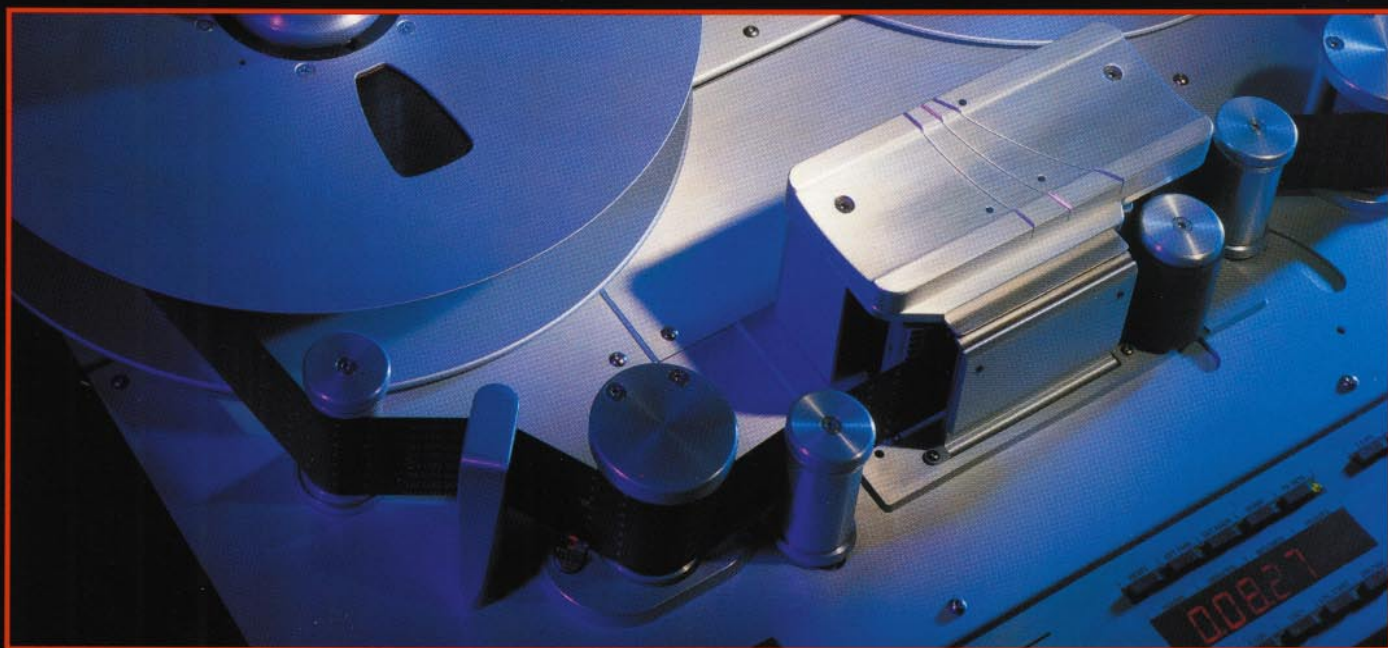


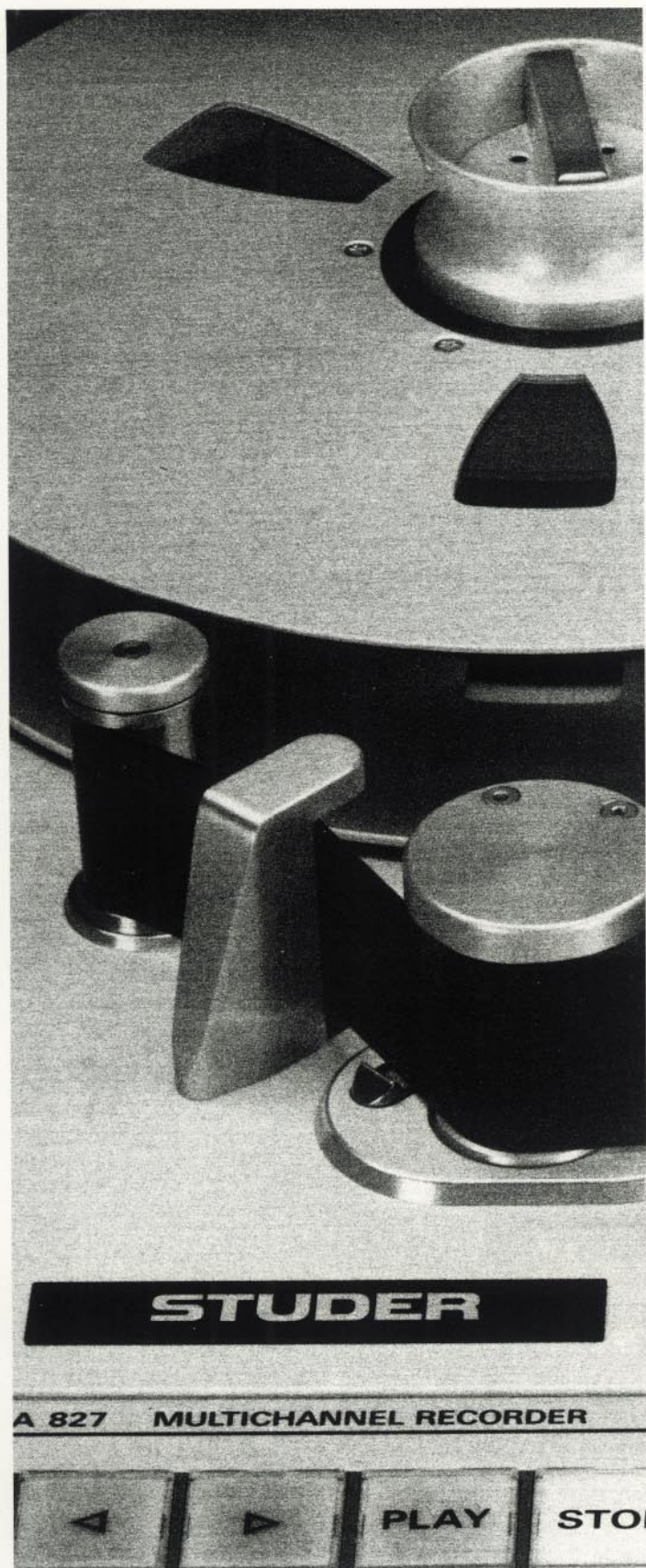
STUDER
PROFESSIONAL AUDIO EQUIPMENT

A827



Professional Multichannel Tape Recorder

STUDER A827. The fascination of engineering expertise



Sure, you know it: professional sound recording today is unthinkable without multitrack recorders. It doesn't matter whether it is a large studio or a small production place – multitrack technology is here to stay. Radio and Television as well as post-production studios for video and film also depend on multichannel technology. Not without reason. Efficiency and creative possibilities are more in demand than ever.

The extent to which studios implement or upgrade to multichannel technology depends largely on individual requirements. One criterion is certainly undisputed: multichannel tape recorders are work tools, they have to perform, and they must be affordable.

For this reason a number of factors are significant: The integration and linking with existing equipment must not present any problems; reliability is important for a relaxed working atmosphere; efficient handling requires a well-engineered, ergonomical design; and the recall capability of stored tape parameters is a great time saver. Considering the final result, excellent audio quality is a must. But likewise, the expected service life, ease of maintenance and long-term availability of spares are decisive factors.

These are basic considerations. At STUDER we believe that the cost/benefit ratio of an investment can only be determined if all relevant factors are included in the overall evaluation.

This is why we have built the A827 – exactly to fit your requirements.



Tailored exactly to your requirements

A tape transport that will still match your requirements, even if tomorrows demands are more severe.

The obvious kinship between the tape transport of the STUDER A827 and the top-of-the-line STUDER A820 is neither coincidental. For drive mechanism and the associated control logic we simply make no compromises.

There are solid reasons for this: An analog multitrack tape recorder, be it configured for 24, 16 or 8 tracks, is principally a workhorse for daily use. It is no secret that studio projects tend to come under time pressure. This is why the responsiveness and the handling play an important role. It therefore comes as no surprise that even in a machine that has been trimmed down to essentials we still install the best tape transport. Because only the best tape transport will guarantee for top audio quality even after years of service.

