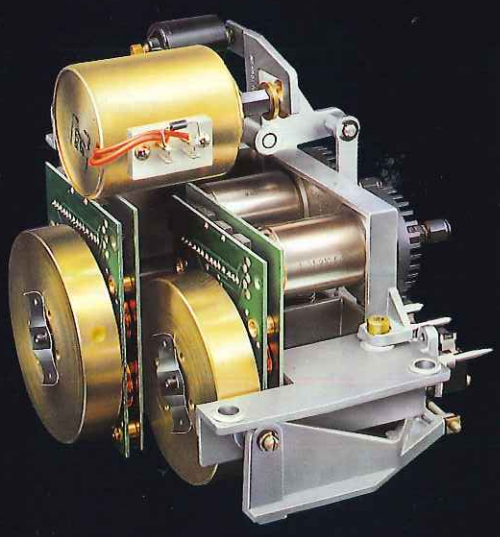
STUDER A721 PROFESSIONAL CASSETTE TAPE RECORDER

The practical cassette has become an accepted recording medium in professional audio engineering, be it for OB applications, for disc recording or AV studios. Common requirements of professional users are superb audio performance, reliability, consistent performance to specifications, and stability in continuous duty – qualities that are also expected of cassette recorders! With the development of the A721 cassette recorder Studer has succeeded in satisfying all requirements of professional users. Principal features: solid-metal die-cast chassis for enduring precision, 4-motor direct drive with dual capstan and 2 DC spooling motors, microprocessor control for very gentle tape processing and simple operation, tape counter with digital real-time indication, modular audio electronics with automatic record parameter calibration, peak program meter with backlit LCD bargraph instruments, changeover between DOLBY® B&C as standard equipment, including tape/source monitoring, balanced inputs and outputs, calibrated and uncalibrated. Suited for 19" rack mounting.

Studer A721, a studio tool

PROFESSIONAL...



...THE TAPE TRANSPORT TECHNOLOGY

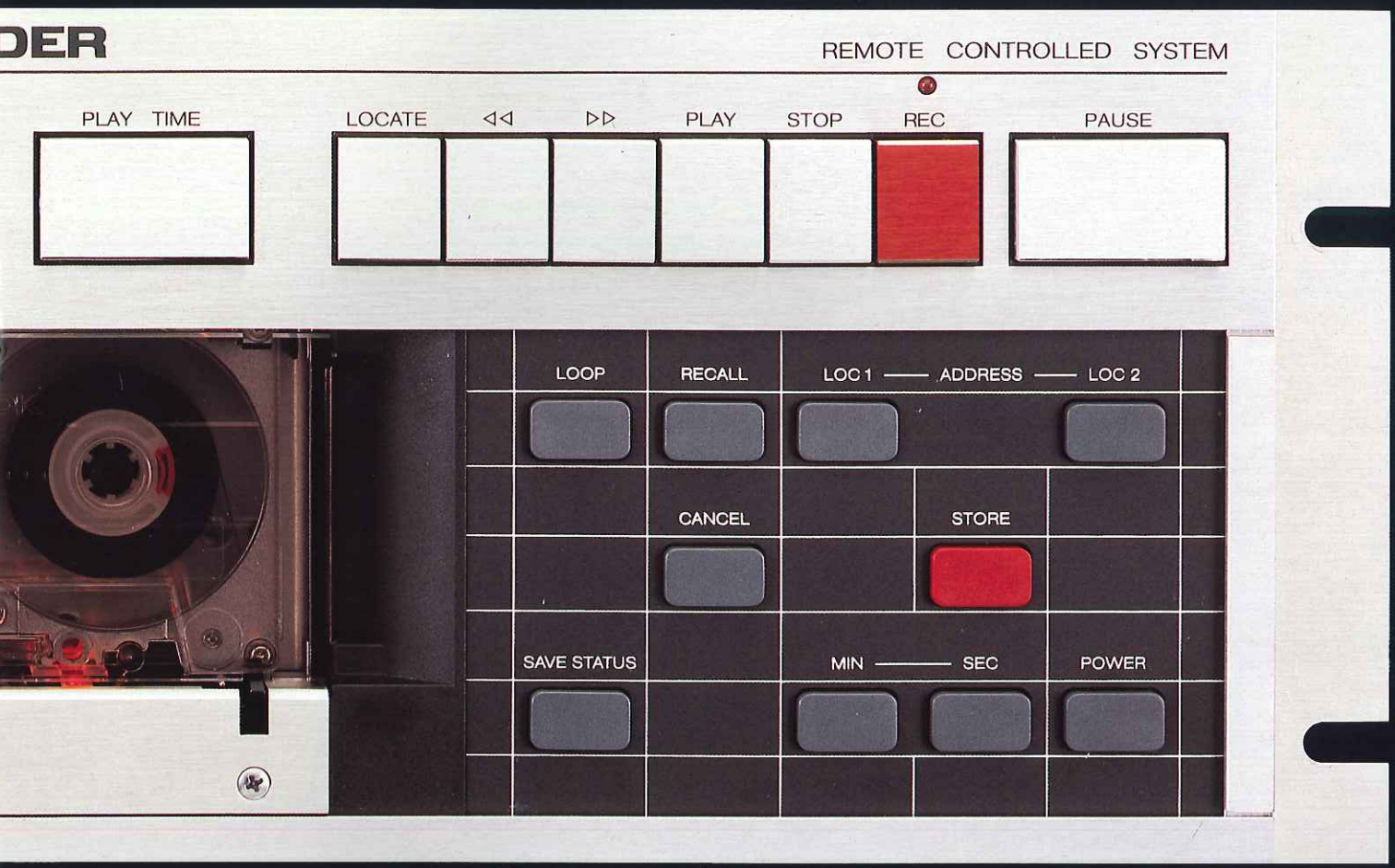
The construction of the tape transport clearly exemplifies the high standard of precision and stability which was set for the entire unit. Precision has a direct influence on audio quality especially where the narrow tape is concerned. And stability is one of the basic requirements of a unit designed for constant professional use. And yet the A721 has performance capacity to spare:

