



Data Recording

PC200Ax Series Specifications

Specifications

Model		PC204Ax	PC208Ax	PC216Ax
Tape transport				
Usable tape and record/playback time		DG60Ms 120, DG90Ms 180, DGD120MA 360, DT-46 46, DT-60 60, DT-90 90, DT-120 120 *The figures show the time in min. For normal tape speed. In the double speed mode, the figures are half of those given here. *Tape width: 3.81 mm, tape speed: 8.15 mm/s (normal speed), 16.30 mm/s (double speed)		
Head Configuration		Rotary heads (2 for recording, 2 for playback) Drum dia: 30 mm, Wrapping angle: 90 degrees ; Drum rotation: 2000 r/min (normal speed), 4000 r/min (double speed)		
Writing speed		3.133 m/s (normal speed), 6.266 m/s (double speed)		
Start-up/stopping time		1 s or less(from PAUSE, normal speed)/0.5 s or less(normal speed)		
Servo		Capstan: Phase control(in REC-FWD) and ATF control (in FWD) Drum: Phase control, speed control Reel: Tension control(in FWD/REC/FWD)		
Motors		Drum(1), capstan(1), reels(2), control(1)		
FF/REW time		60 s or less(DG60Ms)		
Model		PC204Ax	PC208Ax	PC216Ax
Record/Playback				
Channels (main data)		2(normal speed only) 4	2(normal speed only) 4/8	2(normal speed only) 4/8/16/ 32(with PCCX32Ax)
Sampling frequency		3 kHz(with 1.25 kHz bandwidth), 6 kHz(with 2.5 kHz bandwidth), 12 kHz(with 5 kHz bandwidth), 24 kHz(with 10 kHz bandwidth), 48 kHz(with 20 kHz bandwidth)(64-times oversampling in both record and playback)		
Quantization		16 bit, linear (15 bit for main channel, LSB I/O 1 bit)		
Error correction		Double Reed Solomon		
Subcode channel		Announcement, address, time, ID, B/C mode, recording tape speed, input range setting (analog mode), event*, memo (max. 12 characters)* *External input only		
Frequency response	2ch mode	DC to 20 kHz(normal speed), +0.5 to -1.0dB, 0dB @200 Hz		
	4 ch mode	DC to 10 kHz(normal speed), +0.5 to -1.0 dB, 0 dB @200 Hz		
		DC to 20 kHz(double speed), +0.5 to -1.0 dB, 0 dB @200 Hz		

	8 ch mode	DC to 5 kHz(normal speed), +0.5 to -1.0 dB, 0 dB @200 Hz DC to 10 kHz(double speed), +0.5 to -1.0 dB, 0 dB @200 Hz		
	16 ch mode	DC to 2.5 kHz(normal speed), +0.5 to -1.0 dB, 0 dB @200 Hz DC to 5 kHz(double speed), +0.5 to -1.0 dB, 0 dB @200 Hz		
	32 ch mode	DC to 1.25 kHz(normal speed), +0.5 to -1.0 dB, 0 dB @200 Hz DC to 2.5 kHz(double speed), +0.5 to -1.0 dB, 0 dB @200 Hz		
Dynamic range		80 dB or more (within the bandwidth)		
S/N ratio		78 dB or more (within the bandwidth)		
Interchannel phase difference		1 degree or less	2 degrees or less	
Cross talk		- 80 dB or less (within the bandwidth)		
Distortion		0.02 % or less (within the bandwidth)		
DC linearity		±0.1 % or less (within the bandwidth)		
Drift		±0.1 % or less each in recording and playback blocks(fir 2 hours from 15 minutes after power-on)		
Input		Input range: ±20 Vp, ±10 Vp, ±5 Vp , ±2 Vp , ±1 Vp , ±0.5 Vp Coupling: DC, Input impedance: 100 k ohm , unbalanced		
Output	Output level	±1 Vp to ±5 Vp, continuously variable, Output current: 10 mA max		
	Output impedance	50 ohm, unbalanced		
	Test signal	±100% sine wave(500 Hz for normal speed/ 1 kHz for double speed)/+100% DC/-100% DC/0V, 4types selectable		
Input/output zero point adjustment		Auto calibration: Gain, offset(at power-on or selfcheck)		
LSB digital input / output (analog mode)		Input / output signal: TTL, 1 bit, Sampling frequency: 96 kHz (normal speed), 192 kHz (double speed)		
Parallel digital output (analog mode)	Output signal	TTL, 16 bit parallel data (main channel data: 15 bit, LSB: 1 bit)		
	Data transfer rate	96 kword/s (normal speed), 192 kword/s (double speed)		
	Word clock	96 kHz (normal speed), 192 kHz (double speed)		
Serial digital input / output (digital mode)	input/output signal	Bit serial (balanced RS-422A) Bit rate (synchronous): 1.536 Mbps(normal speed), 3.072 Mbps (double speed) Bit rate (asynchronous): less than 0.768 Mbps (normal speed), less than 1.536 Mbps (double speed)		
Model		PC204Ax	PC208Ax	PC216Ax
Function				
Search speed		Max, 200 times normal speed		
Search target		Mark 1, Mark 2, ID, Start ID, END (front panel) ID, Start ID, END, counter, address, time (RS-232C)		
Manual search		16 times normal speed by pressing FF/REW in FWD mode		
Remote control (option)		PCRM21Ax	PCRM22Ax	
		Connects to REMOTE, RS-232C or EXT		
RS-232C control		Refer to system application chart		
EXT control		External relay contact input		
Fan control mode		Stop the ventilation fan until the unit's internal temperature reaches a given temperature level.		