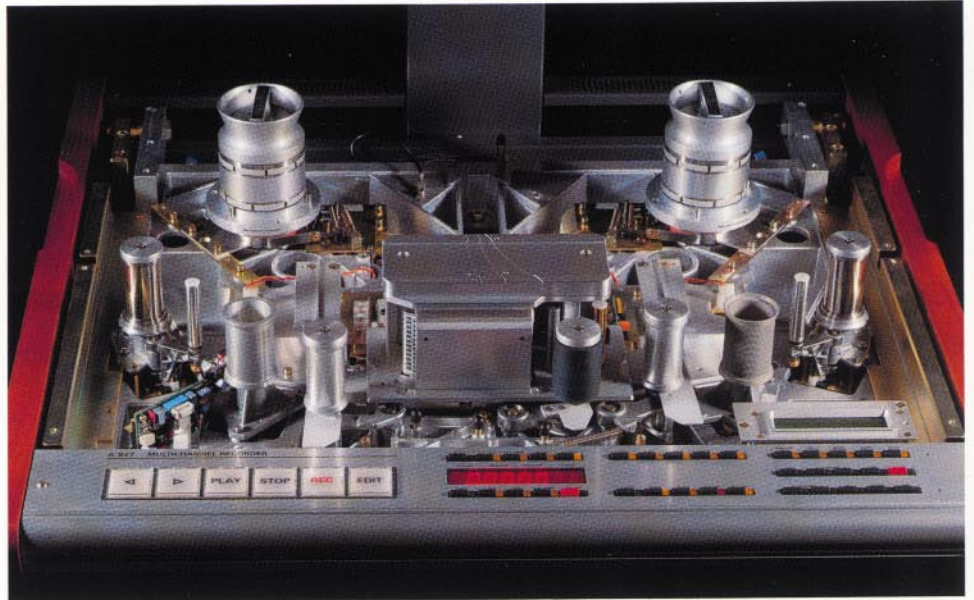
Stability, precision, speed

The tape transport accommodates 14" (356 mm) tape reels and can operate with three different speeds (7,5, 15, 30 ips) plus vari-speed control. It can also record and play in the reverse tape direction (incl. varispeed). Heavy-duty DC disc rotor motors with switched driver electronics for maximum efficiency and low heat dissipation achieve spooling speeds of up to 15 m/s (590 ips), and in conjunction with the processor controlled pancake inertia measurement also extremely fast response times.

In synchronising applications in particular, the STUDER A827 achieves short parking and acceleration times; and although the searching for cue and edit points even at short distances occurs with breathtaking speed, the tape handling is always smooth and gentle. For optimum processor control of the tape tension in all operating states the A827 is equipped with two high-resolution tape tension sensors. Result: Silky tape processing as well as cat-like responsiveness.

Antiskew tracking

The A827 Antiskew tracking system based on a tape edge compensation sensor ensures ideal, stable height guidance of the tape across the heads. For the first time the finite mechanical accuracy of the tapes is compensated so that a measurably better phase stability of the audio tracks is achieved.



The stability of the supporting tape transport elements and their mechanical precision are the key to the excellent tape guidance. By the way: This is your best guarantee after the warranty period has long expired.

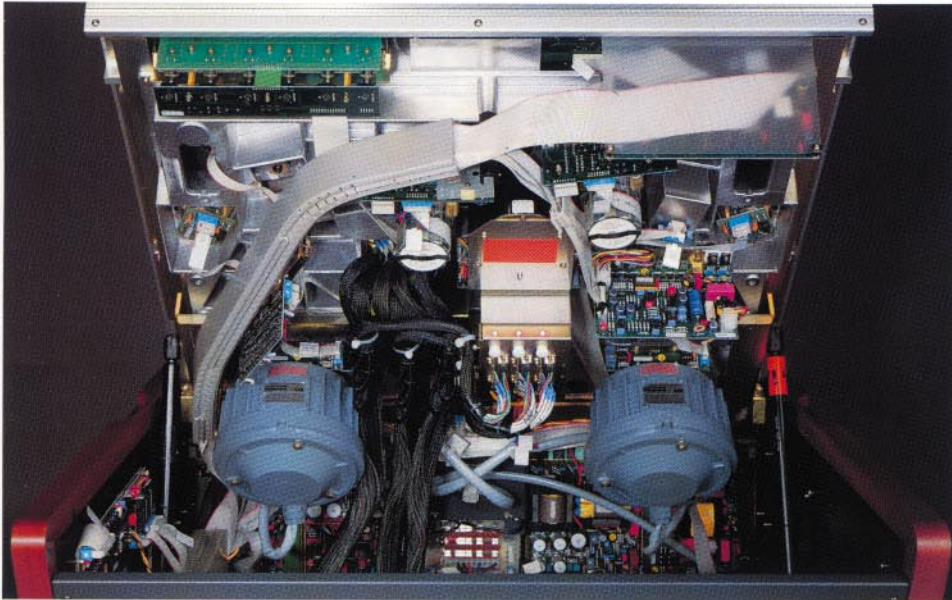
High-resolution tape tension sensors on both sides for extremely effective and responsive tape handling.



Antiskew tracking for stable height guidance of the tape.



