Tascam FW1082

Audio & MIDI Interface And Control Surface For Mac & PC

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Joining the growing market for one-box devices combining audio and MIDI interfacing with control-surface functionality, Tascam's latest Firewire unit might be all you need for multitrack recording and mixing.

The Tascam FW1082 is a combined Firewire audio and MIDI interface and mixer-like control surface for Digital Audio Workstation (DAW) applications such as Steinberg's *Cubase* and MOTU's *Digital Performer*. According to Tascam, it's intended to be 'the nerve centre of your digital audio environment', and it certainly looks the part: a solidly built device, boasting banks of illuminated buttons, numerous knobs and nine motorised faders.

The FW1082 is not just a pretty face, however. Its audio facilities support 24-bit recording and playback at sampling rates up to 96kHz, and allow for 10 simultaneous input channels (eight analogue, two digital). In addition it features a 2 x 2 MIDI interface, basic analogue audio mixing, and a versatile programmable control surface. Steinberg's *Cubase LE* is also included, providing a complete multitrack audio and MIDI recording package (see the 'Bundled Software' box for more details).

Installation

Installing the FW1082 is straightforward. The necessary drivers are supplied on a CD-ROM, and after running the installer program it's simply a question of rebooting your machine and attaching the device.

Under Windows (2000 or XP) the FW1082 supports the ASIO and WDM (MME) standards. Under Mac OS X (10.2.8 or later) Core Audio and Core MIDI are supported.

Full marks to Tascam for supplying proper, printed documentation. The user manual and a useful setup guide are both presented on paper, which makes the business of finding your way around a lot easier. Some other useful documents (as well as duplicates of the printed booklets) are supplied as PDF files on the installation CD, but all the most important stuff is covered in print.

The FW1082 communicates with the host computer via the IEEE 1394 Firewire protocol. All recent Macs will have suitable connectors already built-in, and PC Firewire support is becoming more universal. It should be pointed that the FW1082's manual specifically warns against connecting the device to the smaller, four-pin variety of IEEE 1394 connectors found on some laptops, recommending that the larger six-pin type be used instead. I experimented very briefly with attaching the FW1082 to my laptop's four-pin connector, and didn't encounter any immediate, obvious problems. Nevertheless, I would be inclined to heed Tascam's warning, and to use a computer with a six-pin connector for all serious work. For the purposes of this review, I installed an inexpensive Belkin PCI IEEE 1394 card in my desktop PC, and it worked without a hitch.

Once the drivers are installed, a software control panel is available, from which it's possible to adjust various settings, including ASIO buffer size and sample rate. The control panel can be launched either from within your DAW software, or simply by pressing the Control Panel button on the FW1082's front panel.

Front Panel

The FW1082's front panel resembles a conventional mixer in many respects. At the top is the analogue input section, with gain Trim knobs for each of the unit's eight analogue inputs. Each knob is accompanied by a pair of LED indicators. The first of these lights up green to indicate the presence of a signal, while the second lights up red to warn when the input is overloaded (the warning threshold is adjustable).

Over in the right-hand corner are three 'mode' keys, which are used to switch the FW1082 between its three different modes of operation. The precise functions of many of the FW1082's other controls depend upon which mode is selected. In Computer Control mode, the FW1082 closely integrates with your computer and DAW software. All fader and knob movements and button presses are transmitted to the computer, and interpreted by the software. Data can be sent back by the computer to adjust fader positions, or illuminate LEDs. Several different control protocols are available — see the 'Supported Applications' box for more details.

In MIDI Control mode, the FW1082's buttons, knobs and faders can be used to control external MIDI devices, and MIDI-capable software applications. The FW1082 has two physical MIDI output sockets, and two 'virtual' output ports which are visible to the host computer. MIDI data is sent to the virtual ports via the Firewire connection. By default, a reasonable set of MIDI controllers is already assigned to the

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Tascam FW1082 $999

pros

- Easy installation.
- High-quality multi-channel audio, plus comprehensive MIDI I/O.
- Faders are very responsive, and quiet when moving.
- *Cubase LE* is a bonus.

cons

- Multi-purpose controls can be a bit confusing to begin with.
- A more comprehensive list of compatible applications would be useful.

summary

The Tascam FW1082 is a well-built, logically designed device, which provides high-quality audio I/O plus effective and comfortable hands-on control over your DAW. Hard to fault.

FW1082's controls, but these are all editable via the software control panel.

In Monitor Mix mode, the FW1082 can be used as a straightforward audio mixer. This allows for easy, zero-latency monitoring of the input signals, and the main audio outputs from the DAW software — ideal for overdubs. You can choose between monitoring only the inputs, only the DAW outputs, or both together.

