digidesign

VENUE

VENUE
live sound environment

A Digital Revolution in Live Sound

With the introduction of the VENUE live sound environment in February 2005, Digidesign ignited a revolution in the world of live sound mixing. The system's groundbreaking design was created with direct input from leading mix engineers to answer the needs of modern live sound applications. The result is a state-of-the-art live sound production environment that delivers studio-grade audio, unprecedented reliability, and maximum flexibility for today's most demanding mixers and engineers.

Outstanding performance—coupled with unique features such as TDM effects plug-ins and seamless recording and playback integration with industry-standard Digidesign® Pro Tools® systems—has driven forward-thinking mixers to choose VENUE for their touring, theater, house of worship, and broadcast applications.

Experience the power and simplicity of VENUE, and quickly discover why this cutting-edge system is shaping the future of live performance audio.

"VENUE has given me the very best balance of both digital AND analog sound quality. The effortless workflow—plus being able to augment the transparency and pristine nature of digital audio with studio-grade analog emulations via the TDM plug-in architecture— makes for a very powerful weapon. For the first time in live performance audio, the sonic possibilities seem truly endless. VENUE is the most creative live platform I have ever mixed on."

Robert Scovill
Six-Time TEC Award Winner and Engineer for Tom Petty & the Heartbreakers, Matchbox Twenty, Rush, Def Leppard
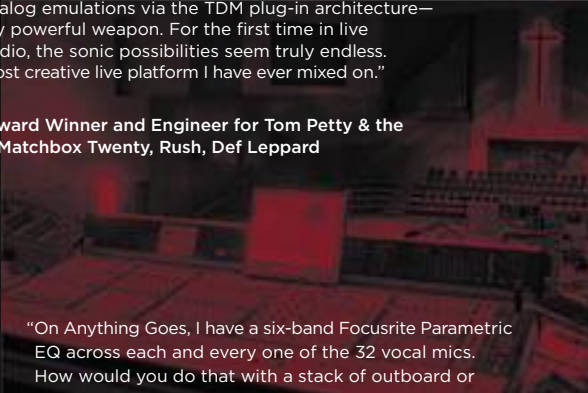
"On Anything Goes, I have a six-band Focusrite Parametric EQ across each and every one of the 32 vocal mics. How would you do that with a stack of outboard or any other digital console?!?"

Gareth Owen
Sound Designer, Orbital Sound
Anything Goes, Footloose, Fame, Evita, Annie Get Your Gun, Jesus Christ Superstar, Thoroughly Modern Millie, High Society, Summer Holiday

"I record 64 tracks every night. VENUE takes absolutely every input we've got for the show plus all the audience mics, various mixbacks, and VT from our video world. That all gets recorded and tracked in Pro Tools. We hit go, and it records two and half hours of show every night."

Paul "Pab" Boothroyd
Paul McCartney Tour, The La's

"We're six months into the Vertigo tour with VENUE. So what's next? Nothing much, just the Grammys, a six-week stadium tour in South America, and a 96-channel Pro Tools recording for a 3D HD movie soundtrack, all being handled by VENUE. It has to work, every day, for all these situations, and it handles it with ease. Any one of these duties would be considered substantial in its own right."

Dave Skaff
Parnellia Award Winning Monitor Mixer, U2

"When we decided to replace the console in our church, we chose VENUE because it was not only the most flexible digital live sound environment on the market, but also the easiest to use. Its plug-in architecture, reliability, and expandability put the system miles ahead of the competition, and we've found that anyone who has mixed live sound before feels completely comfortable with VENUE. We're super satisfied with the way that it works, the way that it sounds, and its ease of use."

