SONY

SPRESSA™ Professional CD-ReWritable

Sony CRX120E Maximum Performance
CD-Rewritable Recorder

User's Guide

Spressa™ Professional

LIMITED WARRANTY

A separate warranty card is enclosed with the documentation.

WARNING

To prevent fire or shock hazard, do not expose the unit to moisture. To avoid electrical shock, do not open the unit. Refer servicing to qualified personnel only.

CAUTION

The laser beam used in this CD-Recorder drive unit is harmful to the eyes. Do not attempt to disassemble the cabinet.

FCC Compliance

SONY CRX120E

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

PRODUCT NAME:	INTERNAL CD REWRITABLE DRIVE
MODEL NUMBER:	CRX120E
FCC RULES:	TESTED TO COMPLY WITH PART 15 CLASS B
OPERATING ENVIRONMENT:	FOR HOME OR OFFICE USE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient / Relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

THE PARTY RESPONSIBLE FOR PRODUCT COMPLIANCE:

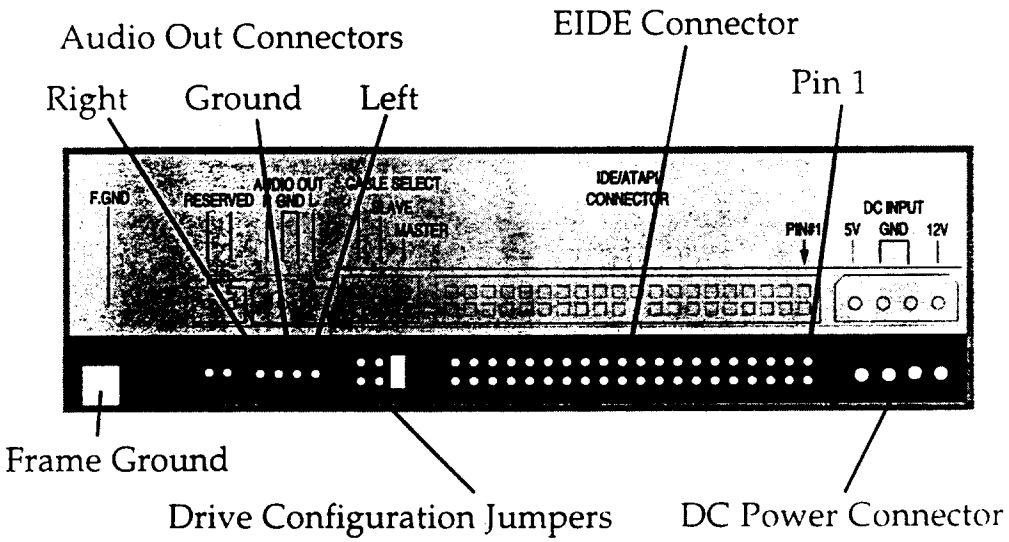
Sony Electronics Inc.
Value Added Products Division
3300 Zanker Road
San Jose, CA 95134 USA
(408) 432-1600

Please Record Responsibly. Before copying anything onto a CD-RW or CD-R disc, please be sure you are not violating Copyright laws. Most software companies allow you to make a back-up or archive copy of software. Check your software's license agreement for specific details.

Headphone Jack/Volume Control.

To listen to an audio CD from the CD ROM unit you may insert a standard headphone cable into the headphone jack. If there is a audio CD player utility installed on your PC, you can listen to audio CDs directly from the CRX120E. The software functions like a typical CD player, letting you choose tracks to play, etc. The audio can be heard through your PC's speakers if you connect the audio out connector of the CRX120E drive to the CD input of your sound card. The volume control on the front panel controls headphone volume only.

Rear Panel



EIDE Connector

The CRX120E uses a standard 40-pin IDE connector to be attached to an Enhanced IDE/ATAPI port on the motherboard. See Chapter 3 which describes how to connect your CRX120E to your PC.

