

SONY®

Stereo Cassette Recorder **TC-D5 PRO**

High-performance transports and electronics
packed in the smallest possible space
Sony's new cassette tape recorder for professional applications



(Microphones Optional)

Unequaled in compactness, unequaled in performance.

The Sony TC-D5 PRO stereo cassette recorder sets new standard for professional in-the-field recording.

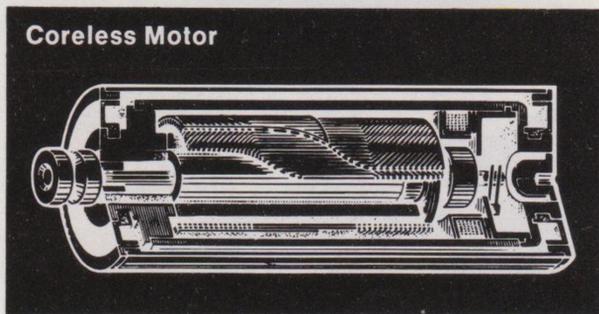
High-performance transports and electronics packed in the smallest possible space. Sony's new cassette tape recorder for professional applications.

Out-of-doors cassette recording has always meant a compromise in performance. By drawing on its rich experience and expertise, however, Sony now offers to TV, radio, or newspaper reporters and recording engineers at production houses a completely new style cassette unit.

The TC-D5 PRO is the first cassette tape recorder capable of providing true out-of-doors versatility without sacrificing sound quality. It is as small as a letter-size book and as lightweight as a single-lens reflex camera. It nevertheless provides performance equal to that of more expensive open-reel tape recorders designed for the same demanding professional applications. Frequency response is extended to 40-16,000Hz \pm 3dB. Wow and flutter is less than 0.06%. With these extraordinary figures never before achieved by this compact a unit, the TC-D5 PRO is most suitable for those professional people with the highest demands on quality, operation, and maneuverability.

Reliable Mechanism

More than anything else, the prime feature of the TC-D5 PRO is its reliability. It adopts a transport system of 3 refined elements: a disc drive, a capstan servo, and a coreless motor.



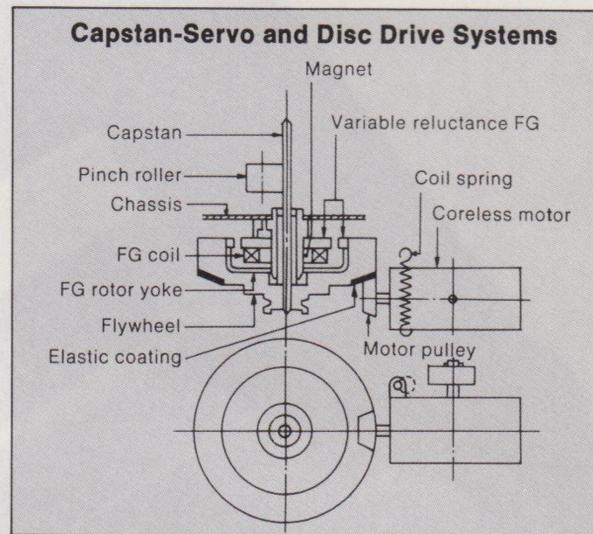
Coreless Motor

motor shaft into direct contact with the elastic-coated outer bottom of the flywheel. It is thus characterized by a drive section which takes the minimum possible space and makes for a compact tape mechanism. The disc drive system also needs no belts or other transmission mechanisms, resulting in minimum torque loss, fast start-up, and powerful anti-rolling effect. In addition, the compliance of the elastic material and the mass of the flywheel configure a mechanical filter which greatly reduces flutters of over 100Hz.

Capstan-Servo System

The heart of this servo system is a frequency generator composed of highly dense 144 "internal teeth" within the flywheel and a combination of a bias magnet, a coil, and 144 "external teeth" fixed to both the rotor yoke and

the bearing side. As the flywheel rotates, the changes in the magnetic flux, produced by variations in the air gap between the internal teeth and external teeth, are detected by the coil. Frequency generators operating under this method are called the variable reluctance type. The accurate variable reluctance frequency generator of the TC-D5 PRO, when combined with a servo circuit featuring a sample and hold circuit ensures stable servo control and thus superior wow and flutter figures.