Paul VanDyke
Technical Director, Central Wesleyan Church

VENUE concept

System Overview

VENUE is a modular system that can be custom-configured for a range of live sound applications. Its basic components include the D-Show™ mixing console, FOH (front-of-house) Rack (which houses the system's mix engine), Stage Rack (with recallable, remote-controlled preamps), and multi-channel digital snake. The system's highly expandable architecture allows up to 96 mic inputs, 27 buses, eight mono matrices, and eight stereo matrices, providing a new level of flexible signal distribution. Stereo matrices can be treated as a monitor submixer and controlled remotely by the artist using the unique Digidesign Personal Q™ monitoring system. The powerful mix engine provides EQ and dynamics processing on every input channel, along with 24 assignable graphic EQs and built-in support for TDM plug-ins.

All mixing surfaces and racks offer dual-redundant power supplies and are purpose-built to measure up to the highest reliability standards in the industry. VENUE also offers direct hardware and software integration with industry-standard Pro Tools digital audio workstations without the need for additional audio peripherals.

1. D-Show Mixing Console

The result of several years of design and ergonomic refinement, the D-Show mixing console was developed with input from leading mix engineers in touring sound, theater, houses of worship, and other fixed installations. The console offers an intuitive and manageable interface to enable control of a large number of inputs from a smaller mixing surface, while giving operators the flexibility to expand the console surface with up to three Sidecars total to reduce the need for layering or assignment.

2. D-Show Mix Engine

Powerful DSP cards are the backbone of the console's internal architecture, providing 48-bit pathways throughout the system for maximum headroom and signal quality. Every channel strip includes extensive built-in signal processing capabilities, including delay, fourth-order HPF, compression/limiting, and expansion/gating. Channel strips also offer a unique four-band EQ capable of processing in digital or analog emulation mode. VENUE supports additional software-based TDM plug-ins to give engineers the power and flexibility to use a vast palette of high-quality effects while effectively replacing cumbersome and expensive racks of outboard equipment.

3. FOH Rack

The FOH Rack houses the D-Show digital mix engine, embedded control computer, and additional hardware option cards, providing connectivity at the mix position for inserts or auxiliary devices that need to reside near the operator. The FOH Rack is equipped with eight analog inputs and outputs (expandable to 16), analog and digital two-track connections, intercom facilities, and outputs for near-field speaker monitoring. MIDI connectors on the FOH Rack permit remote control of outboard devices or MIDI Time Code synchronization of snapshot automation during a performance.

4. Stage Rack

The Stage Rack handles I/O for stage mic/line sources and output signals. A single Stage Rack accommodates up to 48 remote-controlled mic preamps and converters, and up to 48 outputs. The Stage Rack connects to the mix engine via the digital snake system. A remote head-amp architecture ensures that sensitive mic signals are converted to digital as close to the source as possible, preserving maximum audio fidelity.

Using a second, optional FOH Snake Card, operators can connect two remotely positioned Stage Racks to a single FOH Rack, expanding the total I/O from 48 to 96 preamps. Together with the FOH Rack I/O, a total of 128 inputs are available to mix. With the optional Digital Stage Input (DSI) and/or Digital Stage Output (DSO) card, the Stage Rack can also accommodate 48 channels of digital input and output.

5. Digital Snake System

The digital snake offers an optional dual-redundant system that uses affordable standard coaxial cable with BNC connectors, and it transports up to 48 signals bi-directionally over distances up to 500 feet. The snake transports both audio and control data with maximum interference rejection for an extremely low-latency, error-free result. The snake's bit-error detection capability provides an early indication of cable-wear, and it can switch seamlessly to a backup cable should a failure occur.

The digital snake system replaces bulky and expensive traditional multi-channel analog connections. In addition to lighter weight and lower cost, it has the benefit of providing complete isolation from ground loops between the stage and mix positions.

The Heart of the VENUE System

With the industry's easiest, yet most comprehensive graphical user interfaces, D-Show software sets new standards in efficiency and workflow. Just a single button push or click from any screen gives operators instant access to any function of the system. D-Show software provides a simple connection to the powerful digital patchbay, which enables any physical input to be digitally routed to one or more channels on the D-Show console. Output routing offers the same flexibility, allowing signals to be sent to multiple destinations within the mix engine, FOH Rack, Stage Rack, and optional Pro Tools recording system. D-Show software also enables engineers to control EQ or dynamics plug-ins from the ACS EQ or Dynamics section on the D-Show console by using familiar, tactile encoders.