Introduction Chapter 1

The Sony CRX120E is a high performance internal CD-RW Recorder/Player for PC users. The CRX120E is capable of recording and playing rewritable CD-RW and write once CD-R media as well as being able to read mass produced stamped CDs.

CD-R and CD-RW

CD-R is the term used to denote CD-Recordable media. CD-R discs are recorded permanently. Once information is written, it cannot be erased. Data can be added until the disc is full. CD-R is good for creating archived information that need not be changed, or for distribution because the price of CD-R media has dropped rapidly in the last few years.

CD-RW is the term used to denote CD-ReWritable media. CD-RW discs can be written to many times. CD-RW media is rated for one thousand different writes to the media. CD-RW is perfect for personal file storage or for creating reliable backups that can be added to as necessary, and even rewritten as your backup scheme requires.

While CD-RW media is more expensive than CD-R media it has a lower cost per megabyte than other competing technologies, such as Magneto–Optical or even magnetic removable media drives.

CD-RW drives are very versatile for transporting information to both older and newer CD and DVD ROM drives. CD-RW media can be read by newer CD-ROM and DVD drives. These newer drives are known as Multi-Read (MR) drives. And even though CD-RW media cannot be read by older CD ROM drives, the Sony CRX120E can write to CD-R media which can be read by standard CD-ROM drives and CD Players.

How CD-R and CD-RW work

CD-ROM drives (CD-R and CD-RW drives as well) read the one and zero bits by difference in reflectivity. Mass produced Compact Discs are created by stamping "pits" in the CD. These "pits" reflect differently than the "land" which is the area between "pits."

CD-R drives work by using a laser beam to heat the recording layer, causing a chemical reaction in that spot so CD-ROM players will see this as a "pit" and the unburnt area as "land."

CD-RW uses what is known as a "Phase Change" technology. In the CD-RW media is a substance which can be changed from an amorphous "mark" that very closely resembles the pits of a stamped CD, to a crystalline state which resembles "land." The laser beam of the Sony CRX120E changes the crystalline state to the amorphous state by use of a laser to quickly heat the spot on the disc, forming a mark. To change the amorphous state back to the crystalline state the laser beam uses a lower power setting to transition the mark back to the crystalline "land."

Performance

The CRX120E is capable of writing CD-RW and CD-R discs at quad speed (4X). Quad speed means that the CRX120E can write (also called record or burn) a CD-R disc at 600 kilobytes per second. This rate allows the CRX120E to record a full 650 megabyte CD-R disc in about 18 minutes.

The CRX120E can also record CD-RW and CD-R discs at double speed (2x), and *even record CD-R discs at single speed (1X).*

The CRX120E is a multi-function device. Since the drive is also capable of reading at up to 24X (3600 kilobytes per second) it is a good general use CD-ROM drive as well as recorder.

The speed at which a CD ROM is written does not affect the speed at which that CD ROM can be read. For example, a CD ROM which was written at 2X can be read at 1X, 2X, 4X, 8X, 12X, 24X and so on.

Buffer

The Spressa CRX120E has a two megabyte data buffer, which protects against buffer underruns when writing to CD-RW and CD-R media with some software. Buffer underrun is a condition where the drive's buffer runs out of data while the CD-R or CD-RW media is still being written. The recording of a CD is a system intensive process with some software, and the recorder needs a constant stream of data. A buffer underrun occurs when the data stream to the recorder is not fast enough to keep the recorder's buffer full, causing the recording to abort.

CD Formats Supported

The CRX120E records these popular CD formats:

- **CD-Digital Audio**; the format used for audio CDs, playable on audio CD players.
- **CD Extra**; Audio and data in multi-session format.
- **CD TEXT**; Audio CD with album name; song titles encoded. CD TEXT information is displayed on CD TEXT Compatible CD Players and CD ROM drives.
- **CD-ROM** (Mode 1); the format used for most CD-ROM applications.
- **CD-ROM XA** (Mode 2 Form 1 and Mode 2 Form 2); CD ROM Extended Architecture. This standard was created for smoother playback of multimedia content.
- **CD-I*** (Mode2 Form 1 and Mode 2 Form 2), **CD-I Ready**; CD-Interactive is used for home entertainment systems.
- **CD-Bridge**; a format for a mixture of Kodak **Photo CDs** and **Video CDs**, playable on TV set top players and personal computers.

