DR-680MKII

8-Track Field Recorder

The DR-680MKII brings multi-track portable recording within reach of any musician for polished live, location and surround recordings. Up to eight tracks can be recorded to solid-state SD card media at 96 kHz / 24-bit Broadcast WAV quality. Six mic inputs provide 60 dB of gain and phantom power for clear recordings with condenser microphones. Record the six analogue input signals along with a digital SPDIF source for 8-track recording.

Inputs can be monitored using a built-in mixer with level and pan controls for each input. The stereo mixdown can even be recorded along with the six analogue input signals for quick stereo playback of the event. There's also a built-in speaker to check recordings without headphones.

The DR-680MKII is also able to capture stereo audio at 192 kHz / 24-bit for audiophile-quality masters or record up to four channels simultaneuously in space-saving MP3 format – ideal for minutes recording. And for up to 16-track recording on battery power two units can be connected with a cascade cable. An AC adapter, a USB cable and a shoulder strap are included as standard.

Details

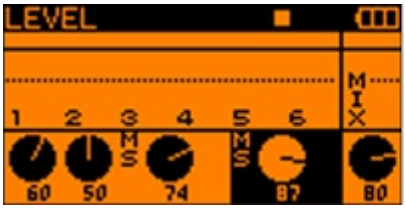
Simultaneous recording of up to 8 tracks at 96 kHz and 24 bit

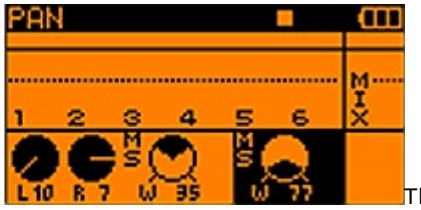
The DR-680MKII offers six XLR/TRS inputs with phantom power, and a digital input for versatility. Record multitrack live music, capture sound effects in surround, or document film shoots or events with multiple microphones.

Record a stereo mix to tracks 7 and 8
When you don't need the digital input, you can record the internal monitoring mix to tracks 7 and 8 as a stereo track, with completely separate level and pan settings from the 6 independent tracks. This enables you to share a stereo mix immediately, while retainig the multitrack version for mixdown.

Record four channels in MP3 format
Recording of MP3 files with up to four channels is also possible at 96, 128, 192 or 320 KBit/s. This allows efficient control of files sizes when in situations requiring long recording times. The file type can be stereo or mono.

Mid-side mic decoding mode





The built-in mid-side decoder enables use with MS microphone configurations. Level and Pan for each channel pair (1-2, 3-4, 5-6) can be set separately. Decoding is possible during recording or when monitoring.

TASCAM premium HDDA (High Definition Discrete Architecture) mic preamps

Microphone preamps have a significant impact on the quality of the recorded audio. The DR-680MKII has HDDA mic preamps designed by Tascam with carefully selected components. Each preamp is built with a differential amplification circuit that employs discrete architecture, and made with parts selected for their audio quality. These preamps also provide +48V phantom power.

High-resolution 2-track recording at 192 kHz / 24 bit

In addition to WAV and MP3 formats, this unit also records in BWF format which stores the recording start times in the metadata. Using the WAV/BWF format, the DR-680MKII can also create two tracks at 192 kHz and 24-bit resolution.

Digital output and six unbalanced line outputs

The unit has a built-in coaxial digital input and output (SPDIF, AES/EBU) and six unbalanced line outputs. By connecting a mixer to the outputs, the DR-680MKII can be used as a 6-track playback device.

Transport control of multiple units using a master unit

When using the cascade function, the master unit controls the REC/PAUSE start (front of unit) and the STOP and PLAY/PAUSE keys (on the top) from multiple DR-680MKII units at the same time.

Excellent resistance to vibration and environmental conditions

SD, SDHC and SDXC cards are used as recording and playback media, and the compact form offers excellent vibration resistance. Along with the included shoulder strap, this unit has a built-in folding stand for tabletop use, making operation easy in a variety of situations.

Features at a glance

Recording/Playback

- High-quality field recording
- Compact size and easy operation
- Up to 8 recording tracks
    - 6 tracks + stereo mix track at up to 24-bit/96 kHz
    - 6 tracks via the analogue inputs + 2 tracks via the digital input at up to 24-bit/96 kHz
    - 2 tracks at 24-bit/192 kHz
- Secure and easily available SD/SDHC/SDXC recording media
- Recording/playback in uncompressed BWF or WAV format or space-saving MP3 format
- MP3 multi-track recording (2 stereo or 4 mono files)
- WAV/BWF sampling frequencies: 44.1 kHz, 48 kHz, 96 kHz, 192 kHz
- MP3 sampling frequencies: 44.1 kHz, 48 kHz
- MP3 bit rates: 96 kbit/s, 128 kbit/s, 192 kbit/s, 320 kbit/s
- 16-bit/24-bit resolution
- Improved mic preamps
- Pre-recording buffer allows a recording to start before the record key is pressed (max. 2 seconds)
- Automatic recording allows the unit to start and stop recording automatically by input level
- Dual recording function allows two files to be recorded simultaneously at different levels

- Repeat playback feature
- Mark function convenient for moving to specific locations