- Tape deck chassis and headblock assembly made of rigid die-cast aluminum alloy.
- Four-motor tape transport mechanism: two direct-drive fast responding spooling motors, plus two high-precision disc rotor motors for the dual capstan direct drive.
- All transport functions managed by microprocessors.

...THE OPERATING CONCEPT

The A721 is extremely easy to operate, a fact which clearly contributes to the reliability of the machine and which enables the user to make efficient use of the comprehensive function repertoire. To permit fast and error-free operation, large-surface keys have been provided for the primary tape deck functions. The logical arrangement of the secondary controls for the audio electronics and the tape transport control enables the user to take full advantage of the wide range of programmable auxiliary functions. The well-arranged LC display is easy to read under any lighting conditions and provides continuous and comprehensive information on the real-time tape position, output level, operating modes, and machine states.

Convenient, powerful, functional



...THE AUDIO ELECTRONICS

The audio electronics, designed for achieving outstanding performance data, can be optimally used for any type of tape. A calibration computer performs all necessary functions: simply press three buttons and the calibration procedure (ALIGN) is completed within 20 seconds. Audio parameters specific to a batch of tapes are stored in one of the six registers of the calibration computers, from where they can be retrieved automatically. The input and output levels are calibrated (CAL) to nominal studio level or can be varied individually for each channel (UNCAL). In recording mode, the changeover for tape/source monitoring is performed by a control logic, or can be actuated manually (MONITOR). The DOLBY B and C noise reduction systems, additionally with switchable FM pilot tone suppression (MPX), can be brought into the circuit by pressing a button.

...THE TAPE DECK CONTROL

The processor-coordinated tape deck control is highly convenient to operate: Any operating mode can be activated directly from any machine state. Clean transitions such as fast, smooth fade-in and fad-out in record mode are taken over by the computer. Practical locator functions are available for positioning the tape at a specific address. When the LOCATE key is pressed, the last PLAY or REC start position is automatically found. Two addressable locator registers (LOC1/LOC2) permit very fast access to any two tape locations, or they can be used for repetitive playing of a program sequence (LOOP). Addressing is very simple: The current tape address is entered by pressing the STORE key, or any locations can be keyed in (MIN-SEC). The register contents can be read off the display (RECALL) at any time, or cancelled (CANCEL) or overwritten (STORE).

...THE CONNECTION FACILITIES

The parallel remote control interface, a 25-pin D-type connector, supports fader start and remote control operation of all primary tape deck functions with visual status feedback. Naturally, the A721 studio cassette recorder is equipped with balanced and floating XLR inputs and outputs.

Technical data

The measured values related to specific tape types are achieved with modern, high-quality cassettes.

Tape deck:
4-Motor tape transport, 2 computer-controlled DC motors, 2 individually controlled direct-drive capstan motors.

Tape counter:
Real-time indication in min./sec. based on preselected cassette play time.

Locator functions:
2 user-definable/erasable addresses, supports loop function, additional working address for LOCATE function.

Tape speed: **17/8 ips, ±0.3 %**

Wow and flutter: (DIN 45507 / IEC 386)
(weighted) for C-46 to C-90 **0.1 %**

Usable cassettes: **C-46** through **C-120**
(technical data guaranteed up to C-90).

Spooling times: for C-60 **approx. 50 s**
for C-90 **approx. 75 s**

Noise reduction system: **Dolby B / Dolby C**
individually selectable for record and reproduce mode.

Tape type selection:

(2 memory locations)	ferric oxyde	**Type I**
(3 memory locations)	chromium dioxyde	**Type II**
(1 memory location)	metal pigment	**Type IV**

Assignment automatically via cassette coding or manually via push button.

