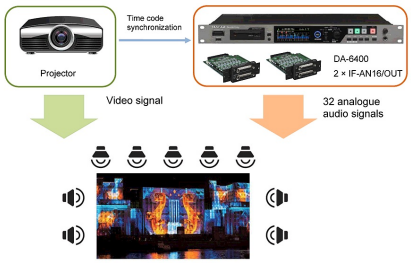
Additional model featuring a redundant power supply

In addition to the DA-6400 standard model, the lineup also includes the DA-6400dp which has two power supply circuits built-in to allow redundant power from another AC circuit. This provides failsafe operation in case AC power is interrupted on one of the circuits.

1U size enables installation where rack space is at a premium

A single DA-6400 can record and play back up to 64 channels but requires only a small amount of space for installation due to its compact 1U design.

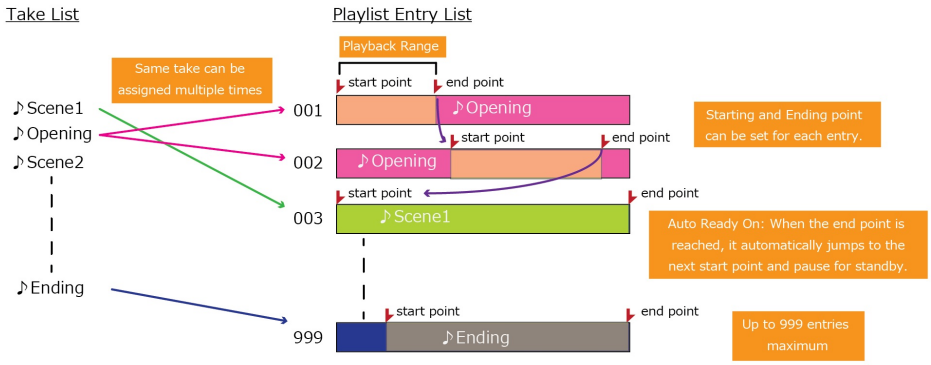
Ideal multi-channel playback device



The DA-6400 is a perfect solid-state, compact playback system for theatres, theme parks, and similar venues. By fitting two IF-AN16/OUT analogue output cards, the DA-6400 can supply up to 32 different playback signals for surround sound and impressive special effects. For audio-visual presentations in event and amusement parks the recorder can also synchronise the projector's video signal to the audio signal.

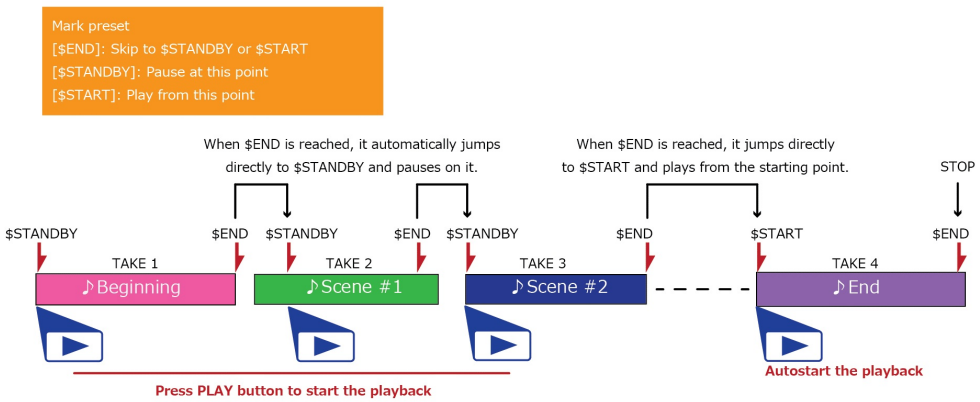
Playlist function to play audio in the order you want

The playlist function available since firmware v2.00 makes it possible to assign takes to a list in the order you want, change playback order, and nondestructively set playback ranges of every audio entry without affecting the audio files. In addition, loading and writing of JPPA flash start playlist files is supported. After a take from a playlist ends, when Auto Ready mode is enabled, the unit automatically jumps to and pauses at the beginning of the next starting point.



Theater Play function to play selected ranges of multiple takes in order

The theatre play function introduced with firmware v2.00 allows marks to be set for playback starting and ending points on each take. This makes it possible to trigger marked playback ranges of multiple takes in order. In this mode, the unit enters playback standby at the first mark and starts playback when a play trigger is received. When the end of the range is reached, the unit stops playback automatically, locates the beginning of the next range and reenters standby. In addition to ordinary playback operations, external control using the serial or parallel port can also be used to send play triggers. In this way, you can assemble playback material according to your wishes and play it back in the desired order either manually or automatically.