- **Photo CD** (single and multisession); Kodak Photo CD.
- **Video CD**; playable on TV set -top video CD Players and most DVD systems.

* The CRX120E does not have the necessary audio circuitry and decoding functions for CD-I playback, but can read and record.

Recording Methods

The CRX120E has the capability to use several different recording methods. The descriptions of these methods in this manual are overviews of the subject, The methods are covered in greater detail in the software documentation.

- **Disc at Once**; this is a recording method in which the entire disc is written in a single pass. Data cannot be added at a later time.
- **Track at Once**; a track can be copied to the disc incrementally (one at a time).
- **Multi–session**; several sessions can be written to a disc. Each session has at least one track.
- **Variable and fixed packet recording**; typically used by back-up software and Drive Letter Access software to add files and folders at a time, instead of tracks/sessions at a time.

Applications

CD-R and CD-RW discs are each ideal for slightly different applications. Both can be recorded with the Spressa CD-ReWritable recorder. CD-R discs can't be erased, but are compatible with standard CD-ROM drives and CD players. CD-RW discs can be erased and re-written, but have some inter-change limitations. Here are some typical applications for both discs:

	Data Distribution	Back-up	Archiving	CD Prototyping	Personal File Storage
CD-R	•		•	•	
CD-RW		•		•	•

Media Compatibility

Due to the different makeup of CD-R and CD-RW discs, these discs have different reflective qualities, and can be used with the following units.

CD-R	All CD-ROM drives and CD players
CD-RW	Multi-Read and CD-RW compatible CD-ROM drives

Most newer drives are Multi-Read drives which have the capability to read stamped CD, CD-R and CD-RW discs.

Recommended Media

CD-R:	Sony 74 min. CD Recordable disc.
CD-RW:	Sony 74 min. CD ReWritable disc.

Reliability

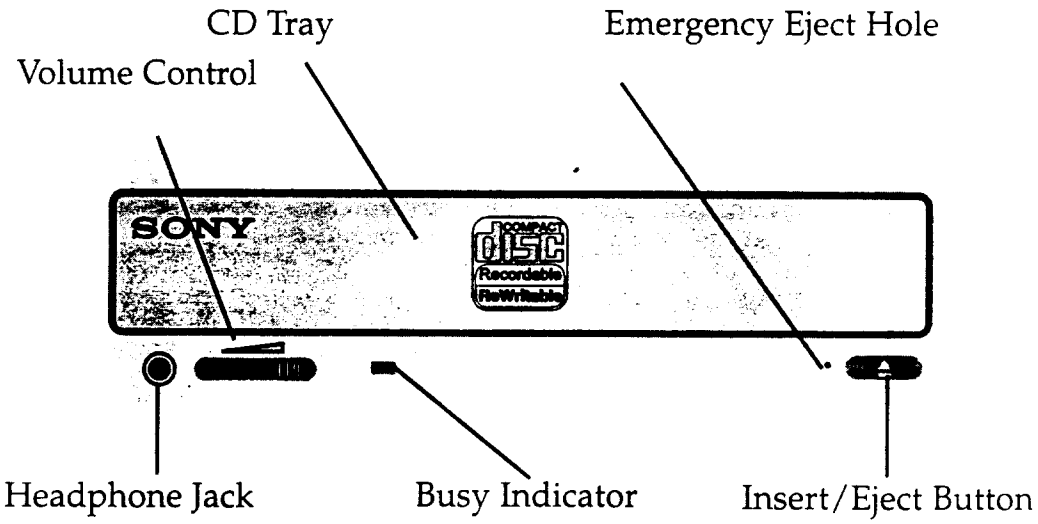
The CRX120E has a mean time between failure (MTBF) rating of 100,000 power on hours (POH) at 25% duty. 25% duty means the CRX120E is in actual use a quarter of the time the unit is turned on. MTBF is an average failure rate based on the total power on hours divided by the number of drive failures. A failure is any malfunction of the drive that prevents you from using it. This includes failure to power up, load or unload a CD, and read or write data. Faults are not considered failures when they relate to incompatible software or discs, or from mishandling and/or abuse.

