

STUDER
PROFESSIONAL AUDIO EQUIPMENT



D827 MCH
24/48 track DASH Tape Recorders

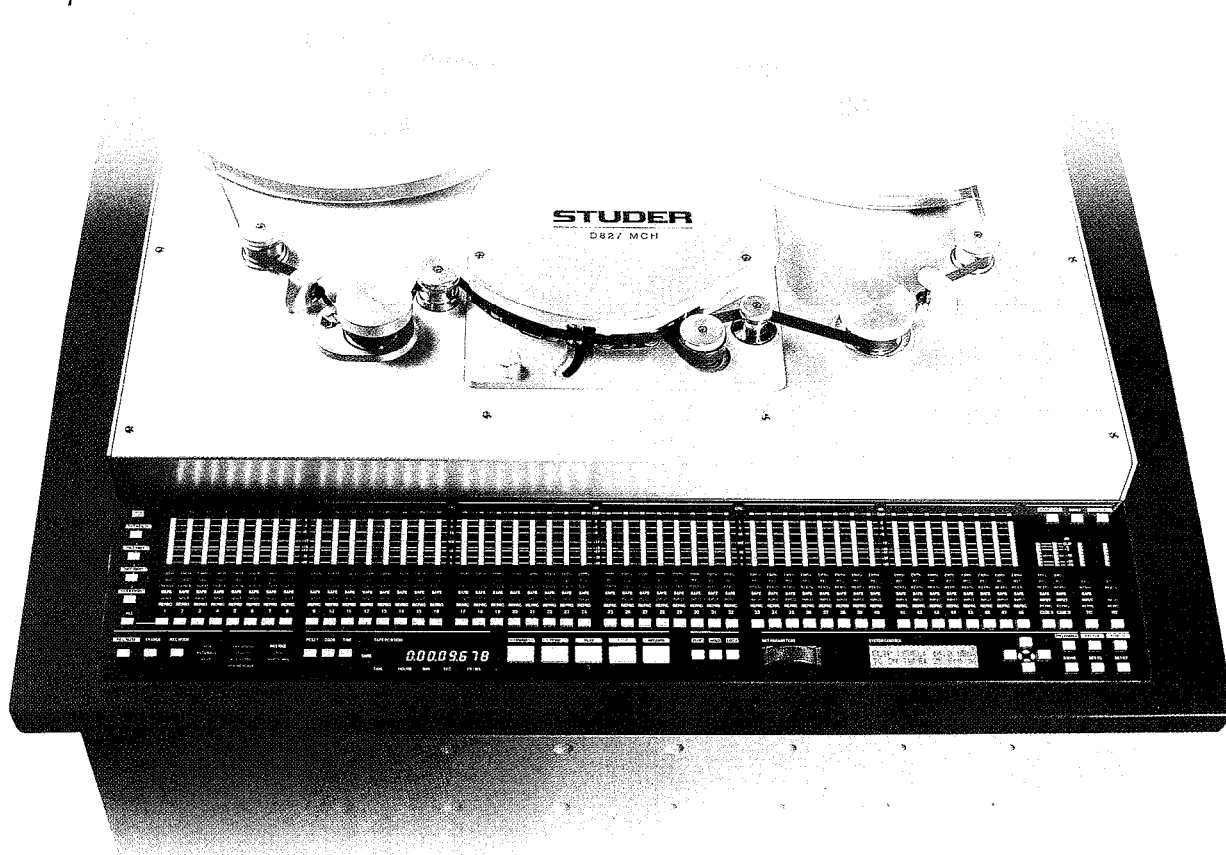
STUDER D827 MCH

The Essence of Top Professional Achievement

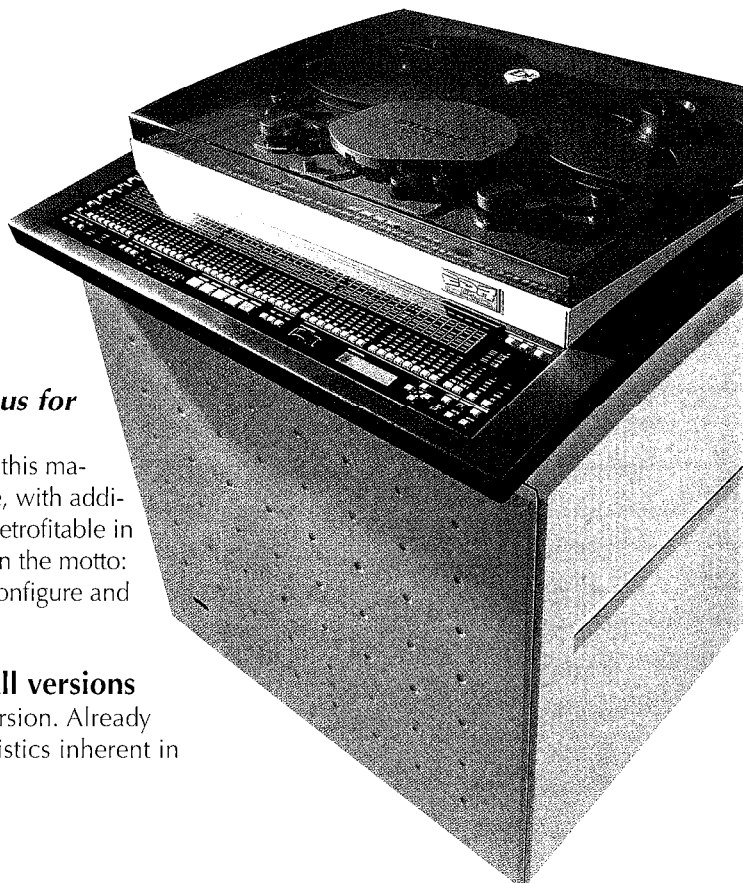
The change in the world of professional audio and video technology is difficult to overlook. The all digital audio environment is becoming reality at a breathtaking pace. New audio production methods are created, modern systems open vast new capabilities, and frequently they quickly expose the inefficiency of existing technology. Progress-minded producers are sensitized to the economical implications, and cost-consciousness is no longer limited to individual cases.

The answer to this fascinating development in professional recording studio technology is the STUDER D827 MCH multichannel DASH tape recorder. This modular machine has been designed with advanced features that ensure economy, efficiency, and suitability for system integration.

The STUDER D827 MCH is based on a well-engineered machine concept which, starting from a «MADI only» nucleus, comprises three different versions: The retrofitable 24 channel model, the 48 channel model, and the «super» 24 channel EDR with 24 bit resolution.



STUDER D827 MCH Perfectly Modular Design



Modular design, with identical system nucleus for 24 and 48 track versions

