

TM-D8000

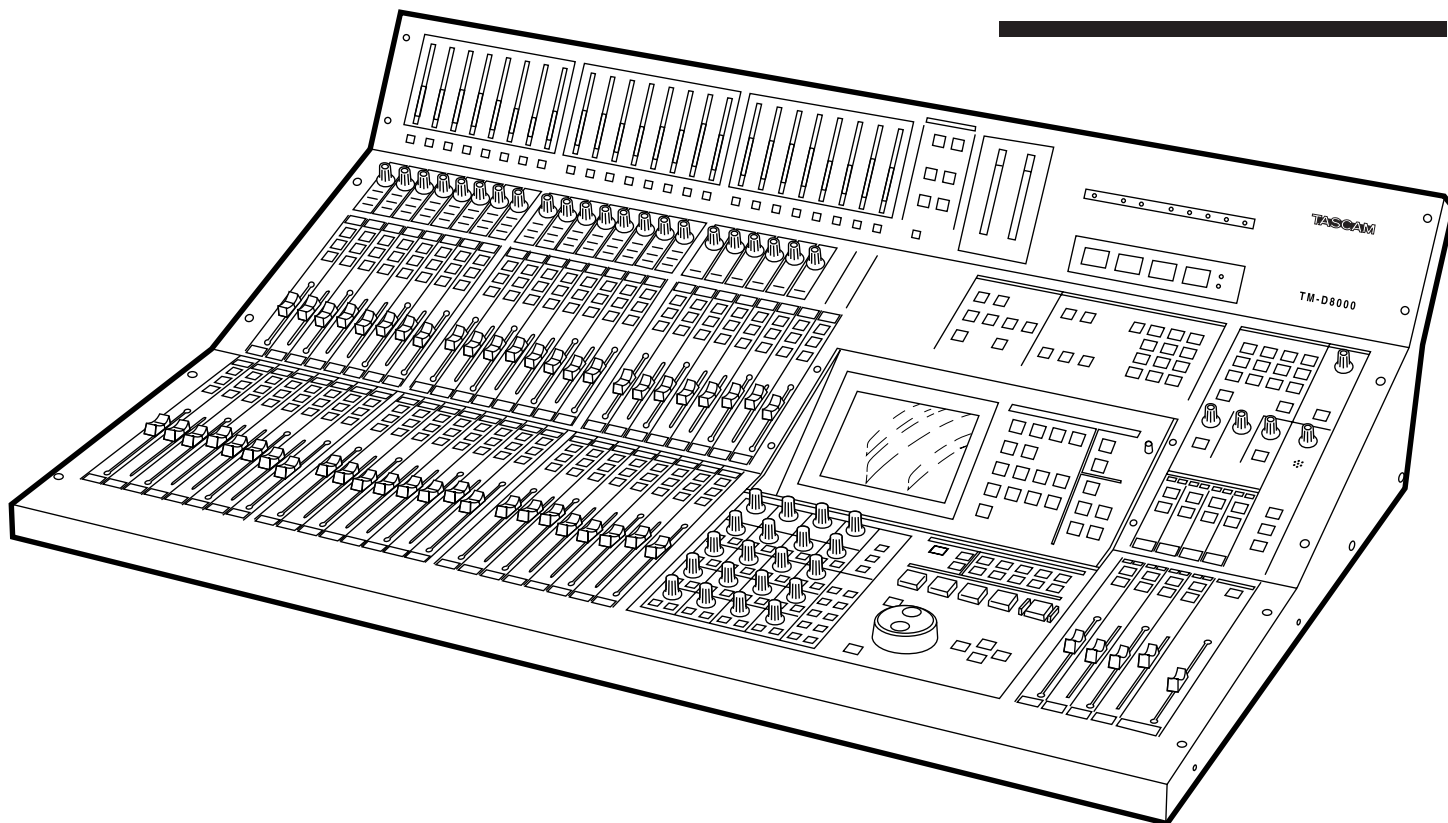
DIGITAL MIXER

PRELIMINARY

Continuing its tradition of pioneering high-quality and affordable recording equipment, TASCAM is about to introduce its first console in the family of digital mixers. Designed primarily to interface with the DTRS® series of multitrack recorders, the TM-D8000 delivers the features and sonic clarity of digital consoles costing much more. TASCAM's 20 years of experience in designing high-quality, compact recording consoles has greatly influenced the design of this new product's interface.