Inputs/Outputs

- 6 balanced mic/line inputs (4 XLR/TRS combo connectors, 2 TRS connectors)
- +48 V phantom power (hardware-switchable in pairs)
- Selectable input gain on each analogue input (hardware-switchable high/low)
- Switchable low-cut filter and limiter on each analogue input
- 6 unbalanced line outputs (RCA)
- Stereo digital input and output (selectable between SPDIF and AES/EBU)
- Headphones output with level control
- USB 2.0 high-speed data transfer to PC
- Cascade feature

Other features

- Hold feature locks buttons to prevent misoperation
- Built-in loudspeaker for monitor purposes
- Powered by 8 AA-size batteries (alkaline, NiMH, lithium) or AC adapter GPE248120200Z (included)
- Extended operation time on batteries
- Optional accessory: CS-DR680 carrying case

Related products

DA-6400: 64-track Audio Recorder

Specifications

Recording media and formats

Recording media	SD card (64 MB – 2 GB) SDHC card (4–32 GB) SDXC card (48–128 GB)
Supported recording and playback formats	BWF: 16/24-bit, 44.1/48/96/192 kHz WAV: 16/24-bit, 44.1/48/96/192 kHz MP3: 96/128/192/320 kbps, 44.1/48 kHz
Number of tracks	
6 tracks and a stereo mix track	BWF: 44.1/48/96 kHz WAV: 44.1/48/96 kHz MP3: 44.1/48 kHz
2 tracks	BWF: 192 kHz WAV: 192 kHz
File recording modes	BWF: monaural, stereo, 6-channel WAV: monaural, stereo, 6-channel MP3: monaural, stereo

Analogue audio inputs and outputs

MIC/LINE inputs	XLR-3-31/ 6.3-mm TRS combo connectors
INPUT switch set to MIC:	
Input impedance	2.4 kΩ
Nominal input level	GAIN LOW: –20 dBu (0.11 V) GAIN HIGH: –44 dBu (6.91 mV)
Maximum input level	GAIN LOW: +3 dBu (1.55 V) GAIN HIGH: –21 dBu (0.098 V)
Minimum input level	GAIN LOW: –51.5 dBu (2.0 mV) GAIN HIGH: –75.5 dBu (0.1 mV)
INPUT switch set to LINE:	
Input impedance	10 kΩ
Nominal input level	+4 dBu (1.23 V)
Maximum input level	+24 Bu (12.3 V)
Minimum input level	–27.5 dBu (0.05 V)
LINE outputs	RCA pin jack
Output impedance	200 Ω
Nominal output level	–10 dBV (0.3 V)
Maximum output level	+6 dBV (2.0 V)
PHONES jack	6.3-mm stereo jack
Maximum output power	50 mW + 50 mW (into 32 Ω load)
Built-in speaker	500 mW (monaural)

Digital audio input and output

DIGITAL/SYNC IN jack	RCA pin jack
Format	IEC60958-3 (S/PDIF) or AES3-2003/IEC60958-4 (AES/EBU) automatically determined
DIGITAL/SYNC OUT jack	RCA pin jack
Format	IEC60958-3 (S/PDIF) or AES3-2003/IEC60958-4 (AES/EBU) set by user

Control input and output

USB connection	Mini-B type
Format	USB2.0 HIGH SPEED (480 Mbit/s)

Audio performance

(LINE IN to LINE OUT, Input level = –1 dBFS)	
Frequency response	20 Hz - 20 kHz +0.5/–1.5 dB (44.1 kHz) 20 Hz - 20 kHz +0.5/–0.5 dB (48 kHz) 20 Hz - 40 kHz +0.5/–1.0 dB (96 kHz) 20 Hz – 80 kHz +0.5/–5.0 dB (192 kHz)
Distortion	0.007% (1 kHz)
S/N ratio	100 dB(A)
Equivalent input noise (EIN)	≤–124 dBu

Host computer requirements

Windows	Pentium 300 MHz or faster 128 MB or more memory USB port (USB2.0 recommended)
Mac	266 MHz Power PC, iMac, G3, G4 or faster 64 MB or more memory USB port (USB2.0 recommended)
Recommended USB host controller	Intel chipset
Supported Operating Systems	Windows XP, Windows Vista, Windows 7 Mac OS X 10.2 or newer

Power supply and other specifications

Power supply	8 AA batteries (alkaline, NiMH or Lithium) AC adapter GPE248-120200-Z (AC 100–240 V, 50–60 Hz, included)
Power consumption	
AC 100–120 V	9 W (phantom power on, AC adapter)
AC 220–240 V	9½ W (phantom power on, AC adapter)
Approximate battery operation time (continuous operation)	
Alkaline batteries (Evolta)	3½ hours (phantom power on for 6 channels) 4½ hours (phantom power on for 2 channels) 6 hours (phantom power off)
NiMH batteries	4 hours (phantom power on for 6 channels) 4½ hours (phantom power on for 2 channels) 5½ hours (phantom power off)
Lithium batteries (Energizer Ultimate Lithium)	7½ hours (phantom power on for 6 channels) 9½ hours (phantom power on for 2 channels) 11 hours (phantom power off)
Dimensions (width x height x depth)	217 mm x 56 mm x 189 mm
Weight	1.2 kg (without batteries)
Operating temperature range	0–40 °C

Design and specifications subject to change without notice.

Page last modified: 2021-03-15 16:48:07 UTC

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