Due to the identical system nucleus of the 24 track version this machine can later be easily upgraded as required, for example, with additional tracks, converters, or other options, all of which are retrofittable in the field. This concept also reduces the initial costs based on the motto: **wyniwyg** or «*what you need is what you get*» that is, you configure and invest in what you need and nothing more!

High-quality system nucleus - identical for all versions

The system nucleus is pre-engineered for the 48-track version. Already the **standard configuration** offers the excellent characteristics inherent in the common components:

High-performance tape deck

Extremely fast, unmatched acceleration and deceleration performance.

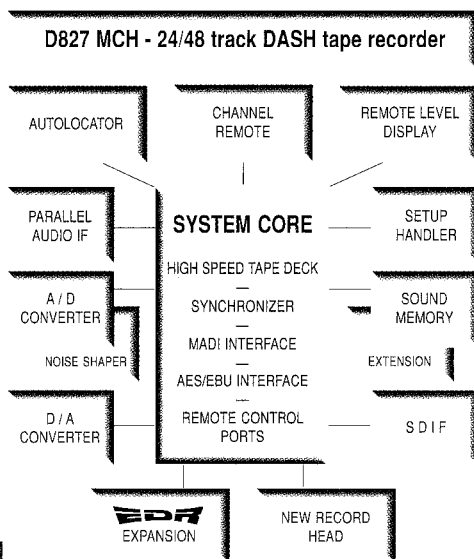
Synchronizer

Built in, for editing functions, with TC chase and **DASH lock** synchronizations.

Integrated MADI & AES/EBU interfaces

Remote controls

All serial and parallel remote ports are included in the standard configuration.



Converters for the analog world? Yes, but only the finest.

+Option+

As a bridge to the analog studio world, high-quality A/D and D/A converters for 8 channels each are available. The 18 bit Sigma-Delta A/D converters and the 20 bit D/A converters are a new development, characterized by excellent sound quality - the recognized Studer reference. The A/D converters can optionally be fitted with noise shaper modules.