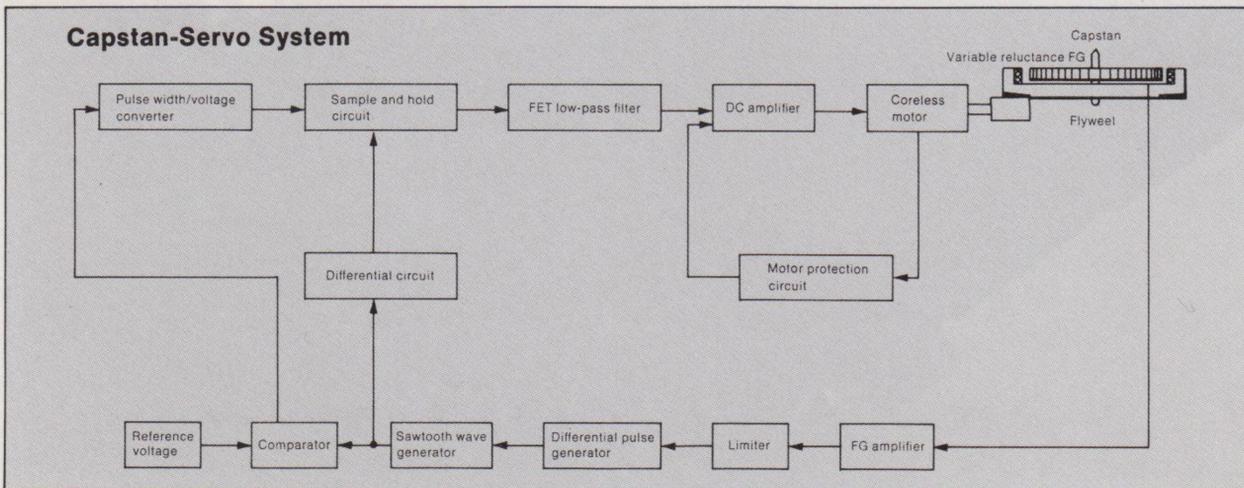


Coreless Motor

A coreless motor is characterized by a strong torque. It features a cylindrical rotor and a powerful rare-earth magnet so that it can provide maximum compactness, minimum power consumption, plus maximum torque. The motor noise is also reduced to a minimum due to its special construction. The excellence of this coreless motor's response characteristics goes hand in hand with the capstan-servo to obtain a highly accurate tape transport.

Disc Drive system

There are many ways to drive the capstan. In the TC-D5 PRO, a unique disc drive system has been adopted. This system brings the

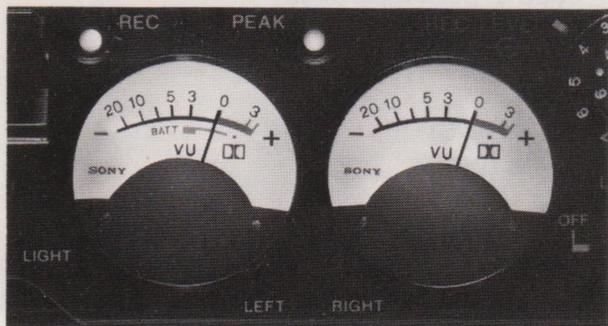


Sophisticated Electronics

A cassette recorder with an advanced mechanism such as the TC-D5 PRO must have equally sophisticated electronics to provide top performance. Each of the head, transports, and electronic circuits combine to produce greatly improved sonic capabilities.

VU Meters & Peak Level Indicator

Field recording is no time for guesswork. The



TC-D5 PRO employs 2 illuminated VU meters. For perfect response to very rapid peaks, an LED peak indicator is supplementary integrated. With these accurate meters, wide dynamic range recording without distortion can be easily achieved.

Limiters Switch

In spite of the wide dynamic range of the TC-D5 PRO, occasional unexpected peaks are bound to occur in field work. The limiter switch provides for such instances. With this switch ON, the limiter circuit automatically acts to suppress excessive peaks and thus eliminates tape overload and the possibility of distortion.

DC-DC Converter

To achieve superb linearity, the voltage to be supplied to the amplifier stage must be sufficiently high and stable. Using more batteries, however, must be avoided with portable units as it results in an increase in size and weight. Instead, the TC-D5 PRO incorporates an efficient DC-DC converter with a regulator circuit, achieving true portability combined with outstanding sound fidelity.

Tape Selector

The TC-D5 PRO features a tape selector for the Type I (standard) and the Type III (FeCr) tapes. In addition, a special device automatically detects the Type II (CrO₂) cassette having special detector slots and provides correct bias and equalization.

Record Mode Selector

Recording in monaural using 2 stereo tracks simultaneously is an effective way of improving signal-to-noise ratio. A record mode selector is provided for such a purpose and the right channel MIC connector is designed to be used for a single-microphone connection.

