

Tascam FW1884

Photos: Mark Ewing



Firewire Control Surface, Audio & MIDI Interface

Tascam's FW1884 is more than just a well-specified Firewire audio and MIDI interface: it also offers detailed control over almost every MIDI + Audio sequencer thanks to its motorised faders, rotary controls, transport buttons and more.

Paul White

Tascam's FW1884, which is actually the result of a joint project between Tascam and Frontier Design Group, doesn't have one of the most memorable product names of all time, but its purpose is clear enough. It acts as a moving-fader control surface that is compatible with the major Mac and PC sequencers (to date, *Cubase SX/Nuendo*, *Logic Audio*, *Pro Tools 6*, *Sonar* and *Digital Performer*) and also incorporates both a four-port MIDI

interface and multi-channel audio I/O, with eight balanced mic/line preamps and ADAT digital I/O. Basic Mackie Control and HUI emulation is included, allowing other software to be controlled, and it connects to the host computer via a single Firewire (also commonly known as IEEE 1394) cable, supporting 24-bit recording at sample rates of up to 96kHz. Tascam recommend that the FW1884 be connected using a six-pin Firewire cable, though it can't be powered via the Firewire buss. An FE8 expander unit is expected to become available towards the end of the year,

when the system will be expandable up to a massive 128 faders using multiple FE8s.

Zero-latency hardware monitoring is supported, and a number of MIDI routing functions are included that can be accessed independently of external software. The FW1884 can also function independently of a computer as a straightforward 18:2 monitor mixer with simple level and pan controls, or as a MIDI controller (see Modes box). When used with a computer and a supported audio program, it can operate under Windows XP and Windows 2000 as well as Mac OS 9.2.2 or later and Mac OS 10.2.4 or later. No Windows 98 or ME support is available.

Main Features

The control interface itself is based around nine touch-sensitive, moving faders, a set of transport controls and further multi-function rotary controls and illuminated buttons. Other than status LEDs and the illuminated buttons, there is no display at all. Visually, the Tascam FW1884 looks not unlike a small digital mixer, and it houses eight mic/line input preamps, eight analogue outputs and eight further digital inputs and outputs via ADAT lightpipe. There are also stereo digital ins and outs on S/PDIF phono connectors. When all the I/O capability of the machine is employed, up to 18 inputs and outputs can be handled simultaneously at sample rates of up to 48kHz; you lose four of the ADAT channels when working at 96kHz. To achieve maximum I/O without problems, I'd recommend connecting the FW1884 to its own Firewire port and not daisy-chaining any other Firewire devices from it that are likely to be shifting a significant amount of data while you are recording or playing back, otherwise you could experience glitching. This has been true of all the other Firewire interfaces I've tried, so I tested the FW1884 running from its own port on my Mac G4 and experienced no problems.

Of the eight balanced outputs, the first two may be used to provide a two-channel mixed output from your computer, or all eight may be used together for applications that include surround mixing. Word clock in and out BNC connectors allow synchronisation to external digital devices, and phantom power is available on the mic inputs for use with capacitor microphones and active DI boxes. Installation software is provided for each supported OS platform, with support for specific software packages being implemented

Each channel features a single rotary encoder which can control pan or aux send levels. The Flip button swaps the functions of the rotary control and fader for each channel.

SOUND ON SOUND

Tascam FW1884 £1299

pros

- Provides a friendly, mixer-like working environment
- Compatible with a number of major host software packages via its Mackie Control and HUI emulation capabilities.
- Generous I/O capability with eight very respectable mic amps included.
- Four MIDI ports as standard.

cons

- Some software control functions are not yet accessible via the HUI or Mackie emulation modes.
- No positional displays for the encoders.
- No means to control software synths or plug-ins within a sequencer.

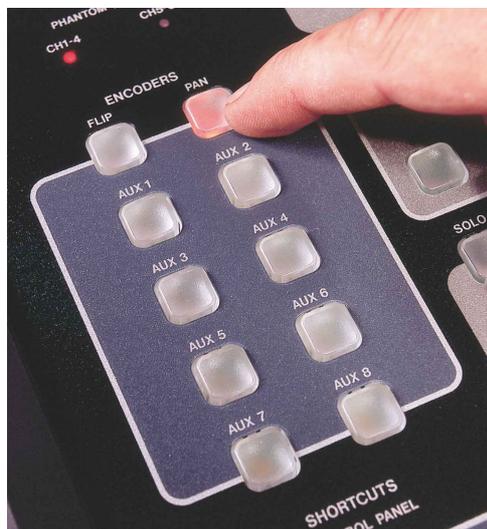
summary

Overall, the FW1884 is an excellent one-box solution for anyone wanting mixer-style hardware control of their audio software with mic amps, audio interface and MIDI interface all built in. As the level of control surface support differs slightly from one host software package to another, try to get a demo before you buy.

via further software plug-ins and low-latency ASIO drivers. A Core Audio driver is supplied for use with Mac OS X.