Noise shaper for 18 bit listening quality - linear, without coding

+Option+

The noise shaping DSP technology psycho-acoustically suppresses the increase in the noise floor that occurs when the word length is reduced to the 16 bit DASH limit. Particularly advantageous is the linear, uncoded operation of the system. The attainable 18 bit au-

without sacrificing the compatibility with the DASH format. The first 24 of the 48 tracks are written in normal 16 bit, whereas the remaining 24 tracks are reserved for the 8 bit higher resolution. Due to the linear recording normal post-production of EDR channels is possible and they are accessible via the MADI interface and AES/EBU interface in the full 24 bit word length.



24 bit linear - the dream called *Extended Digital Resolution (EDR)*

+Option+

With EDR it is now possible for the first time to produce **linear** 24 bit recording of 24 channels on conventional 16 bit media

STUDER D827 MCH

The only Reference: Unsurpassed Sound Quality

Audio quality is preserved also when different D/A converters are used for playback, and the quality is not impaired by mixing and post-processing operations.

Remote control console: Convenience and precision

+Option+

The console for controlling the autolocator/sound memory and the audio channel status is attractively styled and especially designed for ergonomical operation. The two command panels can be optimally positioned to suit the user; in addition the inclination of the upper panel can be adjusted separately. The remote control commands are transmitted via a high-speed serial master-slave bus (REMBUS), which also supplies the operating voltage for the connected units. This eliminates annoying AC power connections on caster-equipped control systems.

Autolocator and sound memory control

+Option+

The flexible and accurate autolocator and sound memory controls are arranged in the lower command panel. This panel is identical for 24 and 48 track machines.

4 Channel sound memory, multifunctional, capacity up to 180 sec.

+Option+

For audio post-production a user-configurable 4-channel RAM unit with flexible capacity is available. The maximum recording time is 45 sec. for 4 channels, or 180 sec. (mono). Aside from conventional editing functions the sound memory also supports variable delay (track slipping) for time compensation in the millisecond range.

Powerful audio channel control

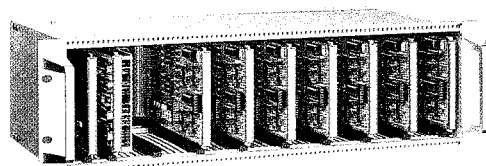
+Option+

For implementing simple or sophisticated sound ideas with the push of a button: Audio channel control, grouping, status indication, and comprehensive functions in the upper command panel (available in 24 and 48 channel versions).

Audio channel control interface

+Option+

For controlling the audio channels from the mixing console there is a parallel interface (19" rack module) that transmits all LED and key information.



SDIF multichannel interface

+Option+

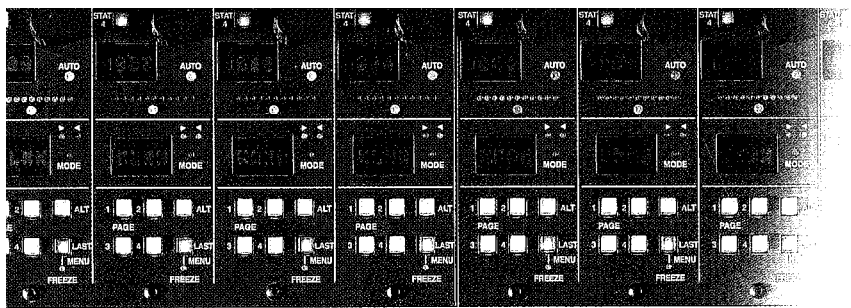
For 16 bit data transfer in SDIF format, expansion units for 24 channels each are available.

Tape/source monitoring? No problem with the NEW REC head.

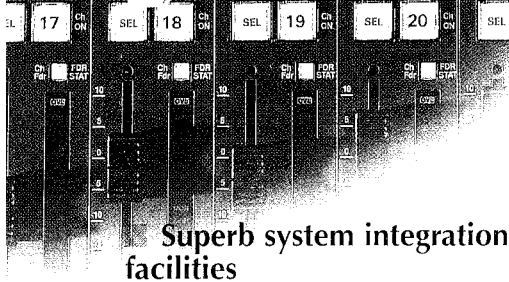
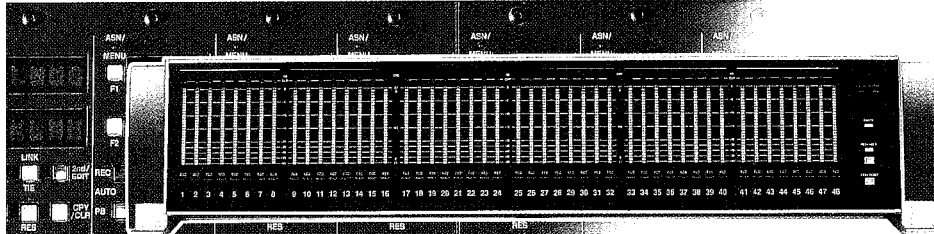
+Option+

For «true tape/source monitoring», required for example in live multitrack recordings, the headblock can be upgraded with a «New Record» head. This head can be supplied for field installation and comes prealigned and with a parameter diskette.