The tape transport with the responsiveness of a wild cat



A827 tape transport in service position: excellent access to mechanical as well as electronic assemblies.

DC capstan motors with microprocessor control

Also for the tape transport only the best was good enough for us: A low-inertia DC capstan motor – of course with Hall commutation – and a separate microprocessor control. This combination ensures a wide varispeed control range as well as extremely fast but gentle start-ups, and consequently excellent characteristics for time-saving, accurate work in synchronized operation.

Menu-controlled input of the operating parameters

All mechanical parameters such as tape tensions, spooling speeds and rollback times can be entered conveniently and quickly under menu control via the keyboard. The tape transport behavior, the definition of remote controls and also the function repertoire of the user-programmable keys can, together with other settings, be adapted to the characteristics preferred in the corresponding country or studio. All settings are stored in memory and transmitted via MDACs to the transport elec-

tronics. Avoiding potentiometers leads to highly accurate reproducibility and maintenance-free operation.

Built-in locator functions

The local keyboard supports various locator functions such as zero locator, LOC START, i.e. direct selection of the last play start position, as well as a freely selectable locator address and a loop function.

More than just enhanced flexibility: STUDER AUTOLOCATOR

With the serial STUDER autolocator (option) the user can manage 20 cue address memories. The fast forward or rewind speed can be steplessly varied with the built-in shuttle control. Every position of the shuttle wheel can be stored. The autolocator also features remote control functions for varispeed and tape transport, two programmable tape counters, as well as several loop functions.

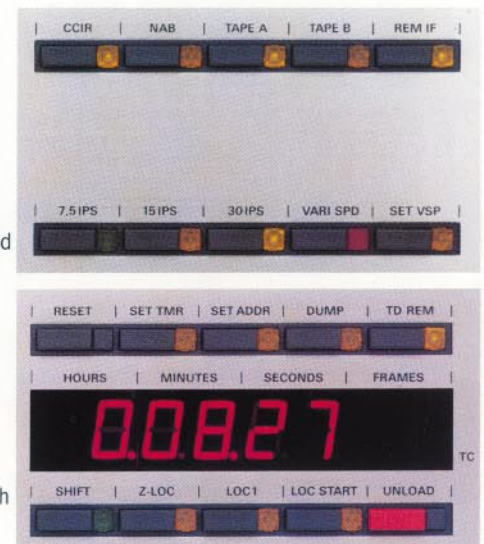
Parallel control interface for the mixing console

For use in conjunction with large mixing consoles of various makes which have the possibility for parallel control of multitrack recorders integrated an optional interface for the STUDER A827 is available.

STUDER autolocator with 20 cue memories for convenient tape transport remote control.



Ergonomic operation: keypad for tape related commands.



Tape counter display with keypad and locator functions

Have you honestly ever heard a better sound?

More for less ?

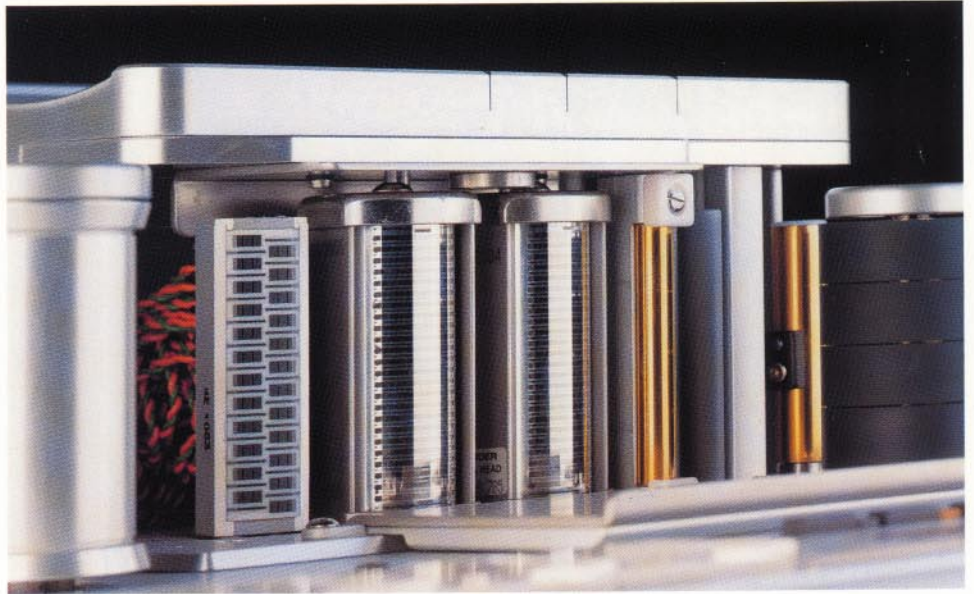
Difficult tasks can lead to fascinating results, if engineering expertise controls the solution.

