



Data Recording

PC200Ax Series Features

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● Portability

The use of Sony's unique compact mechanics and LSI technology has enabled the manufacture of compact, lightweight PC200Ax Series {297 mm (W) x 220 mm (D) x 70 mm/100 mm (H) and approx. 3.5 kg/4.5 kg} that can be carried in an attache case or traveling bag to the field.

● Multiple power source

The PC200Ax Series operates on AC, DC or with an internal rechargeable battery for easy indoor/outdoor measuring. The 2-way power supply (AC/DC or DC/battery) backs up the data in case of power failure in either case.

● Double bandwidth record/playback

By doubling both the longitudinal tape speed and the rotational speed of the head drum, double bandwidth record/playback has been achieved:

- DC to 20 kHz for all 4 channels (PC204Ax/PC208Ax/PC216Ax)
- DC to 10 kHz for all 8 channels (PC208Ax/PC216Ax)
- DC to 5 kHz for all 16 channels (PC216Ax)

● Multiband/Channel modes

The multiband/channel modes offer a wider variety of combinations of the frequency and a number of channels. Added with the switchable record/playback speed (normal and double) mode, a yet more flexible data gathering is possible.

- 2/4-channel mode for PC204Ax
- 2/4/8-channel mode for PC208Ax
- 2/4/8/16-channel mode for PC216Ax

- 2/4/8/16/32-channel mode for PC216Ax with channel expansion unit PCCX32Ax.

● Double speed time axis conversion

Being capable of two speed modes. The time taken for data analysis can be halved by reproducing recordings made at the normal speed in the double speed mode. Alternatively, recordings made in the double speed mode can be played back at the normal speed for precision monitoring. Up to 6-hour recording/playback is possible (with a 120m DDS tape at the normal speed).

● Wide dynamic range / Further reduced interchannel phase difference

The use of 16-bit linear quantization (using the least significant bit for the LSB digital channel) achieved a broad dynamic range of 80 dB or more (within the bandwidth), which is only possible with PCM, making the setting of the input range an easy task. In addition, an interchannel phase difference of less than 1deg(PC204Ax/208Ax) or less than 2deg(PC216Ax) has been attained by compensating the phase variations occurring in the analog filters with digital filters.

● Compliance with safety/ EMC regulations

Complying with world's major safety / EMC regulations (UL and EN61010-1; FCC and EN55011-A {EMI}; EN50082-1 {EMS}), the PC200Ax Series can be relied on for safety and reliability.

● Automatic analog circuit calibration

At power-on or in self-check, the offset and gain of the analog circuits are automatically calibrated. This enables high-accuracy recording and playback without the need of compensations for the offsets or variations in gain that changes with the ambient temperature or with the passage of time.

● Table of contents displayed all together

The table of contents (TOC) of a whole tape displayed on a host computer screen enables more efficient check and search of the recorded data. The TOC data includes ID number, tape address, input range and up to 20 characters for your memo's, for each block of recorded data.

TOC data is automatically compiled from actual recordings and written into the leading 2-minute area of a tape specially reserved for TOC data. TOC data can also be edited and re-recorded as required under control of the computer.

● Switchable % / dB Bar display

Comprehensive data signal monitoring is achieved by means of a back lit bar graph display, affording a wide viewing angle and the choice of either % or dB calibration. In addition, an LED indicator alerts the operator to the over-range input.

*The PC216Ax shows the % graph in both plus and minus directions, with the 0V at the center, a convenient feature for stress and distortion measuring.

● Read-After-Write function

The read-after-write function using 4 heads checks data in real time during recording for write errors and displays the data status to quickly alert the operator to damaged tape, clogged heads and other conditions to be corrected.

● Built-In test signal

A test signal selectable from among $\pm 100\%$ digital sine wave signal, + 100% DC, - 100% DC and 0V can be generated from the analog/digital output connector or recorded as high accuracy reference signal on the tape.

* $\pm 100\%$ level is equivalent of $\pm nV_p$ with the full input range set to $\pm nV$ range, where $n=0.5/1.0/2.0/5.0/10.0/20.0$

● 6-Hours recording time

An all new tape transport mechanism for use with the new thinner media has been developed. The new tape transport is fully compatible with the very latest 120-m DDS cassettes to enable longer recording time of up to 6 hours at normal speed (3 hours in Double Speed mode). The latest DDS Media also offers superior performance and excellent long term storage capability.

● Various high speed search modes

Following targets are searched for at 200 times the normal speed to enable quick data location; tape position stored in memory by MARK-1/-2 key, 3-digit ID number recorded on tape, start ID automatically written at the start of recording, and the end of the immediately preceding data.