Reproduce equalization:

Type I	**3180 + 120 µs**
Type II	**3180 + 70 µs** or **120 µs**
Type IV	**3180 + 70 µs**

Level meter:
Peak program indicator, 200 nWb/m at 0 dB mark

Harmonic distortion:
(HD3 of 333 Hz/0 dB, Dolby ON)

Type I	**< 1.0 %**
Type II	**< 1.5 %**
Type IV	**< 1.5 %**

Frequency response:
(after automatic calibration, NR OFF)

Type I	20 Hz to 18 kHz	**+2 / −3 dB**
Type II	20 Hz to 20 kHz	**+2 / −3 dB**
Type IV	20 Hz to 20 kHz	**+2 / −3 dB**

Signal-to-noise ratio:
(weighted according to IEC 179 A-curve, values in parentheses are linear, relative to 3 % k 3 at 333 Hz)

	NR off	Dolby B	Dolby C
Type I:	**55 (50) dB**	**64 (54) dB**	**69 (56) dB**
Type II:	**57 (50) dB**	**65 (54) dB**	**71 (56) dB**
Type IV:	**58 (50) dB**	**66 (54) dB**	**72 (56) dB**

Channel separation: at 1 kHz **> 40 dB**

Bias and erase frequency: **105 kHz**

Erase efficiency:
NR switched off, at 1 kHz **> 68 dB**

Line inputs:
via transformer **balanced and floating**
impedance, 30 Hz to 16 kHz **min. 10 kOhm**

Input level:
(for 0 dB level = 200 nWb/m)
calibrated: (0 dBu = 775 mV) **+ 4 dBu**
at 250 nWb/m **+ 6 dBu**
adjustable from **−5 to +15 dBu**
uncalibrated: sensitivity can be increased by **10 dB**
max. input level: **+24 dBu**

Line outputs:
via transformer **balanced and floating**
Impedance, 30 Hz to 16 kHz **< 50 Ohm**
Load resistance **min. 200 Ohm**

Output level:
(for 0 dB level = 200 nWb/m)
calibrated: (0 dBu = 775 mV)
R_{load} = 600 Ohm **+ 4 dBu**
at 250 nWb/m **+ 6 dBu**
adjustable from **−5 to +15 dBu**
uncalibrated: level can be increased by **10 dB**
Max. output level into 600 Ohm **+24 dBu**

Headphones output:
(for 0 dB level = 200 nWb/m)
unbalanced, R^i = 200 Ohm
max. output level: **+12 dBu**
level adjustable in 8 steps

Power requirements:
50 to 60 Hz
100/120/140/200/220/240 V AC ±10 %

Power consumption: **max. 50 W**

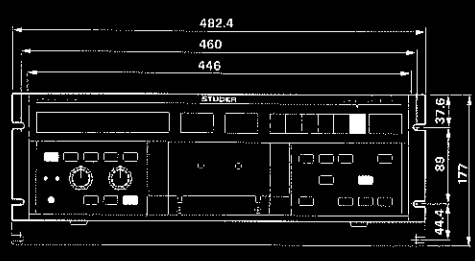
Power fuse:
100 to 140 V AC: (Super Slow) **TT 500 mA/250 V**
200 to 240 V AC: (Super Slow) **TT 250 mA/250 V**

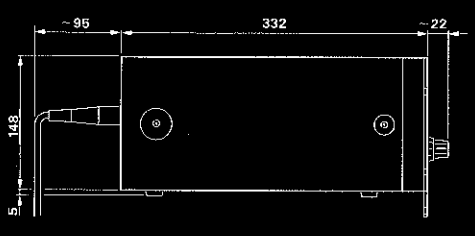
Operating conditions:
Ambient temperature: **+5 °C to +40 °C**
Relative humidity: according to **DIN 40040**
category F, non-condensing

Operating position: only **horizontal**
cassette vertical

Weight: net **10.5 kg**

Dimensions: in mm





Subject to change.

Ordering information

A721 Cassette tape recorder **64.047.21012**
incl. – a set of audio XLR connectors
– Transport remote control connector (25-pin D-Type)
– Sound head cleaning kit
– Filler panel achieve the 7" standard height

Side covers to replace the 19" rack mount adapters
right **1.726.525.01**
left **1.726.525.02**

Sales Offices:
Australia, North Sydney 4064700. **Austria,** Vienna 47 33 09/47 34 65. **Belgium,** Hasselt (011) 229 664. **Canada,** Toronto (416) 423-2831. **Denmark,** Gentofte 451652340. **Finland,** Helsinki 358-0-755 7711. **France,** Paris (1) 45 33 58 58. **Germany,** Löffingen 07654-8030. **Great Britain,** London 01-953 0091. **Hong Kong,** 5-441-310 / 5-412-050. **Italy,** Milano (02) 25390121. **Japan,** Tokyo 03-320-1101. **Netherlands,** Gennep 08851-96300. **Norway,** Oslo (02) 356110. **Singapore,** 2507222/3. **Spain,** Madrid 2317840. **Sweden,** Solna 08/7340750. **USA,** Nashville (615) 254-5651.
Worldwide: Studer International AG, Regensdorf, Switzerland, +411 840 29 60.

Some photos show options offered at additional cost.

We reserve the right to make alterations as technical progress may warrant.

Printed in Switzerland by WILLI STUDER AG, 10.26.0800 (Ed.1087)