To be explicit: The bargraph electronics and the fully automatic alignment of the STUDER A820 have been eliminated and only external noise reduction systems are supported (to achieve greater flexibility).

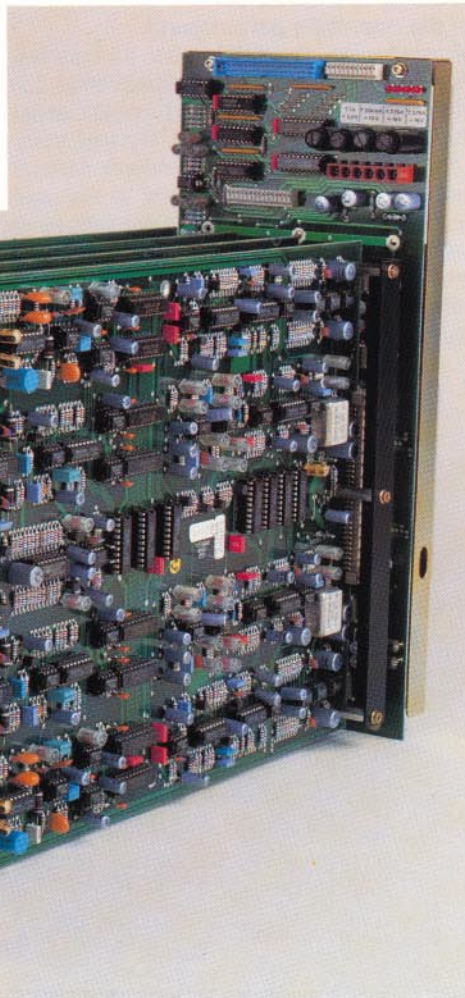
The audio electronics of the STUDER A827 has been completely redesigned. To improve the audio quality, the reliability, and to streamline the manufacturing process, the number of printed circuits has been reduced to 5 boards per 8 channels: The backpanel accommodates 4 audio boards, each of which comprises two complete audio channels including digital control and bias/erase amplifiers. The audio inputs and outputs and the permanent synch outputs are located directly on the backpanel. On each audio board the head signals (audio and RF) are connected via a D-connector directly to the preamplifier/headblock assembly. This must be the most simple design for wiring audio. The audio electronics is carefully and completely phase compensated. The Dolby® HX PRO function for optimized treble response at low tape speeds can be selectively activated.

High-precision headblock system with amorphous metal record and reproduce heads

The exchangeable headblocks are equipped with advanced glass metal heads. The extre-



2" Headblock with 24-track glass metal record and reproduce heads for excellent audio quality and long service life.



mely low wear of this hard, amorphous core material and the excellent audio data that remain constant throughout the long life are the salient features. The electronic identification of the headblock (8-16-24 channel) automatically selects the corresponding audio parameters from memory. Six complete parameter sets, i.e. two for each tape type, can be stored for the three different headblocks.

Complete electronic control

To simplify the local control panel, the audio channel control elements have been relocated to the remote control unit which means that they are directly accessible on the engineers working area, the mixing desk.

The local control panel on the recorder is subdivided into four neatly arranged function blocks (from left to right):

- **Tape transport command keys**
- **Tape counter display** with corresponding function keys and internal locator functions.
- **Tape-specific settings** such as equalization (NAB/CCIR), tape parameters A and B, tape speeds and varispeed.
- **Menu control** with LC display and **monitor mode** function keys (for automatic muting during rewind and automatic changeover to input during stop or spooling) and **record mode** (for master/safe changeover, drop-in rehearsal and record delay compensation).

