

# DR-100MKIII

## Professional Handheld Recorder



Multi-lingual menu: EN, DE, FR, IT, ES, JP

The DR-100MKIII is Tascam's top-of-the-line portable, delivering the best audio performance in the history of Tascam stereo handheld recorders. Designed to meet the needs of the most demanding audio designers and engineers, this third generation of the DR-100 combines robust reliability, an easy-to-use interface and studio-quality sonic performance.

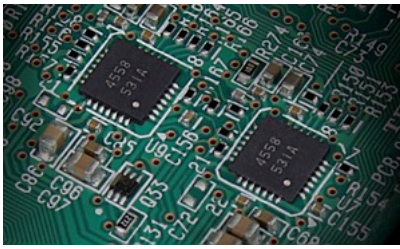


You can record directly from the built-in uni-directional or omni-directional stereo microphones, connect your own mics to the rugged locking Amphenol XLR/TRS connectors, use a camera microphone or line source for recording or record from a digital SPDIF source. 24 or 48 volts of Phantom power on the XLR inputs are available for the use of studio condenser mics and Mid/Side microphone configurations can be decoded before or after recording. This ensures that virtually all fields of application are covered – from music, speech and atmosphere recordings to meeting minutes and live concert recordings.

Many other improvements and new features as well as the multilingual menu make the DR-100MKIII an easy-to-use companion for sound recordings at the highest level.

# Details

## World-class audio performance



**High-quality converters**

Used in a variety of combinations, depending upon the selected function, the DR-100MKIII features dual AKM AK4558 converters with VELVET SOUND architecture, providing both high sound quality and low power consumption, achieving a signal-to-noise ratio of 102 dB.

The dual ADC mode uses two AK4558 AD converters in parallel. Signal-to-noise ratio is maximized and audio fidelity is improved, delivering an S/N ratio of 109 dB as compared to the (already excellent) 102 dB achieved when recording in standard mode.

**Note:** As the S/N ratio when recording exceeds the S/N ratio of the entire circuit, data recorded in dual mono ADC mode will be limited to an S/N ratio of 102 dB when played back on the DR-100MKIII. This does not affect the S/N ratio of the actual file, which is maintained at 109 dB.



**XLR/TRS inputs and low-noise HDDA preamps for external microphones**

The XLR/TRS inputs, used to connect external mics, deliver the highest sound quality and lowest noise of any Tascam Handheld Digital Recorder. HDDA (High Definition Discrete Architecture) mic preamps are also included to maintain a pristine audio signal path throughout.

## High sample rates for high-definition recordings

The DR-100MKIII supports high-definition recording at both 96 kHz / 24 bits and 192 kHz / 24 bits, ensuring that remote recordings achieve the same sonic fidelity as their studio-born counterparts.

## Onboard dual (directional/omnidirectional) stereo microphones

A newly designed microphone housing for the directional mics is based on exhaustive research of previous Tascam handheld recorders and achieves the perfect marriage of protection and performance. Similarly, the omnidirectional stereo microphone setup accepts sound pressure levels up to 125 dB SPL – able to withstand virtually any audio environment.

An integrated shock mount structure for the directional stereo microphone suppresses unwanted vibration and handling noise.



## Reliability and features designed for professionals in the field

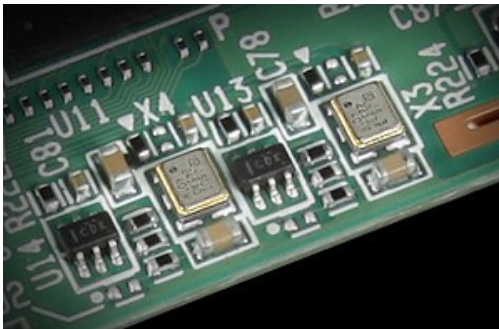


### Redundant power supply for long-term operation

With a dual battery structure that allows the built-in high-capacity lithium-ion battery to be used in concert with AA batteries, operation is possible for extended periods of time. This ensures that the DR-100MKIII is ready to go when you are. Additionally, the recorder can be rapidly charged by connecting an AC adapter and even support USB Bus power from an external battery pack commonly used to charge mobile phones and tablets.