18 19 20 21 22 23



Superb system integration facilities

For decades, close coupling of product and system development has been part of a solid Studer tradition. On this basis the D827 MCH now opens new dimensions with respect to efficiency and digital audio quality. Interfaces for every desired direction lead to audio transfer and control platforms. The concept of the D827 MCH combines the prerequisites for compatibility, speed, and integration in digital systems - at the highest quality level!

All clock sources are accepted

The D827 MCH synchronizes to all clock sources commonly used in the audio-video world:

Word

(48 - 44.1 / 47.952 - 44.056 kHz square-wave signal or derived from AES / EBU signal according to AES-11).

VIDEO

(square-wave signal or composite video / composite sync signal at 24 / 25 / 29.97 / 30 frames / sec)

Varispeed signal, external (9.6 kHz corresponds to 30 ips).

The internal TC generator synchronizes automatically and phase locked to the sampling frequency.

Remote control display

+Option+
The 30 segment digital PPM bargraph output meter is designed for highly accurate and reliable readings within a 60 dB range. It also features an overload indicator for each channel.

Different display modes (peak hold) can be selected for accommodating the user's reading habits. The remote display can be repositioned at the angle that affords the most convenient reading.

MADI interface - the digital link to the modern mixing console

The MADI interface, a standard feature, makes high-speed audio data transfer a practical reality. Digital mixing consoles and digital tape recorders can be coupled directly by means of coaxial cable (up to 50 m) or fiber-optic link (up to 2000 m) via the serial 100 Mbit/s bus connection for up to 56 audio channels. The synchronization via AES-3 word clock supports sampling frequencies of 44.1 and 48 kHz and their variants, including $\pm 12.5\%$ varispeed.

For applications with digital mixing consoles, the «MADI only» basic version of the D827 MCH without

STUDER D827 MCH modular, adaptable, compatible, and fast

converters is the proper decision. These models can be easily retrofitted with converters at any time.

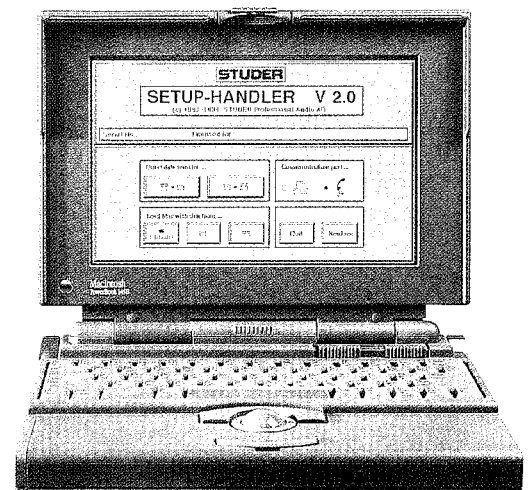
Loss-free transfer from the 24 bit digital mixing console to the D827 MCH 24 bit EDR

The highest possible resolution is achieved by the D827 MCH EDR version that records with a word length of 24 bits. For the first time it is now possible to transfer via the MADI or AES / EBU interface without conversion - and consequently without loss.

SETUP HANDLER - the ideal snapshot control via computer

+ Option +
The «Setup Handler» for the D827 MCH machines functions analogously to the snapshot control of digital mixing consoles where complete audio mixer settings can be quickly stored and reloaded.

The future-proof software concept is the key for storing complete machine settings and locator addresses on diskette. On a Macintosh™ computer or PowerBook™ computer all user



STUDER D827 MCH Professional technology - perfect to the last detail

settings can be seen at a glance and subsequently printed for documentation purposes.

The D827 MCH digital multitrack machines satisfies the requirement for high production efficiency in a competitive market not only with the fastest existing tape deck, also a «total recall» for a new job takes only seconds.