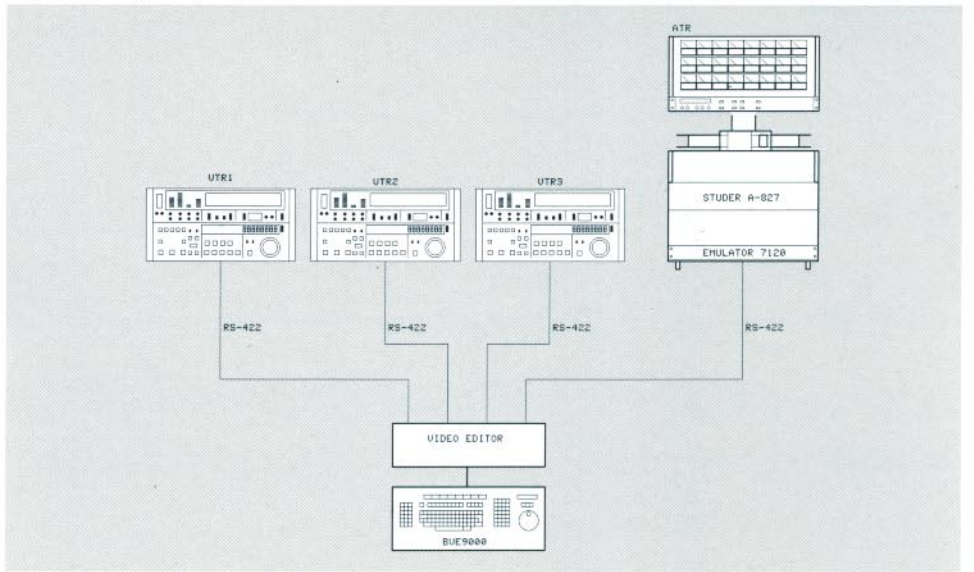
The audio electronics require a minimum of connectors and cabling. One pc board accommodates 2 complete audio channels; the input and output connectors are located directly on the backpanel.

STUDER A827 – fits into every system

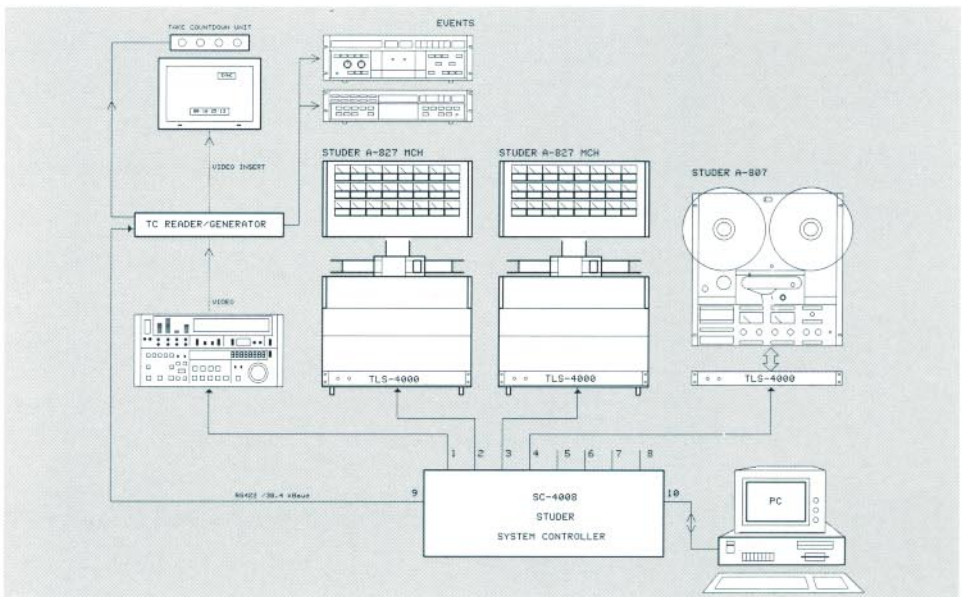
Synchronization

With its excellent tape transport characteristics and audio electronics the STUDER A827 is eminently suited for integration into synchronization systems. The TC channel can be defined and specified by the user. A STUDER tape lock synchronizer (option) can be installed directly into the machine. The machine console has already been prepared (for two 19" modules, 1 unit of vertical rack space each). A separate synchronizer connector panel (option) on the machine's rear side provides simple and convenient access to the periphery. The local control unit (LCU) of the synchronizer can be fitted into the VU-meter panel at a convenient viewing height.

The A827 can be readily integrated into any production and editing system.