The lower half of the front panel is dominated by the main channel controls. Each of the eight channels has its own fader (a ninth fader controls the master level), illuminated mute and solo buttons, a Select button, and a red LED to indicate recording status. In Computer Control mode, pressing a Select button simply selects the relevant channel in the DAW software. Pressing the red Rec button and the Select button together arms that channel for recording. In Monitor Mix mode, the Select button causes the selected channel's pan position to be indicated by the channel record LEDs: channel 1's LED indicates hard left, channel 8's LED indicates hard right, while channels 4 and 5 illuminated together indicates centre. In MIDI Control mode, each Select button can be programmed to send a control message of your choice.

Above and to the right of the channel controls are four encoder knobs, and several associated buttons. In Computer Control mode, these knobs can be used to adjust pan and EQ, and aux send levels for the selected channel — the exact implementation may vary depending on the DAW software. In MIDI Control mode, they can be programmed to send continuous controller messages, while in Monitor Mix mode, the bottom knob serves as a pan control for the selected channel, and the others do nothing.

The FW1082's different modes and multi-function buttons and knobs can be a bit confusing to begin with, but I've probably made them sound more complicated than they are. The front-panel layout is quite logical, and with a little practice it quickly becomes second nature.

Beneath the encoder knobs is a collection of fairly self-explanatory transport controls, which have the same functions in all three modes. There are straightforward rewind, fast-forward, stop, play and record buttons which mirror the DAW software's transport controls, together with a dial for scrubbing backwards or forwards through tracks.

There's also a pair of bank selection keys, which can be used to switch the channel controls between banks of eight DAW channels. For instance, if your DAW project has 32 tracks in total, you can use these keys to switch between four groups of eight channels. The motorised faders really come into their own here, swiftly updating their positions to reflect the selected group's ▶

Test Spec

- Tascam FW1082 software version 1.40.
- Athlon 1.8GHz PC with 512MB RAM, running Windows XP Service Pack 2.
- Steinberg *Cubase LE* version 1.07.

TASCAM FW1082

The FW1082's faders are all touch-sensitive, motorised devices.

settings. Other useful buttons include Locate, Set, In and Out keys, which can be used to move location markers and set punch-in points in DAW software, and four cursor-key buttons for navigating around other on-screen parameters. Finally, there are knobs for setting monitor and headphone levels, plus LEDs to indicate MIDI activity, Firewire connectivity and so on.

Rear Panel

The rear panel is where the FW1082's various sockets and connectors can be found, and there's no shortage of these. Two MIDI In and two MIDI Out ports are available, and there are two Firewire ports, although the manual advises against daisy-chaining Firewire devices. Each of the eight input channels has a balanced, line-level quarter-inch jack socket, and channels 1 and 2 also have quarter-inch TRS (tip, ring, sleeve) insert sockets, which can be used to insert an external processor such as a compressor or EQ into the signal path. The input for channel 8 offers switchable impedance suitable for DI'd guitars and basses, while channels 1 to 4 provide XLR connectors and built-in microphone preamps. These sockets can also deliver 48 Volts of phantom power to any mics that require it.

The only analogue outputs are a pair of monitor outputs on quarter-inch balanced jacks, and a headphone socket which mirrors these monitor outputs. Digital I/O is provided by a pair of stereo co-axial S/PDIF

Supported Applications

A device like the FW1082 is really only useful in conjunction with suitable DAW software, and Tascam have attempted to make it compatible with a variety of different applications. When in Computer Control mode, the FW1082 supports several different control protocols. 'Native Protocol' is the default, and this can be used with Cakewalk's *Sonar* and MOTU's *Digital Performer*, via special software plug-ins for each. These plug-ins are included on the installation CD, and in both cases there are detailed PDF installation guides explaining how to get things up and running.

'Mackie Emulation Protocol' allows the FW1082 to imitate the control messages sent by Mackie's Mackie Control device. Theoretically, therefore, any application which supports the Mackie Control should be able to understand the FW1082. In fact, the special '*Cubase LE*' protocol built into the FW1082's software control panel appears to be a variant on the Mackie Emulation Protocol, since activating it requires you to add a Mackie Control device in *Cubase*'s preferences. Presumably the same applies to the full *Cubase SX*, should you have it.

'HUI Emulation Protocol' is much like Mackie Emulation Protocol, except designed with a different Mackie device in mind: the Mackie HUI (Human User Interface). Neither the FW1082 manual nor the Tascam web site makes specific claim to support any other applications apart from *Cubase LE*, *Digital Performer* and *Sonar*, although this may change. Nevertheless, if your preferred application is not one of these, but supports either the Mackie Control or Mackie HUI (or, as in the case of *Logic*, both), it seems reasonable to assume that it will be possible to get it working with the FW1082. That said, you should certainly ask your local Tascam dealer for a demonstration before parting with any money, just to be sure it works as you want it to.

The FW1082 provides eight analogue inputs, four with phantom-powered mic preamps.