The D-Show snapshot recall system is flexible enough to deliver the automation power required by today's top theater professionals and simple enough to use in houses of worship or fast-paced festivals. D-Show software supports up to 999 snapshots, each able to affect a different range of controls—from resetting the entire console to changing the EQ on a single channel.

D-Show 2.0

D-Show 2.0 software radically increases the efficiency, depth of control, and flexibility of the VENUE live sound environment. With extended snapshot automation capabilities, improved workflows developed in response to user requests, and expanded signal routing and control possibilities, D-Show 2.0 gives operators new functionality while maintaining the system's ease of use.

Snapshot Preview Mode allows operators to take the D-Show console offline from the audio mix and create, modify, manage, store, and view snapshots in their entirety without affecting the currently active mix. This feature is useful for building cues during a rehearsal or performance and for configuring the console for an upcoming act in a multi-band festival.

Recall Safe enables operators to filter the recall of any parameter on any channel or output on a per-scene basis using "scope sets." As a result, operators can make real-time adjustments without losing those changes with a subsequent snapshot recall.

Absolute and Relative Edit Mode lets engineers make changes to individual controls on the console quickly and apply those changes in an absolute or relative fashion across multiple snapshots without affecting other snapshot data.

Enhanced Propagate Mode makes it even easier to capture parameter changes and apply these changes to one or more snapshots.

Split Fader Banking and Encoder Control between D-Show Main Unit and Sidecars enables multiple operators to work independently on different banks of the same console.

Channel Strip Copy/Paste enables operators to copy an entire channel or output and paste it to any desired location, accelerating setup.

Signal Routing Enhancements allow input channel direct outputs to be routed to plug-ins, enabling the user to create numerous pre- or post-fader parallel-processing paths via a single channel output and return. Additionally, monitor bus outputs are now available in the D-Show patchbay, allowing the user to examine solo'd inputs with an analyzer-style TDM plug-in.

"With the introduction of the D-Show 2.0 software, VENUE just goes from strength to strength. Digidesign has really listened to our comments, and the improvements just keep coming thick and fast. I am now using this desk on three different musicals, and it really delivers the sonic clarity, reliability, and automation functionality I have been striving for."

Gareth Owen
Sound Designer, Orbital Sound
Anything Goes, Footloose, Fame, Evita, Annie Get Your Gun, Jesus Christ Superstar, Thoroughly Modern Millie, High Society, Summer Holiday

PLUG-IN
processing
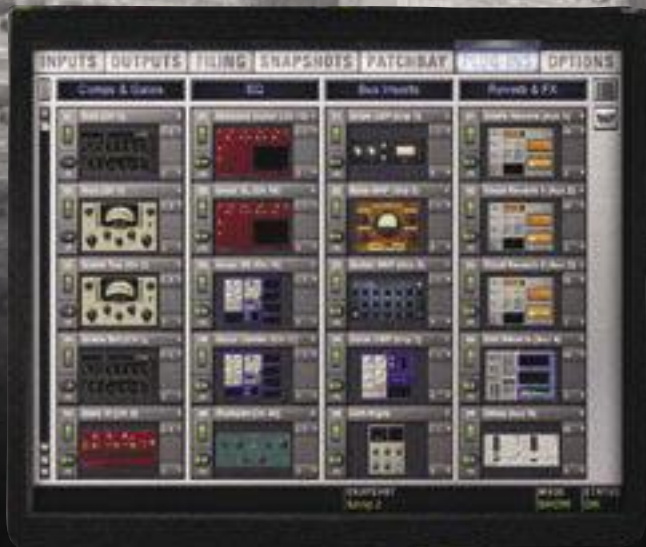
World-Class Effects

One of the VENUE system's most compelling features is its ability to use TDM plug-in effects. Since its introduction more than 10 years ago, the TDM plug-in architecture has become the *de facto* standard for high-resolution effects processing. Used on countless commercial recordings and in post production studios worldwide, TDM plug-ins have become essential tools for modern audio production. With exclusive access to these coveted plug-ins, VENUE is bringing the world of TDM effects processing to all live sound applications.