"Audio follows video" setup



Audio Post Production

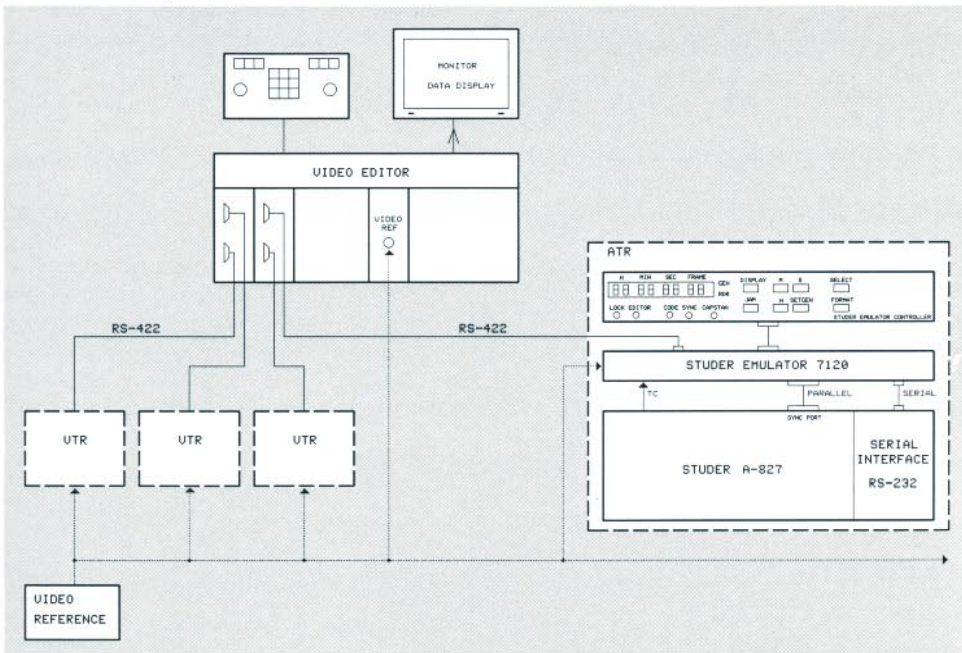
STUDER A827 – fits into every system



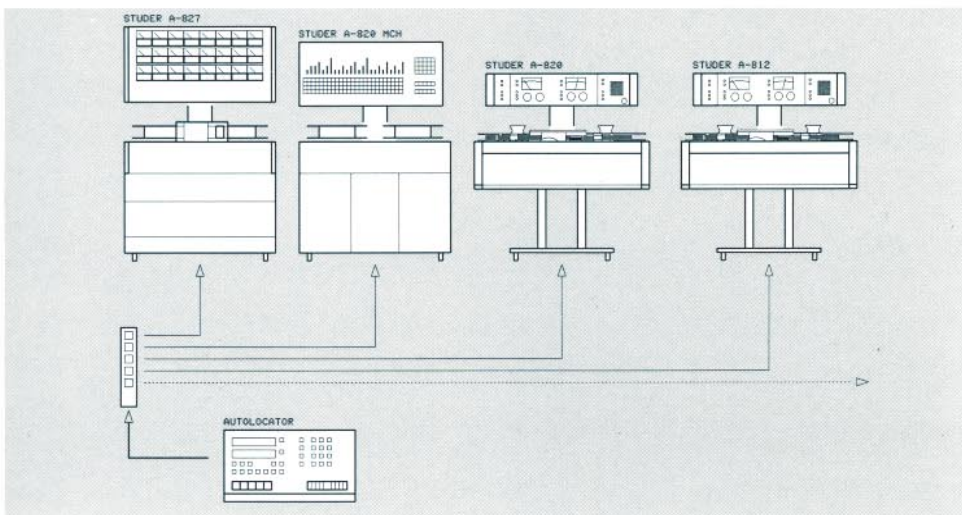
Emulation

The STUDER A827 is also well suited for direct integration into video editing systems. For audio-follows-video applications, a STUDER emulator (option) makes the tape recorder behave like a video machine. There is room for the 19" emulator unit to be installed into the machine console. Because the operating unit is the same size as the synchronizer LCU it fits into the same convenient mounting location on the VU-meter panel.

The A827 can easily be incorporated into any video editing system.



Typical video editing suite with "audio follows video" setup



Autolocator with switchbox. Each machine can be controlled individually

Digitally controlled audio electronics – the ideal combination



Menu control with corresponding alphanumeric LC display



Example:
Indication of tape tension setting for EDIT/2" tape, tape type A



Example:
Indication of reproduce level, 30 ips, CCIR, tape type A, channel 24

Menu-controlled parameter input

With a few efficient key combinations you can call the convenient user guidance on the 2-line, high-contrast alphanumeric display for tape transport and audio parameter setting. Although the STUDER A827 is not equipped with a calibration computer, the calibration work is considerably shortened by the processor assistance. For example when the calibration submenu (ALIGNMENT AUDIO) is called, the user is prompted in a logical sequence to enter the values for LEVEL, TREBLE, BASS and BIAS. With the ALL function you have the option to adjust the settings of all channels simultaneously. It is difficult to imagine a simpler, faster and more reliable method, particularly since all values are displayed in alphanumeric form.