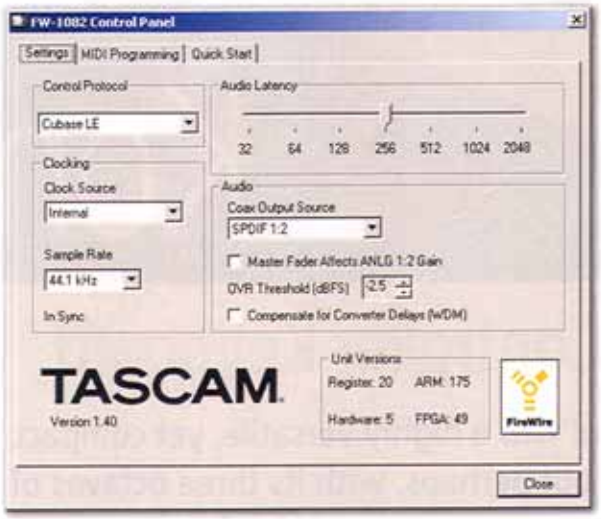
sockets, on standard RCA connectors. The digital output can be set (via the software control panel) to simply mirror the analogue monitor outputs, or it can be used independently. A further jack socket allows you to use a footswitch to punch in and out of record mode.

In Use

For all its complexity, the FW1082 is easy to get along with. The analogue signal path is clean and clear, without a hint of noise or interference. The mic preamps sound good, with no obvious coloration. Monitor Mix mode makes zero-latency monitoring easy, but I also found I was able to get sufficiently low latency out of the FW1082's ASIO drivers that monitoring via software could usually be managed quite comfortably.

Integration with *Cubase LE* is seamless and easy, and recording and playback of fader movements is a no-brainer. The shuttle dial works well, and provides a convenient way to quickly seek back or forwards through a track. (The faders ignore any automation data while the dial is turning, and update themselves when the song position indicator comes to rest, which seems sensible.)

A hardware control surface is arguably only as good as its faders, and the FW1082 doesn't disappoint. The eight 60mm channel faders and single master fader are touch-sensitive, allowing the most minute fingertip adjustments to be made, predictably and reliably. No unwanted twitching or sticking here; your virtual faders go where you put them. All nine faders are motorised, well engineered, and very quiet, even when switching banks and sending all eight channels from one extreme to the other. There's a soft click as the servos activate, before the faders flick up or down to their new positions with barely a sound. On slower automated fades, they're as good as silent.



The control panel is straightforward, but does everything you need it to.

In the past I've worked with cheaper control surfaces, and found myself still habitually reaching for the mouse to make mixer adjustments. Not so here. The FW1082 is very comfortable and responsive, and with judicious use of the various function keys it's possible to get plenty of work done — at least in terms of recording and mixing, if not editing — without touching your computer. Once or twice I found myself wishing that Tascam had fitted independent EQ and aux send knobs for each channel, but to do so would have required a lot more space on the front panel, and doubtless bumped up the manufacturing costs and retail price considerably.

MIDI Control mode is a bonus, and some users may seize upon the opportunity to start programming custom controllers for their favourite hardware or software. Many, I suspect, will be more than satisfied with the basic DAW control functions.

It's hard to find fault with the FW1082. It's easy to install, quite straightforward to use, and works well. In the course of the couple of weeks I was testing it, it sprung no nasty surprises on me, and gave the impression of being very solidly built and dependable. All in all, it does a convincing job of providing high-quality multi-channel audio, comprehensive MIDI I/O, and a very usable control surface. If you're in the market for a hardware DAW controller, the FW1082 deserves serious consideration. SOS

Bundled Software

Tascam have bundled a couple of useful, mid-range software applications along with the FW1082 hardware: their own *Gigastudio 3 LE*, and Steinberg's *Cubase LE*. *Gigastudio LE* is a 64-voice version of the popular, hard disk streaming software sampler application for Windows XP. It offers many of the same features as the full version including Rewire support and VST plug-in capability, and represents a nice bonus for Windows users. No Mac version is available.

***Cubase LE*, on the other hand, is available for both Windows and Mac OS X. It's a cut-down version of Steinberg's flagship *Cubase SX* sequencer, and although the bundled version is based on version 1 of *SX* rather than the current version 3, it's still a powerful audio and MIDI recording, editing and sequencing package in its own right. Up to 48 audio and 64 MIDI tracks are available, and audio tracks can take full advantage of the FW1082's 24-bit, 96kHz capabilities. It also includes Rewire and VST plug-in support, reasonable score editing and printing features, and a very nice time-stretch processor for audio parts. Hardware control surfaces including the FW1082 are, unsurprisingly, supported.**

An upgrade path to *Cubase SX* is available, if and when you feel you've outgrown the limitations of *Cubase LE*.

information

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