Hardware

The unit itself is roughly comparable in size to a Mackie Control and is set out in a similar way, with eight sets of channel controls towards the left of the unit and the transport controls to the right. Eight of the faders control the currently selected bank of eight channels, with the remaining fader functioning as a master level control. A smooth data wheel in the transport section handles a number of functions depending on what is supported by the host software, and Bank keys are used for shifting control via the



physical faders between different blocks of eight software channels or, in conjunction with the Shift key, for moving along one channel at a time. In Monitor Mix mode, the banks switch between the eight analogue ins, the eight ADAT ins and the stereo S/PDIF in (the remaining channels are inactive on this last bank).

The back of the FW1884 is pretty busy as there's a lot of audio I/O to accommodate as well as four sets of MIDI Ins and Outs, a mains inlet, word clock connectors, a pair of Firewire sockets and a footswitch jack. The mic and line inputs are present on eight balanced XLRs and jacks and all eight channels have analogue insert points, while the analogue outs are on eight balanced jacks that may also be used unbalanced. The ADAT I/O is on standard optical connectors and the S/PDIF I/O is on phono connectors only. Overall the unit measures 136 x 582 x 481mm and weighs 10.3kg.

The top panel is made from a back-printed, easy-to-clean polymer and the main control surface areas have silver or grey backgrounds, making the various sections easy to navigate. At the top, the eight preamps have rotary gain trim controls that affect both the XLR mic inputs and the balanced jack line inputs. Phantom power is switchable in two groups of four, and status LEDs show when and where phantom power is active. Though all the leading audio software includes comprehensive on-screen level metering, the preamps are also equipped with clip LEDs that come on 2.5dB below digital full scale, and there are stereo bar-graph meters in the main section.

The Control Surface

Below the preamp controls are eight rotary encoders which, in Computer mode, are assigned to control whatever function (specifically pan or one of eight aux sends) is selected via correspondingly named keys to the left of the panel. In Monitor Mix mode, where a computer is unnecessary, the encoders always operate as pan controls, while in MIDI mode, they generate MIDI Continuous Controller information for the control of external devices or software instruments. On the review model, the MIDI outputs in MIDI mode sent a fixed controller number for each physical control, with a simple control panel utility allowing each control's MIDI data to be routed to any one of the four physical MIDI output ports on any desired MIDI channel. This means any remapping of controller numbers would have to be done within the receiving software; Tascam say that for production units, the control panel utility will allow the user to define the controller messages sent by each control, but I wasn't able to try this version.

TASCAM FW1884



Phantom power for the FW1884's eight mic preamps is switched in two banks of four.

► The Record Ready LEDs serve a dual function: when the FW1884 is being used with a computer, they do exactly as you'd expect, showing you which channels are armed for recording. However, in Monitor mode, the position of the illuminated LEDs along the row of eight indicates the value of the pan control for the selected channel, where having the middle two LEDs lit signifies the pan is set centrally. Each channel has its own illuminated Select key to show which channel is currently active.

Record arming is done by holding down a master Record key while pressing the Select keys of the channel or channels to be armed. Solo keys within each channel solo the tracks according to the way the Solo function works in the host audio software when in Computer mode, though in Monitor Mix mode, they affect only the inbuilt monitoring functions. The same is true of the dedicated Mute keys, and both the Solo and Mute keys generate MIDI controller commands in MIDI Control mode. Each channel has a long-throw, touch-sensitive motorised fader, and a Flip key reverses the roles of the faders and rotary encoders. The function of the rotary encoders is assigned via the Pan button and Aux buttons 1 to 8. These functions are unused in

Monitor Mix mode, but in MIDI mode, the keys again all generate MIDI controller messages.

A further bank of Shortcut keys provides instant access to some of the more important functions of the host software, and you can also open the FW1884's Control Panel software via a single button at the top of this section. Using the Shortcut keys, you can save a song or revert to the previously saved

looping or punch-in/out are set using specific keys in the master section to the right of the front panel.

Also to the right of the fader section is the data wheel, which works as a very smooth cursor scrub controller in *Logic Audio* and most other programs, and there are also four cursor keys, which can be used with or without the Shift key either to scroll up and down through tracks or to zoom in both horizontal and vertical planes (where the host software supports this). Four dedicated keys also provide direct access to the four main Touch, Latch, Read and Write automation modes as well as allowing you to turn the automation off. A row of multi-function buttons directly above them looks after digital I/O issues and MIDI routing, and these also double as function keys.