### Dual Level recording helps to protect your recordings

The Dual Level Recording function simultaneously records a secondary backup file at a lower gain level than the primary recording. This safety file, recorded at a 12 dB lower level protects your recording session from unexpected volume spikes and accidental overload.



### High-precision clock ensures stability when combining recordings with other material

The precision of the built-in clock is crucial when digital recordings made on what device are to be used in conjunction with materials recorded on other devices, such as when combining digital audio and video assets. To ensure stability, the DR-100MKIII utilizes the same Temperature-Compensated Crystal Oscillator (TCXO) used in professional studio master recorders. Moreover, the TCXO is not affected by the temperature of the environment – critical for a portable device which must maintain its precision in support of high-quality recording.



### Reliability through many details

Locking XLR/TRS combo jacks made by Amphenol ensure high reliability in the field and protect against unwanted connectivity issues.

Marrying light weight with long-term reliability, the DR-100MKIII's tough aluminium body ensures many years of trouble-free use.

### Streamlined usability based on user feedback

When working on location, decisions must be made quickly and efficiently, and an intuitive and consistent User Interface is critical. By gathering feedback from users of the original DR-100 and the MKII, we have been able to add a variety of usability enhancements designed to streamline workflow and help audio professionals achieve success quickly and efficiently.

The user interface has been designed to maximise visual confirmation, and includes a large LCD screen (double the size of the screen on the DR-100MKII), dedicated status LEDs for record levels and status and easy-to-read legends on the casework.



Select hardware switches for quick setting control

Dedicated hardware controls have been implemented for the most commonly accessed features to enable quick, positive operation in the field.

Dual format recording provides a master and a web file

The Dual format recording function allows simultaneous recording of both uncompressed WAV (BWF) and MP3 files. This provides the user with instant access to both the original, full resolution master file and a compressed MP3 file (with much smaller size) for easy e-mailing or posting to social media sites.

XRI saves recording information with BWF files

Tascam’s XRI (eXtended Recording Information) function keeps track of all recording settings as part of the file. This powerful features allows the user to easily double-check the details of the original recording for logging or replication of recording conditions at a later date. This information includes date and time of recording, input sources selection and levels, ADC mode on/off status and more. XRI information is stored as part of the BWF data block.



Features	DR-100 MKIII	DR-100 MKII
Maximum sampling rate	192 kHz	96 kHz
Recording media	SDXC (up to 128 GB)	SDHC (up to 32 GB)
AD/DA converter for external input	AKM AK4558	AKM AK4556
Audio clock accuracy	1 ppm (TCXO)	30 ppm
Display size	128×128	128×64
Menu language	EN/FR/ES/DE/IT/JP	EN
Headphones output	40 mW + 40 mW	25 mW + 25 mW
Low-cut filter	40/80/120/220 Hz	40/80/120 Hz
Peak reduction	Yes	No

<b>Power-on recording</b>	<b>Yes</b>	No
<b>Dual level recording</b>	<b>Yes</b>	No
<b>Dual format recording</b>	<b>Yes</b>	No
<b>Floating structure for unidirectional mics</b>	<b>Yes</b>	No
<b>XRI function (stores recording information)</b>	<b>Yes</b>	No
<b>Slate tone generator</b>	<b>Yes</b>	No
<b>Connectors for external input</b>	<b>Amphenol XLR/TRS combo</b>	XLR