DA-6400 as a timecode synchronization master device

Using LTC (SMPTE timecode), the DA-6400 can be used as a timecode synchronization master device. The supported timecode frame rates are 24, 25, 29.97DF, 29.97NDF, 30DF and 30NDF.

Perfect as a backup recorder

Backup operation synchronized to ProTools

The DA-6400 is capable of receiving timecode input from a ProTools system for backup recording with synchronized operation. Using serial/parallel control, you can control DA-6400 recording operations from ProTools.

With a studio/live system that supports MADI, you can use an IF-MA64/EX audio interface card that supports MADI thru output to include a DA-6400 between a mixing desk and ProTools (or another main recording system) allowing you to add a backup system easily. Also, in a system that supports Dante/AES67 and other interfaces, a compact DA-6400 can be used instead of a second complete system.

Perfect as a backup mobile recorder in a variety of live recording situations

The main unit of the DA-6400 weighs 3.5 kg, enabling great mobility when used as a backup recorder – perfect for transport to a variety of locations. It can also be used in applications where recording/playback of rehearsal audio is required, or where a ‘virtual soundcheck’ is needed – as in live touring.

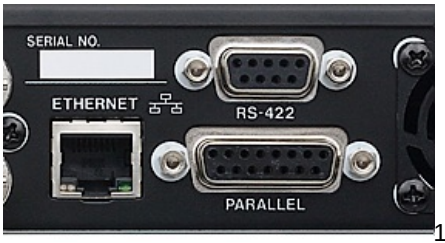
BWF format for easy data transfer to DAW software

BWF is supported as a recording file format, and time information can be stored in files, making file searches and importing files into ProTools and other DAW software easy.

Note: Time information input through the TIMECODE IN can also be captured and written to files.

Includes remote control and LAN function

1000BASE-T Ethernet and file transfer by FTP



1000BASE-T gigabit LAN is supported, and the work protocol is FTP (File Transfer Protocol). Access is possible from any kind of system, including Windows, Macintosh and UNIX.

External parallel/serial control

In addition to remote control and monitoring using the LAN function, external remote control using parallel and RS-422 serial communication interface (2P protocol) is supported.

SNTP time synchronization

With SNTP support, the DA-6400 can automatically update its internal clock at regular intervals over a network, so accurate time information can be maintained.

Card slots for audio interfaces

Two audio interface slots provide input and output flexibility

The DA-6400 has two rear audio interface slots. By adding interface cards (sold separately), flexible support for input and output options is possible. For example, signal conversion of Dante/AES67 input to MADI output is possible. In addition, one slot could use MADI/Dante to record 56 channels as the main, while the other slot could use AES/EBU to record 8 channels as the sub. Furthermore, by using two AES/EBU interface cards, the maximum number of simultaneous input and output channels can be increased to 32.

MADI, Dante/AES67, AES/EBU and other digital input and output plus analogue output

Audio interface cards can be swapped from their slots, enabling flexible support for different types. The lineup of interface cards includes solutions for MADI, Dante/AES67, AES/EBU, and a planned analogue output and AVB to complete the line. Support is available for the recording studio and live systems of major manufacturers, so you can choose interface cards according to the application requirements.

Note: When using two AES/EBU cards, a maximum of 32 inputs and outputs at 96 kHz/24-bit resolution is possible.

Features at a glance

- Supports recording/playback in PCM format of 64 channels at 48 kHz/24-bit or 32 channels at 96 kHz/24-bit
- Capable of backup recording with operation synchronized to ProTools systems
- 2.5-inch Tascam SSDs used as recording media featuring excellent vibration and environmental resistance as well as maintenance-free operation (more information below)
- With BWF support, time information can be stored in files
- With two slots, audio interface cards (sold separately) can be used for flexible input and output options
    - MADI input/output/thru support when IF-MA64/EX interface card (sold separately) installed
    - MADI input/output support when IF-MA64/BN interface card (sold separately) installed
    - Dante and AES67 input/output support when IF-DA64 interface card (sold separately) installed
    - AES/EBU input/output support when IF-AE16 interface card (sold separately) installed
    - AVB support planned for the future
- Stand-alone use possible with simple operations for startup, recording and playback
- Usable as a timecode synchronization master device
- Parallel remote control supported
- RS-422 serial remote control supported (9-pin serial protocol compliant)
- LAN (1000Base-T Ethernet) built-in, allowing file transfer, remote control and monitoring over a network
- SNTP server functions supported for automatic adjustment of the internal clock over a network
- Video reference (NTSC/PAL blackburst signals and HDTV Tri-level signals) and word clock input and output/thru
- Remote control applications for iPad and computer
- Firmware upload possible using USB port
- Colour LCD with high legibility (320×120 pixels)
- IEC 3-pin inlet
- AC power redundancy built in (DA-6400dp only)

