

Tascam DR-1, Yamaha Pocketrack 2G, Edirol R-09HR and M-Audio Microtrack II £247, £289, £259 & £229

Fancy recording a gig or rehearsal? You need a portable stereo digital recorder, and you're spoilt for choice... *by Trevor Curwen*

We can think of plenty of reasons for owning a portable stereo recorder. Being able to record your gigs and rehearsals for both posterity and analysis would probably be enough to justify the cost of one, but it would also be an invaluable tool for those moments when inspiration strikes and you just need to record that killer riff before you forget it. Besides that musical sketchpad role, a portable recorder could be an option if a more formal recording of, say, solo acoustic guitar is needed. You can also load pre-recorded audio into them for playback. Worthwhile keeping one handy then...

Now, there was a time when a cassette or minidisk recorder was the likely tool for the job, but now there is a whole new generation of hand-held digital recorders that not only enable you to record audio with close to pristine quality, but also let you transfer it to your computer for further work.

We have the latest recorders from four of the major players – Tascam, Yamaha, Edirol and M-Audio – here right now. All are small enough to fit into a pocket, albeit a fairly large pocket in the case of the Tascam, and all are gig-ready in that they come complete with a stereo microphone – permanently attached to the body in all except the M-Audio, which has a mic that plugs in. If you want to use microphones other than those supplied, all four sport connectors for that purpose; all except the Yamaha also feature line inputs, but only the M-Audio has them on 6.4mm jacks. All four recorders have headphone sockets to monitor your recorded audio but the Edirol and Yamaha additionally have a small built-in speaker that, though offering

inferior sound to headphones, may help save a bit of faffing around.

Recording in this type of machine usually takes place to removable media like Secure Digital (SD) or CompactFlash (CF) cards, although the Yamaha on test is an exception to the rule as it has its own internal 2GB flash memory. Wav and mp3 file recording formats are available with various bit depths and sampling frequencies, and when all the audio has been recorded it can be transferred to computer for editing and perhaps overdubs. All four have USB connectivity to facilitate this, but line outputs are a common feature if you wish to transfer to another medium.

A portable recorder wouldn't be very portable if it wasn't battery powered and all four implement this in different ways. The M-Audio has a non-removable internal battery charged from mains power or USB while the

Tascam's removable internal battery is similarly charged. Both the Edirol and Yamaha will run off standard batteries, the Yamaha coming with one that is rechargeable via USB while the Edirol has no facility for recharging batteries but can be run via an AC adaptor.

Tascam DR-1

The DR-1 is the largest portable recorder in this selection, but still fits easily into the palm of your hand. The larger size allows certain ergonomic advantages such as a display that amply shows all the information that you need and a set of controls that are well laid out and easily accessed. The two capsules of the stereo

The Rivals

Zoom has the **H4** (£259, reviewed in issue 284) and **H2** (£159) Handy Recorders.

Olympus may be better known for cameras but the **LS10** (£269) portable stereo recorder has built-in mics, 2GB of internal memory and an SD card slot. It missed this round-up by days but **Tascam's GT-R1** (£265) is basically a DR-1, but with added instrument trainer facilities. There's a built-in rhythm machine and you can plug guitar or bass in. Look out for a review soon. **Yamaha** also has the **Pocketrak CX** (£TBA) upcoming with X-Y microphone and micro SD card.

microphone are connected by a slim handle that easily allows them to be rotated to the most appropriate angle in the 90 degrees of travel available – there are five fixed positions available for flexibility in aiming it towards the sound source.

Sounds/In use

Basic recording is not complicated with the DR-1 – turn it on, press the large record button twice and you are up and running. Other functions take a little more button prodding but it's all

Basic recording is not complicated with the DR-1 – turn it on, press the record button twice and you're up and running



The Tascam's microphone capsules can rotate up to 90 degrees





Smaller than most mobile phones the Yamaha is small enough for a shirt pocket

straightforward and there are a few features that should appeal to guitarists – notably an onboard chromatic tuner, a metronome and some of the playback features that are found in Tascam’s range of phrase trainers. You can loop sections of audio and change the speed without changing the pitch – ideal for figuring out the parts if you load some of your favourite songs in – and also change pitch without changing speed. There’s also an overdub mode so you can build up songs one part at a time, which, considering that you can plug a guitar into the 6.4mm mic socket and apply internal reverb and modulation effects, makes the DR-1 a very practical proposition.