# Features at a glance

- Handheld digital stereo recorder for professional use
- Rugged aluminium chassis
- Two separate types of batteries used together allow for many hours of operation as well as the ability to change batteries while recording
- Recording medium: SD card (64 MB – 128 GB)
- Selectable recording formats:
  - Linear PCM (WAV/BWF), resolution: 16/24 bits, sampling rate: 192/176.4/96/88.2/48/44.1 kHz
  - MP3, bit rate: 128/192/256/320 KBit/s, sampling rate: 44.1/48 kHz
  - Dual recording allows a second recording to be created in parallel at a lower level or in a different format
- 102 dB S/N ratio
- A/D converters switchable to dual mode for even higher S/N ratio
- Four built-in high-quality condenser microphones
  - Two uni-directional microphones with internal shock mount for stereo sound recording
  - Two enhanced omni-directional microphones for minutes recording or ambience
- Two lockable XLR/jack combo mic/line inputs with switchable 48V phantom power
- High-performance preamps provide a wide range of gain (–58 dBu to +24 dBu)
- Additional stereo input with adjustable level to connect other sources (mini jack, mic/line level, switchable plug-in power)
- Rotary control for intuitive setting of analogue input signals
- Digital input (to be used with included conversion cable, supports SPDIF and AES/EBU)
- Switchable low-cut filter (40/80/120/220 Hz)
- Mic input level attenuation (PAD, hardware switchable)
- Switchable auto gain control
- Limiter to prevent clipping (hardware switchable)
- Built-in monitor speaker (hardware switchable on/off)
- Headphones output with level control (mini jack)
- Separate stereo line output with adjustable level (mini jack)
- Pre-recording buffer (2 seconds) allows a recording to start before the record key is pressed
- Delayed recording feature to prevent the unit from recording a touch noise of keystroke
- Auto-record function can automatically start and stop recording at set levels
- Instant recording start with a press of a button when switching the unit on
- Tone generator for creating slate tones
- Mark function (automatic or manual)
- Create a new audio file during recording (manually or by file size)
- File divide function (to cut unwanted noise, for instance, WAV format only) Playback features include:
  - In/Out loop
  - Folder or playlist playback
  - Switchable VSA function (change playback tempo without affecting the key)
- XRI function allows information on recording settings to be stored with a BWF file
- Multi-language menu (English, German, French, Italian, Spanish, Japanese)
- Metal mic stand adapter (¼ inch) on bottom side to attach the unit to a tripod or microphone stand
- USB 2.0 connection for file transfer with computer
- Power supply by the built-in lithium-ion rechargeable battery, two AA batteries (Alkaline, NiMH or Lithium) or optional battery pack (Tascam **BP-6AA**)
- Power supply by optional AC adapter (Tascam **PS-P520U**) or USB power
- Digital input adapter cable included as standard
- Remote control (Tascam **RC-10**) and foot switch (Tascam **RC-3F**) available as an option



## Options



**AK-DR11:** Accessory Pack for DR Series Audio Recorders



**PS-P520U:** 5-Volt AC Adapter



**BP-6AA:** Battery pack





**TM-10L:** Lavalier Microphone With Screw-Lock Connector



**RC-10:** Wireless/wired remote control



**RC-3F:** Footswitch

## Related products



**DR-40X:** Portable Four-Track Digital Audio Recorder and USB Audio Interface



**DR-680MKII:** 8-Track Field Recorder

# Specifications

## General

Recording media	SD card (64 MB–2 GB) SDHC card (4–32 GB) SDXC card (48–128 GB)
Recording/playback formats	WAV (BWF): 44.1/48/88.2/96/176.4/192 kHz, 16/24 bits MP3: 44.1/48kHz, 128/192/256/320 Kbit/s
Number of audio channels	2 channels (stereo)

## Analogue audio inputs and outputs

MIC/LINE IN jacks (XLR support phantom power)	XLR-3-31 (1: GND, 2: HOT, 3: COLD) 6.3-mm standard TRS jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
When MIC input source selected	
Maximum input level	–14 dBu (PAD on)
Minimum input level	–70.5 dBu (PAD off)
Input impedance	XLR: $\geq 2\text{ k}\Omega$ TRS: $\geq 20\text{ k}\Omega$
When LINE input source selected	
Maximum input level	+24 dBu
Nominal input level	+4 dBu
Input impedance	$\geq 20\text{ k}\Omega$
EXT IN jack (can provide plug-in power)	3.5-mm stereo mini jack
When EXT MIC input source selected	
Maximum input level	–2.8 dBu (PAD on)
Minimum input level	–46.8 dBu (PAD off)
Input impedance	$\geq 50\text{ k}\Omega$
When EXT LINE input source selected	
Maximum input level	+6 dBV
Nominal input level	–10 dBV
Input impedance	$\geq 2\text{ k}\Omega$
LINE OUT jack	3.5-mm stereo mini jack
Output impedance	200 $\Omega$
When LINE input source selected	
Nominal output level	–14 dBV
Maximum output level	+6 dBV
In other situations	
Nominal output level	–10 dBV
Maximum output level	+6 dBV
Headphones jack	3.5-mm stereo mini jack
Maximum output power	40 mW + 40 mW (headphones connected, 32 $\Omega$ load)
Built-in speaker	0.4 W (mono)