Three rotary EQ controls and four band-select buttons allow access to the frequency, gain and Q of the selected band of EQ.

I wondered how this would square up with *Logic's* Channel EQ, which has more than four bands, but I needn't have worried — the controls directly access the top four bands, then you use the EQ select buttons and the Shift key to get to the lower bands.

A PFL key works in Monitor Mix mode to switch the Solo function from PFL to Solo-in-place, but has no function in Computer or MIDI modes. An analogue Solo level control adjusts the output from the Solo buss when PFL mode is selected, and it works the same way in all control modes.

Stereo 12-section LED level meters read the level of the stereo monitor buss prior to the level control (which can be configured to control all eight analogue outputs or just outputs 1 and 2, making it suitable for surround monitor control as well as conventional stereo monitoring). There are three meter modes: the meter reaction can be instantaneous, the peak level can decay over time giving the user a chance to register it, or the peak level can be held until cleared. A headphone outlet with associated level



version, you can set all channels to Safe to prevent further changes being made, and you can clear all solos with a single button press. Other keys access the marker, loop, cut, delete, copy and paste, save and undo/redo functions of the host software, while the computer's Alt/Command, Shift and Control keys are also duplicated. In and Out points for

Modes

The FW1884 can be set to work in one of three modes via dedicated panel buttons. In Computer mode, it combines the roles of hardware control surface, four-port MIDI interface and 18-in, 18-out audio interface. This is the mode I imagine most people will want to use it in, and because all eight outputs can be controlled via a single level control, it is eminently suitable for surround applications where active speakers are being used. Because there's plenty of I/O, the FW1884 is also suitable for mobile recording using a laptop computer, and now that multi-channel mic preamps with ADAT outputs are readily available, it's not difficult to expand the analogue input capability to 16.

Additionally, the FW1884 can be used in

stand-alone mode functioning as an 18:2 monitor mixer where the audio inputs can be controlled in level and panned before being mixed. While I can't imagine anyone buying the FW1884 specifically for this purpose, it is a useful secondary feature. Finally, the unit can be used as a stand-alone MIDI controller, and the promised ability to assign the controller messages of your choice with the control panel utility should make this very useful. Both the faders/knobs and the vast majority of the switches generate MIDI controller information, and a practical application of the MIDI mode might be to control live MIDI lighting or instruments.

TASCAM FW1884

► control is also available, and there are status LEDs to show the integrity of the Firewire connection, the ADAT input clock and the S/PDIF input clock. Mode selection keys determine whether the unit is in Computer, Monitor Mix or MIDI mode.

Continuing on our tour of the keys (sadly not Florida!), there's a Clock Mode button which, when pressed, displays the current clock source and sample rate, and a Route key that's used to get into the MIDI routing mode where routing between the four MIDI Ins and Outs can be set up. LEDs monitor activity on the four MIDI Ins and they're also used in the MIDI routing mode. A further four LEDs monitor the MIDI Out activity across the four ports, and again are used to show the MIDI output routing in MIDI mode.

Setting Up

Installing the software involves a general driver installation plus plug-ins for whichever host software you plan to work with. There are also ASIO drivers for the different OS platforms. The basic install is automatic, but with the pre-release software I was working with, the plug-in had to be placed in the host software's control surface plug-in folder manually. Though the connection is by Firewire, the driver software interfaces with the host's internal MIDI routing for the purpose of sending and receiving control information, so in addition to the four physical MIDI ports, there's one further virtual MIDI port that needs to be set up as the In and Out source for your sequencer's control surface setup page. This had me fooled for a while in *Logic Audio* where I reviewed the FW1884 under OS X, but as soon as I twigged what was going on (or in this case, wasn't!) and selected the FW1884's control port in and out, everything worked flawlessly. The FW1884 runs under OS 9 too, but then you have to route MIDI via OMS — which worked fine



The FW1884 and host sequencer can be switched between different automation modes at the touch of a button.

when I tried it.

Though fewer *Logic* functions are directly accessible from the FW1884 than with my *Logic Control*, the experience of recording and mixing seems much more akin to using a digital mixer, so recording, mixing and handling the mix automation are exceptionally simple. It's also easy to mark in and out points for looping or punching in, and as with *Logic Control*, there's a one-button Save function. I thought that the lack of a readout screen along the top of the unit would be frustrating, but the way the controls are organised means you don't really need one. The FW1884 is definitely designed to augment a screen and mouse rather than to replace them. However, I would have preferred indicators around the rotary encoders to show their values, as you get on *Logic Control* and similar work surfaces.