Yamaha Pocketrak 2G

The diminutive size of the Pocketrak confers an advantage in terms of portability – smaller than most mobile phones, this easily slips into a shirt pocket. However, that also means that the display is tiny, although the black legending does stand out boldly against the orange backlight, aiding clarity for the easy-navigable menus. Storage, as mentioned previously, is to an internal 2GB flash memory rather than removable media, which means that recording capacity is fixed. Nevertheless, this still gives three hours of CD quality wav recording, which is certainly plenty to capture a gig or rehearsal. In mp3 mode there is plenty more time available and the USB rechargeable battery offers up to 19 hours depending on the settings used.

The [Yamaha] Pocketrak 2G is a no-messing, instantly accessible resource for capturing the moment

Sounds/In use

This is one cool, well thought out design with a USB plug that pops out at one end for attachment to a computer and a tiny, but nevertheless useful, monitor speaker in the middle. At the other end a dual position stereo microphone swivels through 90 degrees with a firm click and you can place the Pocketrak on any flat surface or use it on a stand, as the leather case has a threaded tripod socket built in plus an adaptor to attach to a mic stand.



Recording is quickly initiated with two presses on the record button, making the Pocketrak 2G a no-messing, instantly accessible resource for quickly capturing the moment. The unit’s microphones, although small, are quite capable of classy results.

Edirol R-09HR

The R-09HR is an updated version of Edirol’s previous R-09. A rubberised finish endows it with a rugged quality that instils confidence, while plenty of hard

switches (on the rear as well as the sides of the unit) give you instant access to various options. The mics are in a fixed position and a small monitor speaker lets you hear what you’ve recorded without resorting to headphones. As well as standard CD-quality and mp3 recording, the R-09HR offers higher quality 96kHz recording if you wish to use it.

Sounds/In use

Navigation around the various menus is easily facilitated by a four-way cursor that doubles as the transport control and operation is straightforward – a couple of pushes on the record button getting things moving instantly. One very useful feature is the addition of a separate remote control, which means that you can place the recorder in a stable position and set it going from a distance, useful if you want to record a performance without leaving the stage.

If you want to mess about with the recorded audio the Edirol allows you to add a touch of reverb and to change the speed of the audio without changing pitch, but not vice versa, which would have been more useful if you wanted to use the machine for phrase training purposes. There is no 6.4mm jack input either, so plugging a guitar straight in is not really a practical option.

M-Audio Microtrack II

The Microtrack II, like the Edirol, is an updated version of a previous model and, like the Edirol, has 96kHz recording capability. It



The four-way cursor on top of the Edirol navigates the menus



There is more socketry available on the M-Audio for added connection flexibility

The layout of the Microtrack's controls is very uncluttered and the display is a decent size for such a compact machine

records its audio to either a Compact Flash card or a connected microdrive.

The Microtrack II has more socketry for flexible connectivity than the other three recorders. In particular it has a pair of 6.4mm microphone sockets with standard 48V phantom power for professional condenser microphones so might appeal to anyone who already has some decent mics and wants to do some quality location recording making the most of the 96kHz operation. Additionally you could easily plug a guitar into one of them.

Sounds/In use

The layout of the Microtracks's controls is very uncluttered and the display is a decent size for such

a compact machine. A conveniently placed navigation wheel with upward and downward movement as well as a press function quickly gets you where you want to go in the menus. If you are really in a hurry to get recording, the Microtrack features one-touch recording – a single press of the recording button sets it off – but it's easy enough to set it up for record/pause operation and two press operation like the other three machines if you want to. Facilities are sparse – there are no effects – but there are some preset EQ curves for playback and it is possible to loop sections of audio for repeated listening although there is no pitch or speed change option available.

Verdict

Any of these four would make a fine addition either to your gigbag or to your favourite practice spot, ready to be fired up at a moment's notice. Sound quality aside, the important factors in this genre have to be the compact portability coupling a decent battery life to enough memory to take advantage of it. In that respect none of the four come up short, although the fixed memory capacity of the Yamaha might possibly deter some users. There is plenty about the Yamaha, though, that gets our vote – notably its convenience. It's an all-round go anywhere cool gadget (and we mean the word gadget as a compliment) that is ideal for capturing ideas on the go. So, if it's mainly a go-anywhere musical sketchpad you are looking for, then look no further.