## Digital input

DIGITAL IN connector	3.5-mm TRS jack (using dedicated conversion cable)
Format	IEC60958-3 (SPDIF)

## Other inputs and outputs

USB port	Micro-B connector
Format	USB 2.0 HIGH SPEED mass storage class

## Other inputs and outputs

REMOTE jack

2.5-mm TRS jack

## Audio performance

Frequency response

MIC/LINE IN (MIC, PAD On) to LINE OUT  
MIC/LINE IN (LINE) to LINE OUT  
EXT IN (MIC, PAD On) to LINE OUT  
EXT IN (LINE) to LINE OUT

44.1/48 kHz sampling frequency (JEITA)

20 Hz – 20 kHz +0.5 dB/–1 dB

88.2/96 kHz sampling frequency (JEITA)

20 Hz – 40 kHz +0.5 dB/–2 dB

176.4/192 kHz sampling frequency (JEITA)

20 Hz – 80 kHz +0.5 dB/–4 dB

Distortion

MIC/LINE IN (MIC, PAD On) to LINE OUT  
MIC/LINE IN (LINE, +20dBu In) to LINE OUT  
EXT IN (MIC, PAD On) to LINE OUT  
EXT IN (LINE) to LINE OUT

44.1/48/88.2/96/176.4/192 kHz sampling frequency (JEITA)

≤0.007 %

S/N ratio

MIC/LINE IN (MIC, PAD On) to LINE OUT  
MIC/LINE IN (LINE) to LINE OUT  
EXT IN (MIC, PAD On) to LINE OUT  
EXT IN (LINE) to LINE OUT

44.1/48/88.2/96/176.4/192 kHz sampling frequency (JEITA)

≥102 dB

Equivalent input noise (EIN)

≤–124 dBu

Note: based on JEITA CP-2150

## Power supply and other specifications

Power supply

Built-in lithium-ion rechargeable battery  
2 AA batteries (alkaline, NiMH or lithium-ion)  
USB bus power from a computer  
AC adapter (Tascam PS-P520U, sold separately)  
Battery pack (Tascam BP-6AA, sold separately)

Power consumption

7.5 W (maximum)

Approximate battery operation time (continuous operation in hours:minutes)

Use conditions

UNI MIC (built-in directional mic) input  
Phantom power unused  
STEREO WAV (BWF)/44.1 kHz, 16-bit recording

Using built-in (lithium-ion rechargeable) battery

12:00

Using lithium batteries (Energizer Ultimate Lithium)

7:00

Using NiMH battery (eneloop)

3:30

Using alkaline batteries (Evolta)

2:45

Use conditions

MIC/LINE IN jack/mic input  
Phantom power used (+48V, 2 × 3 mA)  
STEREO WAV (BWF)/44.1 kHz 16-bit recording

Using built-in (lithium-ion rechargeable) battery

6:00

Using lithium-ion batteries (Energizer Ultimate Lithium)

3:30

Using NiMH battery (eneloop)

2:15

Using alkaline batteries (Evolta)

1:00

Charging time

By USB: about 10 hours  
Using PS-P520U: about 4½ hours

Dimensions (w × h × d)

80 mm × 156 mm × 35 mm (excluding protrusions)

Weight

425 g (including batteries)  
375 g (excluding batteries)

Operating temperature range

0–40 °C

Design and specifications subject to change without notice.

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