The vast majority of digital live sound consoles limit operators to a single family of built-in EQ, dynamics, and effects-processing tools, or require external hardware to achieve a studio-quality mix. With VENUE, engineers can use the finest emulations of analog and digital outboard processing and innovative new signal processing tools: There are now more than 100 high-quality TDM plug-ins available from Digidesign and the most established names in the business, such as Drawmer, Eventide, Sony Oxford, and TC Electronic.

VENUEPack Plug-ins

Every VENUE system comes loaded with VENUEPack, an outstanding collection of some of the most sought-after TDM effects processing plug-ins from Digidesign and Digidesign Development Partners. To give VENUE systems even more processing power, VENUEPack Pro, a selection of additional high-quality plug-ins, comes bundled with the optional Mix Engine DSP card. Please visit www.digidesign.com for more information on the contents of the VENUEPack and VENUEPack Pro plug-in bundles.

Products shown are a selection of the many plug-ins available for VENUE

"I started out the Nine Inch Nails tour with my usual complement of outboard gear. I have none left now. All compressors, all effects, all gating... everything is done within VENUE using either the onboard stuff or the plug-ins."

Jim Warren
Two-Time TEC Award Winner and Front-of-House Mixer for Nine Inch Nails, Radiohead, Peter Gabriel

PRO TOOLS
integration

Simply the Best Recording/ Playback Workflow

VENUE offers the most streamlined, reliable, and economical integration of industry-standard Pro Tools recording and playback capabilities. Since VENUE can also serve as the audio interface for Pro Tools, professional 128-track recordings can be made without the need for additional I/O or preamps—saving tens of thousands of dollars in additional dedicated interfaces.

Operators can easily produce live multi-track recordings that are ready for further editing and mixing in a commercial studio or stereo mixes that can distributed immediately—all without having to worry about sound-compromising file conversions or time-consuming file transfers. Using Pro Tools as a playback source, operators can augment live performances with studio tracks or conduct "virtual soundchecks" to refine their console settings without the presence of performers.

FWx Record/Playback Option

Connect VENUE to a desktop or laptop computer running Pro Tools LE™ software via a simple FireWire connection to record or play back up to 18 tracks simultaneously. No additional audio interfaces are required.

HDx TDM Record/Playback Option

Select the HDx option for an easy, direct connection between the D-Show mix engine and a Pro Tools|HD® system. With this option, operators have access to up to 128 simultaneous tracks of recording or playback without the need for additional audio interfaces.

Virtual Soundcheck

By recording a performance straight to Pro Tools and then subsequently playing it back through the VENUE system, mix engineers can fine-tune the PA or monitor systems for a new concert hall, refine a mix, change automation, and even adjust the gain structure of the mic pres—all without requiring the presence of performers. Whether used for touring music acts, musical theater, or premixing for live broadcast, the ability to conduct "virtual soundchecks" is quickly becoming an indispensable tool for all VENUE users.

"With two DigiLink cables and a Pro Tools system, I can now replace five musicians and the backline crew. 'Virtual soundchecks' allow me to spend more time getting what I want out of a system without making the band play for hours on end to an empty room. Also the band can hear the final product mixed in real time rather than just a CD of a desk mix after the show. Pure genius."

Ian Nelson
Front-of-House Engineer for Placebo

D-SHOW console

A. Input Channels

The input channel section offers visual feedback in a familiar channel strip layout while providing immediate visual and tactile control. Two independent, assignable encoders per channel permit quick adjustment of key parameters—such as gain, pan, compression, gate threshold, and aux send levels—without having to assign each channel to the console's central control section.