The other three could just as equally find a use as musical sketchpads, but perhaps aspire to higher things – particularly the Edirol and M-Audio machines,

which, by providing 96kHz operation, may appeal to the audiophiles among us. That's not to imply, however, that the Tascam is in any way inferior. While there are differences in sound between all of the machines on test (largely due to the variations in the built-in microphones) it's subjective and we couldn't really say that any one sounds better than the next. All, in fact, provide clean and clear sound with decent stereo imagery.

While all four of these recorders are designed to do basically the same job, they are each individual enough to have differences in their design and feature sets that should see a particular one have a greater appeal than its neighbour to the individual – the Tascam, for example, could appeal to anyone who doesn't have a phrase trainer.

If you want to record digitally in stereo, quickly and easily, in any location, all four would do the job admirably. But if we had to pick just one, it would be the Edirol. **G**

The Bottom Line

Tascam DR-1

We like: Angle adjustable mic; large display and easily accessed controls; overdub mode

We dislike: Not as compact as competition; no AC adaptor

Guitarist says: A robust and practical recorder, generously endowed with a bunch of extra features ideal for guitarists

Yamaha Pocketrak 2G

We like: Tiny size; angle adjustable mic; simple point and shoot operation; onboard speaker

We dislike: No mains adaptor; memory not expandable

Guitarist says: If size is an issue, this is an immensely practical musical sketchpad in a really compact package

Edirol R-09HR

We like: 96kHz operation; AC adaptor supplied; remote controller; onboard speaker

We dislike: Small display; batteries not rechargeable in situ

Guitarist says: A robust choice for higher quality audio recording on location

M-Audio microtrack II

We like: Choice of inputs; 96kHz operation

We dislike: No CF card supplied; no easy way to mount it on a stand

Guitarist says: If you already have good microphones add one of these for quality location recording



Tascam DR-1

PRICE: £247
TYPE: Stereo location recorder recording to an SD card (32GB max)
ORIGIN: China
TOTAL RECORDING TIME: Dependent on size of SD card used
QUANTIZATION: 16 bit, 24bit
SAMPLING FREQUENCY: 44.1 kHz, 48kHz
PLAYBACK FORMATS: Wav, mp3
RECORDING FORMATS: Wav, mp3
CONNECTIONS: 3.2mm stereo microphone input with 2.3V power, 3.2mm stereo line input, 6.4mm stereo microphone input, 3.2mm stereo headphone output, USB 2.0 port
EFFECTS: 11 preset insert effects
OTHER FEATURES: Built-in stereo condenser microphone, built-in tuner, vocal cancel features, playback looping, speed and pitch change
DIMENSIONS: 70 (w) x 27 (h) x 135.3mm (d)
PHANTOM POWER: Yes, 2.3V
POWER REQUIREMENTS: Rechargeable/Replaceable Lithium-Ion Battery with about seven hours when recording mp3 format with the built-in mic (varies with operating conditions)
EXTRAS: Soft case, USB cable, 1GB SD card containing the Owner's Manual, lithium ion battery, Quick Start Guide
OPTIONS: PS-P250 AC adaptor, spare battery, AK-DR1 accessory kit (Desktop Mic Stand, Product mic clip, Microphone Stand Adaptor, Windscreen)
Tascam UK 01923 438888
www.tascam.co.uk

Test results

Build quality ★★★★★
Features ★★★★★
Sound ★★★★★
Value for money ★★★★★

GUITARIST RATING ★★★★★



Yamaha Pocketrak 2G

PRICE: £289
TYPE: Stereo location recorder recording to internal flash memory (2GB)
ORIGIN: China
TOTAL RECORDING TIME: From 3 hours 10 minutes in PCM stereo mode to 284 hours 40 minutes in LP mono mode
QUANTIZATION: 16 bit
SAMPLING FREQUENCY: 44.1 kHz
PLAYBACK FORMATS: Mp3, wma, wave, DRM10-wma
RECORDING FORMATS: Linear PCM (wav 16-bit, 44.1kHz), mp3
CONNECTIONS: 3.2mm stereo microphone input with 2.3V power, 3.2mm stereo headphone output, USB 2.0
EFFECTS: None
OTHER FEATURES: Built-in stereo condenser microphone, playback speaker, playback speed change (slow, normal fast)
DIMENSIONS: 34.2 (w) x 119.5 (h) x 13mm (d)
PHANTOM POWER: None
POWER REQUIREMENTS: AAA alkali battery x 1/AAA eneloop rechargeable battery x 1 (battery life between 8.5 and 25 hours depending on recording mode)
EXTRAS: DVD-ROM with Steinberg Cubase AI4, USB cable (for PC connection), AAA eneloop rechargeable battery, stereo earphone (inner ear type), carrying leather case, mic stand adaptor
OPTIONS: None
Yamaha UK 01908 366700
www.yamaha-europe.com