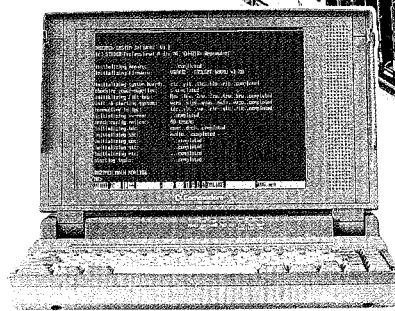
A good design concept reduces the amount of non-productive times

The amount of time a machine is out of use due to service work depends on the quality of the design concept. For this reason the basis for efficient testing and diagnosis has been integrated into the fundamental structure of the D827 MCH machines and has been implemented with a flexible multiprocessor architecture.

The built-in **test monitor** with alphanumeric LC display and comprehensive self-test and diagnostic functions works independently of external instruments. All faults are displayed in plain text.

Various audio signals from the built-in **test signal generator** are available.

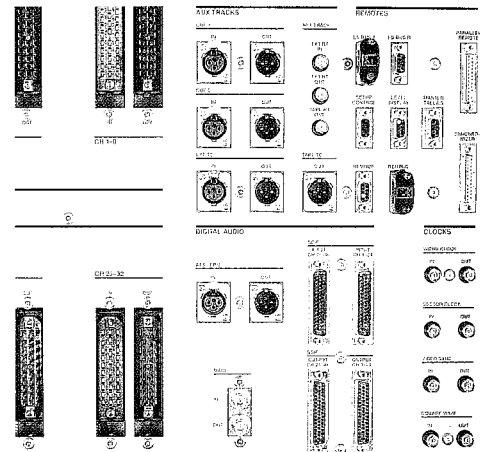
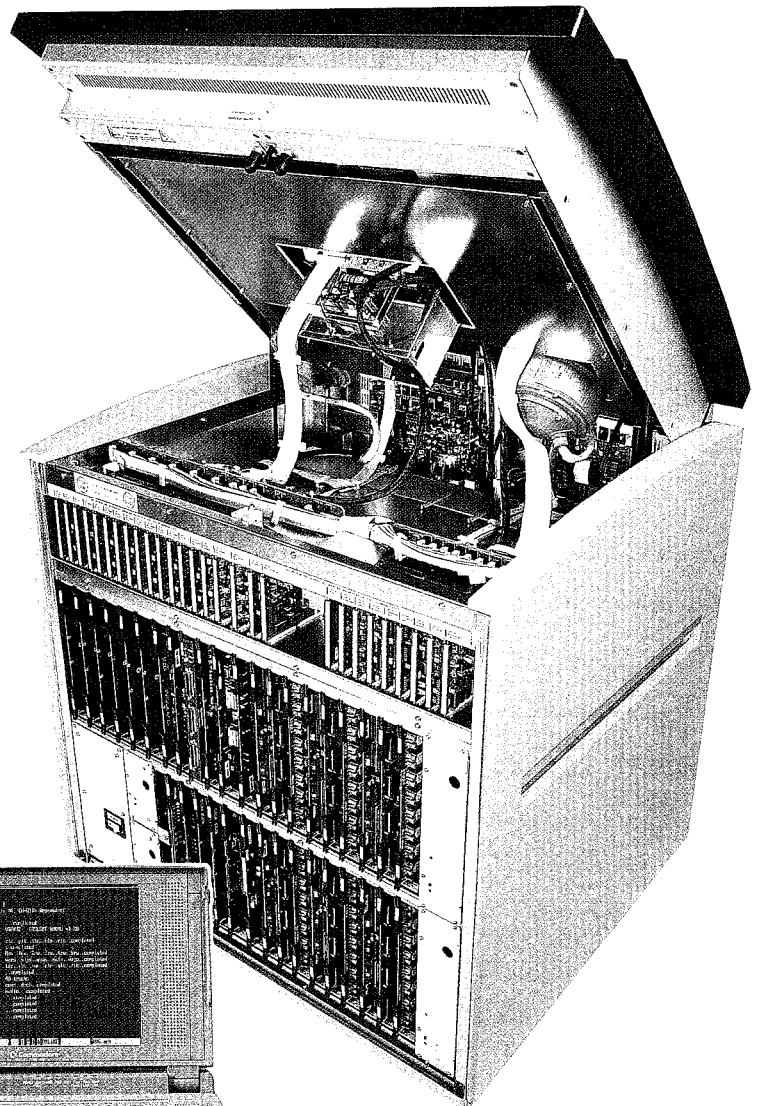
Terminal programs provide a fast and detailed overview of all system states via the RS 232 or RS 422 interfaces.



With software supported service tools even demanding service tasks such as replacing and calibrating a headblock in the field can be performed reliably within a short period of time.

Some of the pictures show optional equipment.

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