Ergonomically, the transport buttons are solid and have a nice positive feel to them, while the data wheel works about as smoothly as you could imagine. You need to experiment using the Shift button to find out what extended functions can be accessed within your own software but there's very little to remember. In fact the main difference between the FW1884 and something like *Logic Control* or *Mackie Control* is that with the FW1884, you need to configure things via the mouse and screen, after which you get a simpler, mixer-like working environment. Other controllers such as *Logic* or *Mackie Control* allow you to insert plug-ins, define buss routings, adjust plug-in parameters and so on, but I didn't find losing these setup functions to be any problem at all, though the inability to twiddle plug-in parameters in real time from the hardware knobs may be limiting to those users who rely on these functions for manipulating software synths and who don't have an alternative hardware controller suited to this purpose.

The MIDI side of the FW1884 operates just like any other multi-port interface, where the ports are assigned to the connected instruments or devices from within your host software in the usual way. Within *Logic* I couldn't detect any MIDI delay or other timing problems (the audio latency was also negligible). The normal mode of operation here is to have all four MIDI Ins merged, with the four Outs sending as four independent ports. The MIDI Programming tab in the control panel (which can be called up directly using the Shift/MIDI key combination) brings up a window that allows you to identify the function and controller value of any physical control on the FW1884. The other function of

The FW And Other Controllers

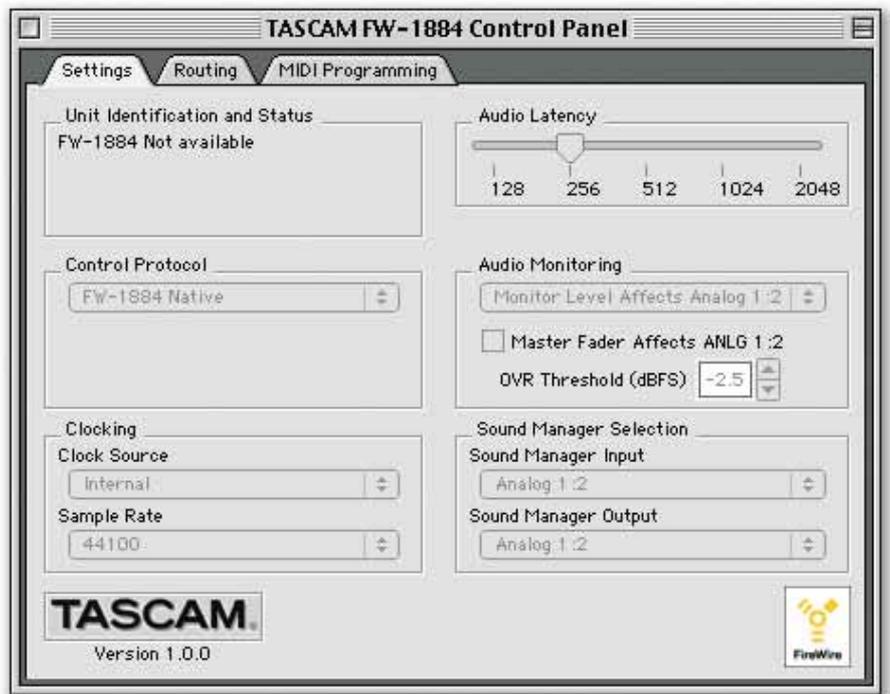
Because the FW1884 isn't switch-for-switch identical to a *Mackie Control*, *Logic Control*, *Houston* or whatever, it doesn't necessarily give access to all the parameters that a dedicated controller does. For example, *Logic Control* can be used to set up sends and to insert and adjust plug-ins, but with the FW1884, only the most important and frequently accessed functions are supported, which means things like level and pan control, track arming, looping, solo, mute, special function keys, cursor scrolling, looping, zooming and so on. You can also get directly to the EQ on compatible software. To be honest, many of the other features are just as easily accessed from the computer screen — as a *Logic Control* user myself, I hardly ever configure or adjust plug-ins via the hardware as I find the screen and mouse more intuitive. Nevertheless, when you come to mix, having hands-on control over levels, pan and

aux sends is brilliant compared to working with only a mouse, and when recording, the ability to arm tracks as you would on a tape machine is also welcome. The way the FW1884 handles aux sends is also simpler than on a *Logic/Mackie Control* because it leaves you to configure your sends via the mouse and screen, allowing the hardware interface to be made much simpler when it comes to actually selecting and using the sends. In many ways, the system is similar to that adopted by many digital mixers, where you simply press a numbered aux button and the rotary controls are instantly assigned to that aux send right across the mixer. This is quite different to *Logic Control* where the first thing it does when you press the Send button is assume you want to configure a new send. In fact I found working with the FW1884 very reminiscent of using the main functions on a Yamaha digital mixer.