- EIA 1U rackmount size

New functions with firmware version 2.00

- Playlist are supported to allow takes to be assigned in any order and playback areas for each take to be set
- A theatre play function allows to mark playback starting and ending points for each take and to play these set parts of multiple takes in order
- An AUTO READY function can put the unit into playback standby at the beginning of the next take after a take completes playback
- Timecode-synchronized playback of all takes in the current folder
- Playback of WAV files in 32-bit PCM and 32-bit floating formats
- Sorting functions allow the take list to be ordered by take timecode or take name
- Pressing SHIFT+MENU on the homescreen now opens a menu with operations for the current take or playlist
- The menu can be user-configured to show only selected menu pages
- A network connection with the DA-6400 can now be achieved easily from macOS and Telnet as well as VNC and FTP apps that support mDNS
- The built-in VNC server now supports two types of compressed transmission formats
- The SNTP menu page now shows the current date and time
- The INFORMATION screen now shows the current folder name
- A mark is now set automatically when a buffer overflow occurs during recording
- Change in display when master clock is not locked
- Track names and other meta data will now be added to the BEXT chunk data of BWF files
- The iXML chunk data of track names and other meta data will now be added to BWF files

New functions with firmware version 2.10

- A cascade function allows simultaneous recording/playback operations on two units
- The INFORMATION screen now shows the cascade status

Options

IF-MA64/EX: 64-channel redundant (in/out/thru) MADI optical/coaxial interface card

IF-MA64/BN: 64-channel MADI coaxial interface card

IF-DA64: 64-channel Dante/AES67 interface card

IF-AE16: 16-channel AES/EBU interface card

IF-AN16/OUT: 16-channel analogue output card

TSSD-240A: 240-GB Serial ATA SSD

TSSD-480B: 480-GB Serial ATA SSD

AK-CC25: SSD storage case for DA-6400 series

DA-6400 Control for iPad: Remote App to monitor and control the Tascam DA-6400/DA-6400dp

Audio File Manager: Audio File Browser With Waveform Display

Related products

CG-2000: Master Clock Generator

SB-16D: Dante Stage Box (16-in/16-out)

Sonicview 24: Interactive Digital Mixing Station

Specifications

General

Recording media	SSD/HDD
File system	FAT32
File format	BWF format (wav extension)
Number of channels	64 channels maximum (44.1/48kHz sampling frequency) 32 channels maximum (88.2/96kHz sampling frequency)
Quantization bit depth	16/24-bit
Sampling frequencies	44.1 kHz, 48 kHz, 88.2 kHz or 96 kHz
Clock references	INTERNAL, WORD IN, VIDEO IN, SLOT1 IN, SLOT2 IN
Timecode frames	23.976F, 24F, 25F, 29.97DF, 29.97NDF, 30DF, 30NDF

Analogue output

Headphones output (PHONES)	6.3-mm standard stereo jack
Maximum output level	45 mW + 45 mW or higher (THD+N 0.1 % or less, 32 Ω load)

Other inputs and outputs

USB port	USB 2.0 A type
Protocol	USB 2.0 Hi Speed (480 Mbps)
Timecode input (TIME CODE IN)	BNC
Signal voltage amplitude	0.5–5 Vpp
Input impedance	10 kΩ
Format	SMPTE 12M-1999 compliant
Timecode output (TIME CODE OUT)	BNC
Signal voltage amplitude	2 Vpp
Output impedance	600 Ω
Format	SMPTE 12M-1999 compliant
Word/video clock input (WORD/VIDEO IN)	BNC
Signal voltage amplitude	0.5–5 Vpp (WORD IN) 1 Vpp (VIDEO IN)
Input impedance	75 Ω ±10% (termination resistance on)
Input frequency (WORD)	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Input signal (VIDEO)	24/25/29.97/30-frame (NTSC/PAL black burst, HDTV tri-Level)
Word/video output/through (WORD/VIDEO THRU/OUT)	BNC (throughput for video signal only)
Signal voltage amplitude	5V TTL equivalent
Output frequency (WORD)	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
Network connector (ETHERNET)	RJ45
Compatible standards	100BASE-TX, 1000BASE-T
RS-422 connector	9-pin D-sub (female, inch-standard)
PARALLEL connector	15-pin D-sub (female, inch-standard)

Power supply and other specifications

Power requirements	AC 100-240 V, 50/60 Hz
Power consumption	21 W (with IF-MA64/EX installed)
Dimensions (width × height × depth)	483 mm × 45 mm × 305 mm
Weight	DA-6400: 3.9 kg DA-6400dp: 4.0 kg (without I/O card or SSD/HDD case)
Operating temperature range	0–40 °C

Design and specifications subject to change without notice.

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