B. Input Faders

Four fader banks allow a D-Show console configured with 24 faders to easily access all 96 inputs. The split fader banking feature for the D-Show Main Unit and Sidecars enables multiple operators to work independently on different banks of the same console.

C. Multi-Function Input Faders

These input faders offer access to all four banks of input faders and dedicated effects returns. They can also be used as encoders for 1/3-octave graphic equalizers (GEQs).

D. Assignable Channel Section

The Assignable Channel Section (ACS) allows D-Show operators to view and adjust all parameters for a selected channel. The ACS features dedicated controls for assigning and adjusting bus assignments, auxiliary sends, onboard and plug-in EQs and dynamics processors, snapshots, and more.

E. Software Control

These controls give the engineer instant access to every page of the D-Show software. Access to inputs, outputs, filing, snapshots, patchbay, plug-ins, and options pages are available with the push of a single button. All snapshots can be previewed and recalled via rotary control.

F. Assignable Output Encoders

The assignable encoders in the D-Show master section give operators control over numerous operations, including all out pans and aux masters, subgroups, and mono and stereo (PQ) matrices. The row of encoders is also mapped for plug-in control with all parameters appearing in the six-character LCD display directly below each encoder.

G. Assignable Output Faders

The D-Show console features ultra-high-quality, touch-sensitive 100 mm faders that are assigned as master controls for auxes, stereo (PQ) matrices, mono matrices, subgroups and VCA masters. The operator can very quickly assign or de-assign multiple channels to a group or VCA master via an innovative multi-assign switch.

H. Master/Global Section

The Master/Global section provides controls for the main left, right, and center/mono buses. All headphone and near-field monitor controls (including dedicated delay) are located in close proximity to all solo status selections. Dedicated two-track, talkback, and noise sources plus eight programmable mute groups are available.

I. Meter Bridge

The meter bridge offers a high-resolution display of left, right, and center mono output levels as well as eight assignable output meters, which display aux, stereo (PQ) matrix, mono matrix, and subgroup output levels. Additionally, the bridge provides high-resolution meters for ACS targeted inputs, which include independent meters for compressor and gate gain reduction displays. Centrally located LEDs deliver comprehensive feedback for the status of all major system components.

D-Show Main Unit

The D-Show Main Unit is the central control component of the VENUE system. It provides hardware control of up to 32 input faders (eight channels across four banks) in addition to 16 stereo effect returns. The unit offers dual-redundant PSUs to ensure maximum reliability. Only one Main Unit can be used in a single VENUE system. Monitor and keyboard not included. (15" or greater TFT display recommended; 1024x768 minimum resolution.)

D-Show Sidecar

The D-Show Sidecar is a 16-fader extension for the Main Unit. Up to three Sidecars can be attached to a single Main Unit for instant access to 56 physical faders on a single layer—96 inputs total. The Sidecar is connected to the Main Unit via a simple three-pin AES/EBU 100-ohm cable. It also offers dual-redundant PSUs. All VENUE systems include one D-Show Sidecar.

D-Show FOH Rack

The D-Show FOH Rack is a ten-space unit that houses the embedded host computer and a number of standard I/O configurations, including balanced analog I/O, AES/EBU digital I/O, dedicated communications, and two-track I/O and MIDI. Numerous expansion cards are available as well, including D-Show Mix Engine, Snake, IOx, ECx Ethernet Expansion, FWx Record/Playback Option, and HDx TDM Record/Playback Option cards.

D-Show Mix Engine DSP Card

D-Show offers an expandable DSP architecture via Mix Engine DSP cards. A maximum of five cards can be used in the system (an impressive 45 DSP chips), which can be allocated for additional input counts, onboard graphic equalizers, and TDM plug-ins.

FOH IOx Card

The FOH IOx card features eight AES digital inputs and outputs, allowing operators to integrate outboard equipment with digital connections. In addition, the FOH IOx card expands the analog I/O capability at FOH with eight balanced analog inputs and outputs on 1/4" TRS jacks. All I/O connections are fully routable from the digital patchbay.