this control panel is to let you decide whether to use the FW1884 under HUI or Mackie Control emulation, or whether Native mode with the plug-in specific to your software is best. For example, *Logic*, *Sonar* and *DP* all have plug-ins that interface directly with Native mode, offering the full range of control available, while *Nuendo* and *Cubase SX* currently work best under HUI mode, which means that the odd function may not be supported. In *Cubase SX* for example, the EQ access controls and the zoom cursors buttons don't function, though Tascam say that Steinberg are working on providing Native support for the FW1884.

Audio is also handled pretty conventionally, with a control panel window used to set up sample rates, clocking sources, buffer sizes and so on. A dedicated button on the interface opens the FW1884 control panel, which is a nice touch. Because the S/PDIF and ADAT inputs can be used at the same time, you need to pay special attention to clocking issues as you can only have one master in a system at any one time. To use all the inputs simultaneously, the ADAT and S/PDIF sources would themselves need to be synchronised to a common word clock source and then either ADAT or S/PDIF selected as the clock source for the FW1884.

Though the unit was tested most thoroughly with *Logic Audio* (which has a reputation for giving many third-party devices a good workout!), Tascam were also kind enough to lend me machines with *Cubase SX*, *Digital Performer* and *Sonar* installed so that I could check its functionality with these. Because *Cubase SX* was running under HUI emulation, some of the lesser functions weren't currently supported, but on all the software tested, the faders, the pan/aux encoders, mutes, solos, record enable keys, automation, transport and loop/in-out markers all worked fine. The EQ could be addressed on every application except *Cubase* at this time. With *Sonar*, I found that there was a slight but quite noticeable delay between moving the physical faders and the software responding (both visually and audibly) and there also seemed to be a noticeable MIDI delay. On checking with Tascam I was told that this was a problem with the ESS Maestro sound driver causing a conflict, so this should be disabled. No such delay problems were encountered with any of the other host software. Stepping back a little, this is the first software release for the



The FW1884 control panel in Mac OS 9.

FW1884 but already it works impressively well, and though you should never buy something based on speculation about future upgrades, I think it's reasonable to assume that some improvements will be forthcoming in the near future.

Conclusions

My first impression of the Tascam FW1884 was that it looked somewhat austere, but as soon as you start to work with it you realise that it is actually very clearly set out and logical to use. I think the designers have missed a couple of tricks, but nothing too major, so let's get those out of the way first. Not having alphanumeric screens running along the top of the control surface isn't, in my view, a great loss, but omitting position indicators around the pan/aux encoders seems like an economy too far, because if you're a user with a single computer monitor and you spend most of your time in the arrange page of your software, there's no visual overview of the pan or aux send status.

Those observations aside, I have to say that I found the FW1884 extremely easy and intuitive to work with and it also does its job in a smooth, classy way that feels professional. The faders and the data wheel are as smooth as a Vaseline-coated eel in a WD40 factory, while the large illuminated buttons mean that you won't be squinting at the control surface to see what you're doing.

Comparisons are bound to be made between the FW1884 and the forthcoming Yamaha 01X, but in reality they are quite different creatures with different strengths and they will probably appeal to different

types of user. The 01X combines more modest I/O and MIDI port facilities with a compact control surface that also includes a pretty sophisticated digital mixer and good-quality effects, whereas the Tascam FW1884 is more comparable to a slightly simplified Mackie or Logic Control that also includes four physical MIDI ports and the I/O capability of a pretty serious stand-alone Firewire audio interface, plus eight good-quality mic amps. Its most direct competitor in terms of hardware features is probably Digidesign's 002, which offers an eight-channel fader surface and a very similar complement of audio I/O over Firewire, but whereas the 002 is specifically intended for use with *Pro Tools*, the FW1884 is designed to be compatible with as many different sequencing packages as possible. When you consider that a typical multi-port MIDI interface will cost you over £200 and an 18-in, 18-out Firewire audio interface over three times that, the cost of the FW1884 starts to look very attractive, especially if a one-box solution appeals, and the only users who are likely to be dissatisfied with its feature set are those musicians who want to do a lot of real-time knob twiddling in their software synths. **ES**

Test Spec

- Apple G4 Mac 800MHz with 768MB RAM, running Mac OS 10.2.6.
- Tested with Emagic *Logic Platinum 6.1*.

information

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