Immediate monitoring

Headphone monitoring or immediate playback through a built-in speaker is possible. The headphone amplifier is capable of 20mW (max.) output so that a satisfactory listening level can always be obtained.

F&F Head

An ideal head will always be a major feature of tape decks. Sony's F&F head uses highly polished, ultra-hard ferrite for both the core and guard portions to achieve exceptional durability and magnetic characteristics. Meticulously engineered, it also provides precisely paralleled head gaps and stable head-to-tape contact. In terms of performance, these design advantages result in extended frequency response, excellent phase characteristics, and reduced noise, which all combine to improve sound quality.

Dolby NR System

The TC-D5 PRO naturally incorporates the Dolby NR system which all quality decks now feature to enhance their signal-to-noise ratio. The Dolby system is especially effective for eliminating tape hiss noise during low-level high-frequency passages.

Operational Convenience

The TC-D5 PRO is much more than an exercise in miniturization. Each and every feature has been designed for optimum efficiency and convenience.



Cannon connector

Cannon connectors are essential for instant interface with professional microphones. The TC-D5 PRO accepts low-impedance balanced



microphones equipped with the Cannon XLR-3-11C connector. The microphone inputs are also provided with a 20dB attenuator to prevent microphone amplifier saturation.

Memory Light Facility

The TC-D5 PRO offers a convenient memory light facility for easy level setting in the dark. Pressing the BATT CHECK/LIGHT button while the recorder is in operation illuminates the VU meters as well as indicates the battery condition on the left VU meter. Lights automatically shut-off after 15 seconds to save batteries.

Pause Facility

Standby recording using the pause button is essential for professional recording so as not to miss critical moments. The pause button can, of course, be used also to stop the tape momentarily in recording or playback.

Record mode Indicator

This lamp lights to indicate the recording mode. It can also be used as a simple battery check as it glows faintly when batteries run low.

Tape Counter

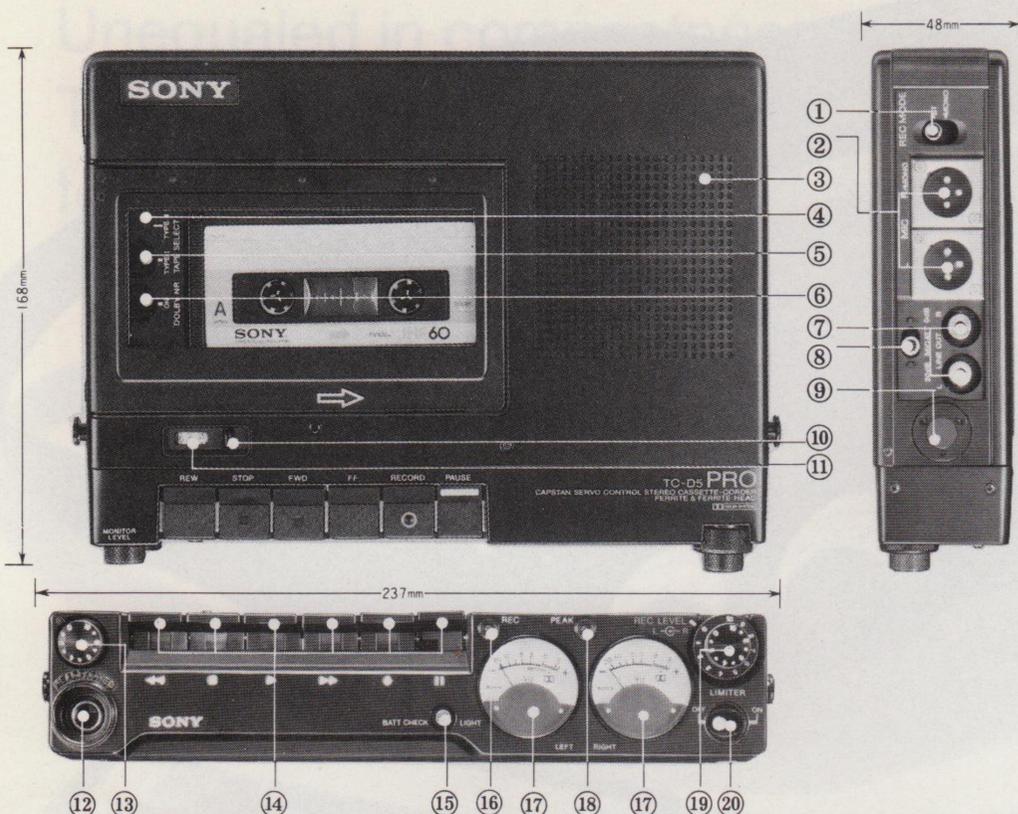
Quick access to the desired portion of the recorded tape is possible by indexing the tape contents with this counter.