If a third or additional tape needs to be calibrated, this can be easily accomplished with the built-in audio generator (option). The tape parameters can subsequently be recorded on tape from where they can be reloaded at any time.

Audio channel control – exactly where it is needed

The STUDER A827 is not equipped with local audio channel control buttons. Instead these are conveniently combined on a remote control unit and accessible directly by the audio mixer. The remote control can also be integrated into the mixing console.

The remote control unit also complements the local control: tape transport, locator and varispeed functions are accessible, as well as record and monitor mode functions. Six complete channel state patterns can be permanently stored and re-established by pressing a button. The remote control also indicates whether or not Dolby HX PRO is enabled, and the flux density that is currently used on the tape.



The audio remote control unit with tape transport keys, channel status memory, varispeed and other enhanced functions.

STUDER A827 multichannel machines: Professionalism without limitations



Audio connectors, well arranged and professional

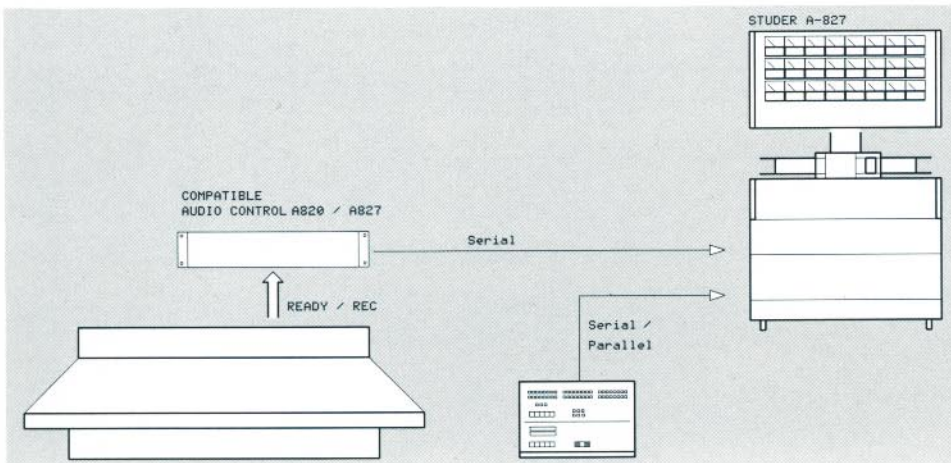
The XLR inputs are balanced and transformer-coupled, whereas the outputs are electronically balanced and also terminated on XLR connectors. The inputs and outputs can be adjusted to studio level from -6 dB to $+10$ dB. Via D25 connectors, the sync signals, e.g. for controlling noise gates, are continuously available for all channels. If required these outputs can be switched to permanent repro by means of jumpers on the audio electronics.

Interfaces for professional peripherals

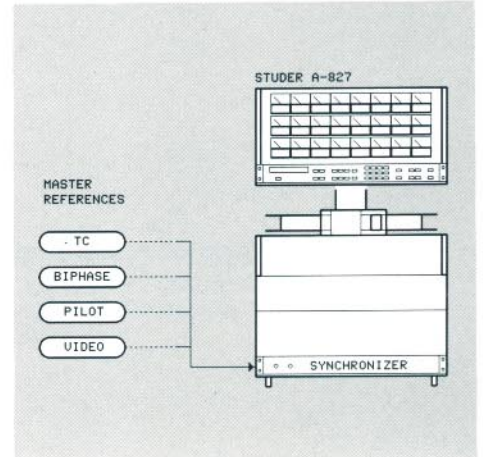
The range of interfaces and remote controls available for the A827 is geared to the requirements of professional applications. Included are audio and tape transport remote controls, audio interfaces, synchronizers, autolocator/timer, RS232, SMPTE/EBU bus (RS422) and controls for external NR systems (Dolby A, SR and Telcom).



Professional connectors for audio, tape transport and periphery.



Audio Remote Interface for mixers with remote control option



Master References for synchronizing

Some photos show options offered at additional cost. We reserve the right to make alternations as technical progress may warrant.

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PROFESSIONAL AUDIO EQUIPMENT
Worldwide: STUDER International, Switzerland, a division of STUDER REVOX AG
 CH-8105 Regensdorf, Althardstr. 10 · Phone +41 1 870 75 11 · Fax +41 1 840 47 37