When you first look at the TM-D8000, it becomes obvious that control is the very essence of the console. Foremost is its tactile appearance — offering 48 channel faders, four assignable control faders, a stereo mix fader, a transport control center incorporating a JOG and SHUTTLE wheel — and at the heart of the mixer, a backlit LCD panel that serves as a “window” to all console functions directly positioned over a “control pod” of rotary encoders.

The touch of a switch will allow you to change the 16 analog input channels to an additional 16 channels of TDIF — thus providing 40 channels of TDIF at mixdown. This means up to five DTRS® machines can be used at mixdown and you'll still have 6 stereo inputs at your disposal for effect returns.



The INs & OUTs ...

The console comes equipped with a versatile compliment of digital and analog inputs and outputs. Basic configuration of the console is 40 mono inputs and 6 stereo inputs assignable to any of the 8 busses, stereo mix or directly to the digital tape send of the corresponding channel. On-board, you'll find 24 dedicated digital tape sends and returns via TDIF-1, making connection to DTRS® machines simple while keeping signal in the digital domain.

The first stage in any digital recording process is taking the analog signal from either microphones or line level instruments and converting it to digital information. Rest assured the TM-D8000 doesn't short change you here. Standard on the console are 16 high-quality analog inputs that are individually switchable between the XLR mic preamps or balanced TRS line inputs. Each of these channels provide analog insert points and phantom power.

To add even greater flexibility, the touch of a switch will allow you to change the 16 analog input channels to an additional 16 channels of TDIF — thus providing 40 channels of TDIF at mixdown. This means up to five DTRS® machines can be used at mixdown and you'll still have 6 stereo inputs at your disposal for effect returns.

You might be asking yourself at this point, "What if I only have 3 DTRS machines and a hard disk editor that utilizes AES/EBU or S/PDIF?" Not to worry. With the flick of a switch, channels 9-16 can be configured to accept either 8 channels of AES/EBU or 4 channels of AES/EBU and 4 channels of S/PDIF. Now you might be telling yourself, "That's great, but do I sacrifice any inputs or have to purchase any additional cards?" The answer is NO! All these interfaces are standard on the console — making the TM-D8000 truly one of the most versatile mixers in its class!

Okay, I have signal in the console, now what?

This is where the fun begins. First, each of the 40 mono channels has a four-band fully parametric EQ offering cut and boost, sweepable frequency select and variable "Q". The top and bottom frequency bands can be either peak or shelving. In addition to EQ on the inputs, there is also a 4 band fully parametric EQ provided for the stereo mix out for any final sweetening that might need to be done. The mixer even lets you store up to 100 of your favorite EQ settings and recall them at any time. This is a great time saver when you're trying to get "your signature sound" for a kick drum or vocal track.

There are 6 AUX sends that enable the integration of outboard effects processing such as reverb and delay. If you have an effects processor with a digital interface, AUX sends 3 and 4 can be digital (using the AES/EBU protocol) — keeping your program send entirely in the digital domain.

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For bringing the output of your effects back into the console, there are 6 stereo returns, all of which are assignable to any of the 8 busses or stereo mix buss. This capability enables you to record your effects to tape if so desired. Additionally, Stereo RTN 6 is switchable between analog or AES/EBU digital to maintain signal in the digital domain.

Dynamic effects processing is a critical element in any tracking or mixing environment, as you may need to gate a drum mic or compress a vocal track before it goes to tape. For these applications, the TM-D8000 offers 8 internal digital dynamic processors. The types of processing can be GATE, COMPRESSION or EXPANSION. Much like the EQ settings, parameters for the dynamic modules can be stored and recalled at any time.

If you already own some of today's most popular tube dynamic processors, you can easily integrate them into the mix using the 4 channel insert matrix that is incorporated into the TM-D8000. Essentially, TASCAM provides the A/D and D/A conversion enabling you to implement your favorite processors. Any of the dynamic modules or insert matrix points are assignable to any of the channel inputs, tape returns or stereo mix.