Auto shut-off

Though the TC-D5 PRO is essentially low in power consumption, the auto shut-off permits a further prolongation of battery life. At the tape end in play or record mode, all mechanisms disengage and the power is shut-off.

Carrying Set

The TC-D5 PRO comes with a heavy-duty shoulder strap and belt. A carrying case is also supplied.



- | | |
|---|------------------------------------|
| ① Record mode switch | ⑪ Tape counter |
| ② Mike connectors
(Cannon XLR-3-32 type) | ⑫ Headphone jack |
| ③ Monitor speaker | ⑬ Monitor level control |
| ④ Type II (CrO ₂) marker | ⑭ Function buttons |
| ⑤ Tape selector | ⑮ Battery check/meter light button |
| ⑥ Dolby NR switch | ⑯ Record mode indicator |
| ⑦ Line output jacks | ⑰ VU meters |
| ⑧ Mike attenuator switch | ⑱ Peak level indicator |
| ⑨ Metal fitting (for shoulder strap) | ⑲ Record level control |
| ⑩ Tape counter reset button | ⑳ Limiter switch |

Optional Accessories

 <p>F-115 Omni-directional dynamic microphone</p>	 <p>FeCr cassette tape (45, 60, 90 minutes)</p>
 <p>ECM-51 Omni-directional Electret Condenser Microphone</p>	 <p>CD-α cassette tape (46, 60, 90 minutes)</p>
 <p>DR-6M Dynamic stereo headphones</p>	 <p>BHF cassette tape (46, 60, 90, 120 minutes)</p>
 <p>MDR-5 Micro dynamic receiver</p>	 <p>SUM-1S "D" size super battery</p>

Specifications

- Recording system : 4-track 2-channel stereo/mono
Tape speed deviation : ±1%
Fast winding time : Approx. 150 sec. with Sony cassette C-60
Operating temperature : 0°C - 40°C (32°F - 104°F)
Frequency response : DOLBY NR OFF
- With Ferri-Chrome Cassette (TAPE SELECT: TYPE III)
40 - 16,000Hz ±3dB (NAB)
40 - 16,000Hz (DIN)
 - With CrO₂ cassette
40 - 15,000Hz ±3dB (NAB)
40 - 15,000Hz (DIN)
 - With standard cassette (TAPE SELECT: TYPE I)
40 - 12,000Hz ±3dB (NAB)
40 - 12,000Hz (DIN)
- S/N ratio : DOLBY NR OFF
- With Ferri-Chrome cassette
58dB at peak level (NAB)
57dB (DIN, 1975 rev.)
 - With CrO₂ cassette
55dB at peak level (NAB)
 - With standard cassette
53dB at peak level (NAB)
- DOLBY NR ON
Improved by 6dB
- Total harmonic distortion : 1.3%
Wow and flutter : 0.06% (WRMS)
±0.17% (DIN)
Bias frequency : 85kHz
Speaker : Approx. 5cm (2 inches) dia.
Power output : 200mW (at 10% harmonic distortion) at DC operation
Inputs : Microphone (Cannon connector XLR-3-32 type, ×2)
balanced sensitivity 0.25mV
(-70dB) for low impedance
microphone with Cannon connector XLR-3-IIC
Outputs : Line (phono jack, ×2)
load impedance 10k ohms or higher
rated output 0.435V (-5dB) at load
impedance 47k ohms
Headphone (stereo binaural jack)
for low impedance headphones
rated output 0.2mW
(at load impedance 8 ohms)
maximum output 20mW
(at load impedance 8 ohms)
- Power requirements : DC 3V, 2 "D" size batteries (IEC designation R20)
Battery life : Approx. 4.5 hours with Eveready alkaline batteries
No. E95
Approx. 1.5 hours with Sony super batteries SUM-1S
Dimensions : Approx. 237(W) × 48(H) × 168mm(D)
(9³/₈ × 1⁷/₈ × 6⁵/₈"")
including projecting parts and controls
Weight : Approx. 1.7 kg (3 lb 12 oz) including batteries
Supplied accessories : Connecting Cord RK-74H (1)
Carrying Case and Shoulder Strap (1 set)
Head Cleaning Tips (1 set)
Belt (1 set)

*Design and specifications are subject to change without notice.

Sony Corporation

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