

Appendix A: PX-230A Specifications

Minimum System Requirements—PX-230A Internal ATAPI Drive

Computer	Pentium III, 500-MHz or equivalent
Minimum RAM	128 MB
Hard Disk Size	1 GB of free space to write to a CD in image mode. (For more accurate guidelines, see the help files or documentation for the recording software you're using.)
DMA Setting	Enabled
Interface	IDE (ATAPI) supported
Operating System	Windows XP, 2000, Me, 98SE, or 98

NOTE: Roxio Easy Media Creator 7 requires Windows 2000/XP

Usable Formats

Logical CD Read/Write	Audio CD, Super Audio CD, Mixed Mode, CD-ROM Mode-1, CD-ROM Mode-2, CD-ROM XA Mode 2 (Form 1, Form 2), CD-I Bridge (Video CD), Photo CD (single and multi-session), CD-DA, CD-Extra, CD-R, CD-RW, CD TEXT, Karaoke CD (VCD format), Video CD, SVCD, Multi-session, CD+G (Read Only)
Write Methods, CD-R/RW	Track-at-once (TAO), disc-at-once (DAO), packet write (variable and fixed), session-at-once (SAO), multi-session, Mount Rainier (MRW)

Other Features

Buffer Underrun Protection	Buffer Underrun Proof Technology
Data Buffer	2 MB

Supported Media

- Supported Media, CD
- Stamped CDs: Discs compliant with Red/Yellow/Green Book
 - CD-R: Orange Book Pt II-compliant discs (Type 74, Type 80)
 - CD-RW: Orange Book Pt III-compliant discs

Supported Media Size 12 cm, 8cm

Recommended Media

Recommended media are recordable or rewritable CD media that have been tested by Plextor. For the latest updated list of recommended media for the PX-230A, see the Plextor web site at www.plextor.com.

CD-R: 4X-52X Maxell, TDK, Fujifilm
media

CD-R: 4X-48X Taiyo Yuden, Mitsui, Mitsubishi/Verbatim
media

CD-RW: 4-32X Mitsubishi/Verbatim
media

Performance SpecificationsRead Speed,
CD

Speed	Mode-1 Discs	Mode-2 Discs	CD-DA Discs
22-52X CAV	Stamp,R	Stamp, R	Stamp,R
20-48X CAV	Stamp,R,	Stamp,R,	Stamp,R
17-40X CAV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
14-32X CAV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
10-24X CAV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
16X CLV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
12X CLV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
8X CLV	Stamp,R, RW	Stamp,R, RW	Stamp,R, RW
4X CLV	R, RW	R, RW	R, RW

Performance Specifications (continued)Write Speed,
CD-R/RW

Speed	CD-R	Ultra Speed CD-RW Media	High Speed CD-RW Media	Normal Speed CD-RW Media
22-52X CAV	✓	–	–	–
20-48X CAV	✓	–	–	–
17-40X CAV	✓	–	–	–
20-32X PCAV	✓	–	–	–
32X ZCLV	–	✓	–	–
20-24X PCAV	✓	–	–	–
24X ZCLV	–	✓	–	–
16X CLV	✓	✓	–	–
12X CLV	✓	–	✓	–
8X CLV	✓	–	✓	–
4X CLV	✓	–	✓	✓

Performance Specifications (continued)

CD Transfer Rate	Speed	Write (KB/s)	Read (KB/s)
	22-52X	3300-7800 (CAV)	3300-7800 (CAV)
	20-48X	3000-7200 (PCAV)	3000-7200 (CAV)
	17-40X	2550-6000 (PCAV)	2550-6000 (CAV)
	20-32X	3000-4800 (PCAV)	–
	14-32X	–	2100-4800 (CAV)
	20-24X	3000-3600 (PCLV)	–
	10-24X	–	1500-3600 (CAV)
	16X	2400 (CLV)	2400 (CLV)
	12X	1800 (CLV)	1800 (CLV)
	8X	1200 (CLV)	1200 (CLV)
	4X	600 (CLV)	–

Initialization Time Time measured from power on until disc is available to read: < 6.5 sec. (typical),

Access Time Random seek access time: < 100 msec.
1/3 Stroke access time: < 110 msec
Full stroke access time: < 250 msec

Sleep Mode Entered after 2 minutes of no access to drive (default setting)