Snake Card

For shows that require more than 48 inputs from the stage, an optional second Stage Rack is required. In this scenario, an additional Snake card, which resides inside the FOH Rack, is needed for connection of the second Stage Rack.

HDx TDM Record/Playback Option

This I/O option allows operators to record or play back up to 128 channels of audio directly to and from a Pro Tools|HD system. DigiLink cables allow VENUE to be patched directly to a dedicated computer housing Pro Tools|HD Core and Accel cards, eliminating the need for any additional audio peripherals.

ECx Ethernet Expansion

The optional ECx Ethernet Expansion card allows remote control of all console functions via standard wired or wireless Ethernet. Used in conjunction with an 802.11G Wi-Fi router (not included) and a laptop or tablet PC running the remote application software, this option frees the operator to make EQ or mix adjustments from any location in the venue.

FWx Record/Playback Option

This FireWire-based option allows operators to record or play back up to 18 channels of audio directly from the D-Show patchbay to a computer equipped with Pro Tools LE software. No additional audio peripherals are required.

D-Show Stage Rack

The D-Show Stage Rack is a ten-space unit that houses up to six Stage Rack Input (SRI) or Digital Stage Input (DSI) cards (48 inputs) or up to six Stage Rack Output (SRO) or Digital Stage Output (DSO) cards. Any combination of the cards is allowed, offering a comprehensive array of both analog and digital inputs and outputs in a single rack.

Stage Rack Input (SRI) Card

Each SRI card provides eight balanced analog mic/line inputs with 48V phantom power and signal presence LEDs next to each XLR-F connector. The input stage offers a high-fidelity analog preamp allowing up to 50 dB of gain, and features the latest low-latency, oversampling analog-to-digital converter design.

Stage Rack Output (SRO) Card

A single SRO card provides eight balanced analog line-level outputs. A green signal presence LED verifies correct routing. A red output mute LED shows the action of the output muting relays, designed to eliminate power-on transients.

Digital Stage Input (DSI) Card

The DSI card provides eight channels of digital input for the VENUE Stage Rack, either as four AES/EBU pairs on individual XLRs or a single ADAT optical interface.

Digital Stage Output (DSO) Card

The DSO card offers eight channels of digital output for the VENUE Stage Rack. Four AES/EBU pairs are provided on individual XLRs, along with an ADAT optical interface. Both interfaces are active at all times, with the AES signals mirrored to the ADAT connection.

Digital Snake

This 75-ohm BNC cable can be purchased directly from Digidesign or assembled by your preferred vendor. See the VENUE specifications for approved cable and connector manufacturers, part numbers, and qualified cable length.