Monitor	ID	000 to 999, with "A" display for auto increment indication (switchable between On and Off)		
	Tape counter	±h, min, s		
	Tape remainder counter	±h, min (in recording and playback)		
	Address	±h, min, s		
	Time	Year-month-day/h-min-s display switchable		
	Caution	LCD Display: Low DC voltage, mechanical trouble, condensation, error check message LED: Over range input(analog mode)		
Monitor output		Data signal of a selected channel(analog mode)		
Sound monitor		Switchable between memo announce and data signal of a selected channel(analog mode); built-in speaker or earphone(jack)		
Synchronous record/playback		Synchronous record/playback with two units (PC216Ax only): 10 kHz each for 16 channels or 5 kHz each for 32 ch record/playback at double speed		
Self check		Power, servo, heads(recording/playback function) and amplifiers		
Model		PC204Ax	PC208Ax	PC216Ax
Power requirements and other specifications				
DC	Voltage	12 to 28 V (rated), 11 to 30 V (allowable range) via DC IN connector		
	Current consumption (double speed / power save mode)	Approx. 1.4 A @ 12 V	Approx. 1.5 A @ 12 V	Approx. 2.0 A @ 12 V
	Current consumption (double speed / normal mode)	Approx. 2.0 A @ 12 V	Approx. 2.4 A @ 12 V	Approx. 3.0 A @ 12 V
AC	Voltage	100 to 240 V(rated), 90 to 250 V(allowable range), 47 to 440 Hz(supplied AC power pack)		
	Current consumption, 120 V @ 60 Hz (double speed / power save mode)	0.3 A	0.35 A	0.45 A
	Current consumption, 120 V @ 60 Hz (double speed / normal mode)	0.4 A	0.5 A	0.6 A
Battery (Built-in)		12 V 2.3 Ah (NP-IB, option)		
Dimensions (excl. projection)		297 (W) x 70 (H) x 220 (D) mm 11.7" (W) x 2.8" (H) x 8.7" (D)	297 (W) x 100 (H) x 220 (D) mm 11.7" (W) x 3.9" (H) x 8.7" (D)	
Weights		Approx. 3.5 kg / 7.8 lbs (net.)	Approx. 4.5 kg / 10 lbs (net.)	
Performance temperature / humidity		+5 degrees to 40 degrees, 40% to 80% RH(no condensation)		
Operation temperature / humidity		0 degree to 45 degrees, 20% to 90% RH(no condensation)		
Storage temperature / humidity		-10 degrees to 50 degrees, 10% to 90% RH(no condensation)		
Performance pressure		860 hPa to 1060 hPa		

Operating position	Horizontal(normal position), vertical(front panel facing upwards)
Vibration resistance	MIL-STD-810C, Method 514.2 Curve V ($\pm 15 \text{ m/s}^2$ {equivalent of $\pm 1.5\text{G}$ }), normal operation in horizontal position
Shock resistance	400 m/s^2 { equivalent of 40 G } 11 ms (in storage)
Safety regulation compliance	UL, EN61010-1
EMI/EMS regulations compliance	EMI: EN55011-A, FCC Part 15, Class A EMS: EN50082-1
Supplied accessories	AC power pakek, Microphone, Operation manual, DC power cord, cassette tape, spare DC fuse, DG5CL cleanling cassette, screwdriver, spare EXT connector, carrying belt

PCHB244 Hybrid Data Recorder	
<ul style="list-style-type: none"> · Same dimensions and weight as PC204Ax/208Ax · Wide-band analog recording of DC to 100 kHz(1 channel mode) · Bit serial data of up to 3.072 Mbps(1 channel mode) · Simultaneous 4channels record/replay of analog and digital signal · Channel provided for IRIG-B time code · Selectable 1/2/4 channel mode 	

■ Dimmensions

PC204Ax/208Ax	PC216Ax
unit:mm	unit:mm