Test results

Build quality ★★★★★
Features ★★★★★
Sound ★★★★★
Value for money ★★★★★

GUITARIST RATING ★★★★★



Guitarist CHOICE

Edirol R-09HR

PRICE: £259
TYPE: Stereo location recorder recording to an SD or SDHC card (up to 8GB)
ORIGIN: China
TOTAL RECORDING TIME: Dependent on SD card used
QUANTIZATION: 16 bit, 24bit
SAMPLING FREQUENCY: 32, 44.1 kHz, 48kHz, 88.2kHz, 96kHz
PLAYBACK FORMATS: Wav, mp3
RECORDING FORMATS: Wav, mp3
CONNECTIONS: 3.2mm stereo microphone input with 2.3V power, 3.2mm stereo line input, 3.2mm stereo headphone output, USB 2.0
EFFECTS: Reverb: four types (Hall1, Hall2, Room, Plate); Playback only. Excludes playback in 88.2 kHz or 96 kHz.
Reverb: Four types (Hall1, Hall2, Room, Plate)
OTHER FEATURES: Built-in stereo condenser microphone, playback speaker, speed change: 50 to 150 per cent of playback speed
DIMENSIONS: 62 (w) x 27 (h) x 113mm (d)
PHANTOM POWER: Yes 2.3V
POWER REQUIREMENTS: AC adaptor, 2 x AA alkali batteries or 2 x HR15/51 Nickel-metal hydride batteries.
EXTRAS: Owner's Manual, AC adaptor, remote control, stand, SD memory card (512 M bytes), USB cable (Mini-B type), CD-ROM (Pyro Audio Creator LE)
OPTIONS: OP-R09M microphone stand adaptor, OP-R09HR-S silicone rubber case, OP-R09HR-C cover/stand set, CS-15 stereo microphone kit, OP-R09HR-P carrying pouch
Edirol Europe 0208 747 5949
www.edirol.com

Test results

Build quality ★★★★★
Features ★★★★★
Sound ★★★★★
Value for money ★★★★★

GUITARIST RATING ★★★★★



M-Audio microtrack II

PRICE: £229
TYPE: Stereo location recorder recording to a CompactFlash card (8GB Max) or Microdrive
ORIGIN: China
TOTAL RECORDING TIME: Depends on size of CF card
QUANTIZATION: 16 bit, 24bit
SAMPLING FREQUENCY: 44.1 kHz, 48kHz, 88.2kHz, 96kHz
PLAYBACK FORMATS: Wav, mp3
RECORDING FORMATS: Wav, mp3
CONNECTIONS: Mic/line 6.4mm TRS jacks L&R, 3.2mm stereo mic input, 3.2mm stereo headphone jack, RCA (phono) line outputs L&R, s/pdif digital I/O, USB
EFFECTS: None
OTHER FEATURES: Preset playback EQ curves, loop playback
DIMENSIONS: 63 (w) x 110 (h) x 28mm (d)
PHANTOM POWER: Yes 5V and 48V
POWER REQUIREMENTS: Internal long life lithium battery: battery life before recharge is approximately four to five hours (three hours with phantom power)
EXTRAS: USB cable, stereo 'T' microphone, 3.2mm female to male extension cable with lapel clip, earbud style headphones, protective bag, USB switching adaptor/power supply, Quick Start Guide, CD-ROM containing the User Guide, test tones, and Audacity editing software
OPTIONS: Micropack custom carrying case,
M-Audio 01753 659590
www.m-audio.co.uk

Test results

Build quality ★★★★★
Features ★★★★★
Sound ★★★★★
Value for money ★★★★★

GUITARIST RATING ★★★★★