Wake Mode < 4.5 sec. (max.) to start drive after sleep

Front Panel

Eject	Eject button; manual emergency eject; software eject.
Disc/Busy Indicator	Illuminated solid green when ready. Illuminated blinking green when reading and writing. (Blink rate indicates the type of activity.)
Disc Loading	Auto

Rear Panel

Power Supply	DC +12V, ±10%	DC +5V, ±5%
Typical standby current	20 mA	250 mA
Typical CD read current (CD 52X)	800 mA	800 mA
Typical write current (CD-R 52X)	800 mA	800 mA
Typical pause current	600 mA	200 mA
Peak current	1.8 A	1.6 A

Power Consumption Maximum 30 W for CD read/write

IDE Interface Connector IDE bus, 40-pin flat ribbon type. Interface complies with ATA/ATAPI.

Maximum total cable length cannot exceed 18 in (45.7 cm).

Rear Panel (continued)

Analog Audio Output Connector	Stereo analog output, Molex connector (L*G*G*R), MPC-3 standard: <ul style="list-style-type: none">▪ Output voltage (max. volume): 1.5V(p-p)▪ Load impedance: 10 k ohms▪ S/N ratio: Min. 75dB▪ Total harmonic distortion+noise: < 2%▪ Dynamic range: Typically 75dB (1kHz)▪ Channel separation: Typically 70dB (1kHz)▪ Frequency response: 20Hz to 20kHz (0dB ±5dB)
Digital Audio Output Connector	Digital audio output for input to SPDIF or Digital-In input: <ul style="list-style-type: none">▪ Sampling frequency: 44.1 kHz▪ Output: TTL level, 3.3V▪ Digital audio line output: 2 pins, non-isolated
Mode Jumper	Master (default), slave, cable select (CSEL)

Dimensions and Weight, PX-230A Internal ATAPI Drive

Dimensions (W/H/D) (excluding front panel)	5.75" x 1.63" x 6.8" 146 mm x 41.2 mm x 172.5 mm
Weight	1.8 lbs. (800 g)

Host Interface, PX-230A Internal ATAPI Drive

Type	ATA/ATAPI-5-compliant
PIO Transfers	Modes 0-4
Ultra DMA Transfers	Modes 0-2
Multiword DMA transfers	Modes 0-2 (DMA changes controlled by operating system and device manager)
ATAPI Command Set	Refer to the Plextor ATAPI command manual.
Inquiry string	PLEXTOR sp CD-R sp sp sp PX-230A sp sp (where "sp" is one space)

Environmental Conditions

Mounting Position	Horizontal or vertical orientation: <ul style="list-style-type: none">▪ Horizontal: ± 10 degrees▪ Vertical: 0 ± 10 degrees, from right side orientation
Operating Temperature	5 to 40 degrees Celsius
Operating Humidity	20 to 80 % relative humidity (Non-condensing)
Storage Temperature	-40 to +65 degrees Celsius
Storage Humidity	5 to 95 % relative humidity (non-condensing)
Acoustic Noise	Playing balanced disc: Maximum 46dB Playing unbalanced disc: Maximum 47.5dB
Vibration, Operating	CD read, random: $0.5G_{0-PK}$ (5-500Hz) CD-R, CD-RW write: $0.3G_{0-PK}$ (5-500Hz)

Environmental Conditions (continued)

Vibration, Non-Operating	2.0G _{0-Pk} (5-300Hz) Random: 0.5G (5~500Hz) (Power off, without disc)
Shock, Operating	CD read: 6.0G _{0-Pk} CD-R, CD-RW write: 2.0G _{0-Pk}
Shock, Non-Operating	2ms half sine wave: Min 160 G 180in/sec square wave: Min 80G (Power off, without disc)
Electrostatic Discharge	±8KV aerial discharge, with no hard errors, no damage

Reliability

MTBF	125,000 POH at 25% duty cycle
Tray Loading	50,000 load/unload cycles
Read Error Rate	CD-ROM Mode 1: 1 block/10 ¹² bits CD-ROM Mode 2: 1 block/10 ⁹ bits

Safety, Laser, and EMC Standards

Country/ Region	Type	Agency	Standard
USA	Safety	UL	UL 1950
	Laser	FDA	21 CFR Subchapter J
	EMC	FCC	Part15 Subpart B Class B
Canada	Safety	UL (C-UL)	CSA 22.2 No. 950-M89
Europe	Safety	CE	EN60950
	Laser	CE	EN60825-1
	EMC	CE	EN55024, EN50022 Class B

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