With all this versatility built into the console, you would think keeping track of all this information and accessing the vast number of parameters would be a real challenge. One of the most unique characteristics of the TM-D8000 is the "control pod". It's located just below the backlit LCD screen and is made up of 20 "soft" rotary encoders and 32 "soft" switch controllers. "Soft" means these are simply virtual controllers and can be assigned to functions such as pan, trim, frequency select and so on. As the screens change, the controllers change their functions and conform to the screen. The following is a list of all the parameters immediately accessible in the channel input screen:

- All EQ parameters (including a graphic representation of the defined curve)
- All AUX send levels and their pre or post assignment
- Trim control
- Pan control
- Phase reversal switch
- Stereo link switch
- Post EQ, Pre-fader level meter (useful for setting trim control)
- Buss and stereo mix assignments
- Preset EQ settings that might have been assigned to that channel
- The dynamic module or insert matrix assigned to that channel
- Cut and Fader group assignments
- Automated fader position

This means all critical mix data is at your disposal and not hidden in any other menus or screens. As you look at the console, you'll notice 4 long throw faders and 4 CUT GROUP switches. These are assignable controllers which can be used to serve as master faders for a group of channels. For example, as opposed to raising or lowering all the faders of the tracks that contain percussion, you can assign these tracks to one

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of the four FADER GROUP masters and simply move one fader to control all tracks. The CUT GROUPs work the same way, enabling you to perhaps mute everything in the mix except vocals.

It's a sure bet that many of us have painstakingly tried to recreate a mix at one time or another to make some slight modifications. Another advantage of all this control in a digital console is the ability to recall any and all information at any time. The TM-D8000 offers 99 scenes of snapshot automation. All mix data can be stored in a library and recalled later. These scenes can be called up manually, via MIDI program change or assigned SMPTE or MTC (MIDI Time Code) offsets.

For projects that require the mix to change "dynamically" (in real time as the mix is being played), dynamic automation of the console's parameters is processed internally, but is controlled via a high speed serial interface connected directly to a personal computer. This arrangement makes for a very intuitive graphic interface and gives you complete control of the mix parameters. Editing tasks such as cutting and pasting parts of an automated mix are a simple mouse click away!

Staying in control ...

Maintaining control of all the critical elements of a mix is of the utmost importance when it comes to tracking, mixing or dubbing in a production setting. The TM-D8000 offers machine control over three different types of devices. There is seamless control over the DTRS[®] machine family of recorders utilizing the TASCAM sync I/O interface. Ten points of auto-location, rehearsal mode, auto punch in/out and track record select are just a few of the standard machine commands incorporated into the TM-D8000. There's also a JOG/SHUTTLE wheel that provides the ability to set up extremely accurate cue points without leaving the surface of the console.

If you need control over a sequencer, hard disk-based recording system or a multitrack recorder that doesn't support the TASCAM sync protocol, the TM-D8000 also implements MIDI Machine Control.

The adoption of the DA-88 as a standard dubbing and transfer format for video and audio post-production applications is reflected in the implementation of the Sony P2 (RS-422) machine control protocol. If you perform numerous "audio for video" tasks, taking control of your video deck is as easy as connecting it to the TM-D8000 and using the locate points and JOG/SHUTTLE wheel built into the console.

In the Know...

Monitoring both visually and sonically in a recording studio is a critical facet that many manufacturers overlook. Knowing what levels are being sent and returned from devices is easy with the 24-channel meterbridge standard on the TM-D8000. You can monitor channel inputs and tape returns either pre or post EQ, tape sends or AUX sends.

The Control Room section of the mixer is second to none. A built-in

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tone oscillator lets you to check signal flow and set optimum gain stages on your multitrack and mixdown decks. There's a wide selection of sources for monitoring, including the STEREO MIX, 2 TRK RTN 1 (balanced +4dBm analog), 2 TRK RTN 2, (unbalanced -10dBV analog), any of the 4 stereo digital inputs (AES/EBU or S/PDIF) and all the AUX sends. There's also a mono summing switch and dimmer button for lowering the signal without entirely muting it. To listen to individual channels, there is an attenuable SOLO section for either PFL (pre-fader listen) or Solo in-place monitoring.

The mixer can accommodate two headphone sets, enabling you to get a different perspective of your mix from that of your control monitor speakers. If you have a playback system in a separate live room, a separate STUDIO out is provided that can feed directly from the STEREO mix or whatever signal path is being monitored in the control room.

A built-in talkback mic is incorporated into the console, giving the engineer the ability to communicate to either the STEREO output, put a slate on the tape tracks or speak over AUX 1 and 2. The latter is a handy feature when using those AUX sends as a headphone cue for the talent. There's even an interface on the back of the console to connect an external mic and momentary switch so communication can be sent across the room from the mixer!

The TM-D8000 represents the culmination of over five years of research and design to develop a high specification digital console for professional applications at a price compatible with today's cost effective studio equipment. TASCAM engineers have done their homework — now it's your turn. Contact your authorized TASCAM dealer or call TASCAM FAXBACK at (800) 827-2268 for additional information today.

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