Personal Q Monitoring System

The optional Personal Q (PQ) monitoring system, which includes wired PQ Controllers and a PQ Rack, enables performers to optimize their onstage experience by creating their own customized, automatable monitor mixes. Each performer uses a PQ Controller to adjust level, pan, mute, and solo control of up to 12 inputs, all routed to an adjustable stereo output. Up to eight PQ Controllers, each controlling a unique stereo mix, can be used with the PQ Rack. Unlike other "single-ended" personal mix solutions, PQ offers snapshot automation and allows the monitor engineer to evaluate the remote mix, assisting the artist as needed.
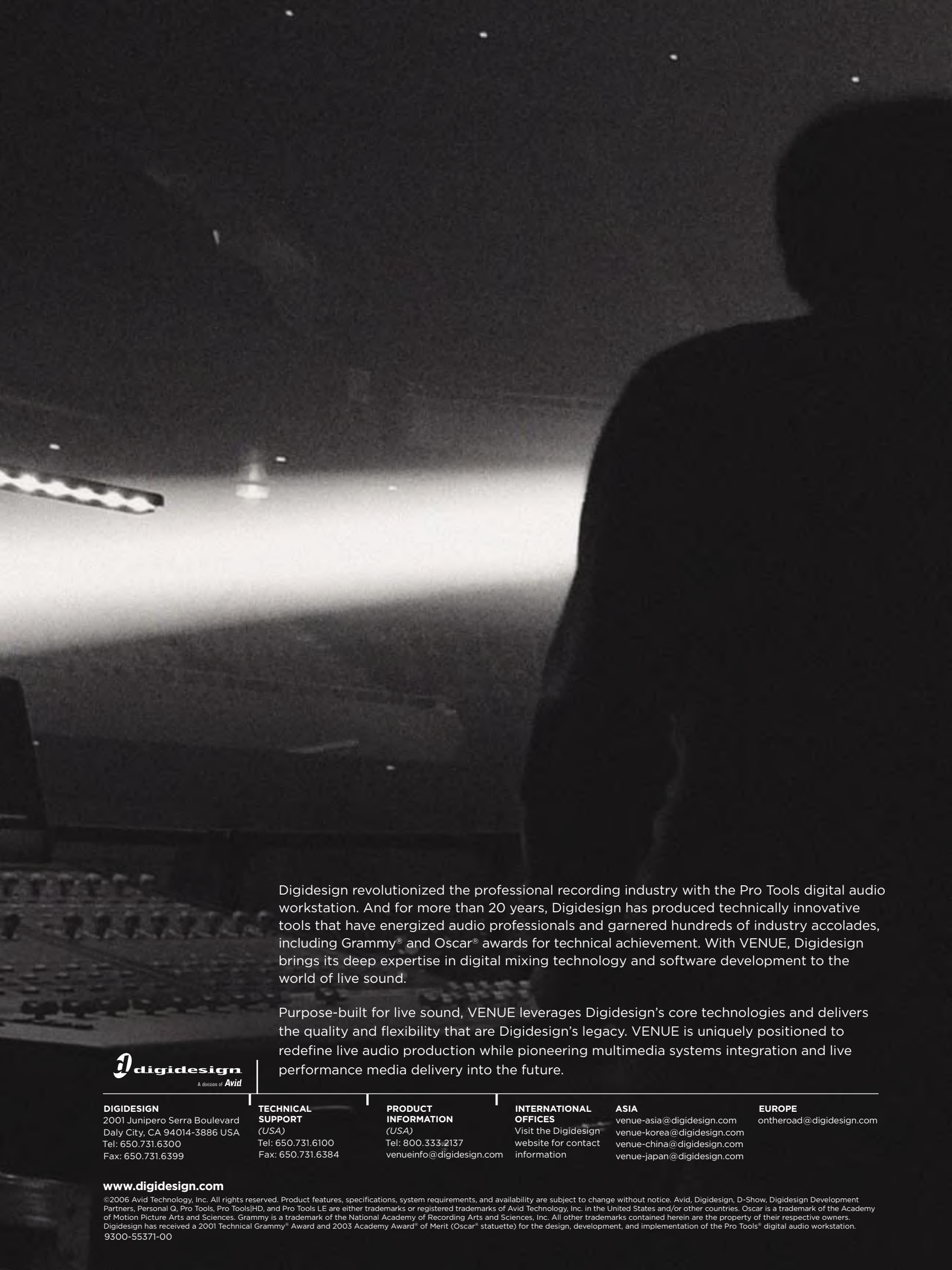
Digidesign revolutionized the professional recording industry with the Pro Tools digital audio workstation. And for more than 20 years, Digidesign has produced technically innovative tools that have energized audio professionals and garnered hundreds of industry accolades, including Grammy® and Oscar® awards for technical achievement. With VENUE, Digidesign brings its deep expertise in digital mixing technology and software development to the world of live sound.

Purpose-built for live sound, VENUE leverages Digidesign's core technologies and delivers the quality and flexibility that are Digidesign's legacy. VENUE is uniquely positioned to redefine live audio production while pioneering multimedia systems integration and live performance media delivery into the future.