Reliability ratings are derived from a large statistical sample, and are not indicative of the performance of a single unit.

Controls and Indicators Chapter 2

This chapter shows the connectors, controls, and indicator lights of the CRX120E. For instructions on connecting and installing the drive to the computer, please consult "Chapter 3, Installing Your CRX120E" located on page 13.

Front Panel



Busy Indicator LED

The Busy Indicator LED shows the condition of the CRX120E.

- When the Busy Indicator light is on full amber, it means the drive is seeking, playing audio, or reading.
- When the Busy Indicator light is flashing amber, it means the drive is recording a disc, or erasing a CD-RW disc.

Insert/Eject Button

Pressing on the eject button when the power is on will eject the CD. Depending on the Software being used with the CRX120E, this button may not appear operational. Some of the software provided with the CRX120E will lock the tray in so that the eject button will not eject the tray, for example, during a write operation.

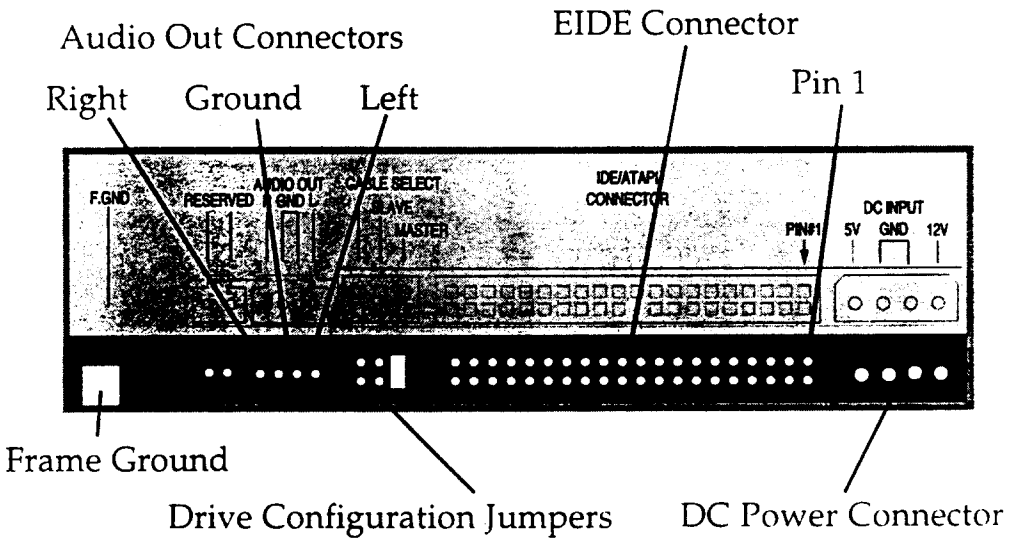
Emergency Eject Hole

In the event that a CD cannot be ejected with the Eject Button and no software is controlling the drive, an emergency eject operation will eject the CD tray. Insert a small metal poker, such as an unbent paperclip into the opening, until it presses against the manual eject mechanism. You will feel the mechanism eject the CD tray. Use this method only when the other method of ejecting a CD, the Eject Button, is not working.

Headphone Jack/Volume Control.

To listen to an audio CD from the CD ROM unit you may insert a standard headphone cable into the headphone jack. If there is a audio CD player utility installed on your PC, you can listen to audio CDs directly from the CRX120E. The software functions like a typical CD player, letting you choose tracks to play, etc. The audio can be heard through your PC's speakers if you connect the audio out connector of the CRX120E drive to the CD input of your sound card. The volume control on the front panel controls headphone volume only.

Rear Panel

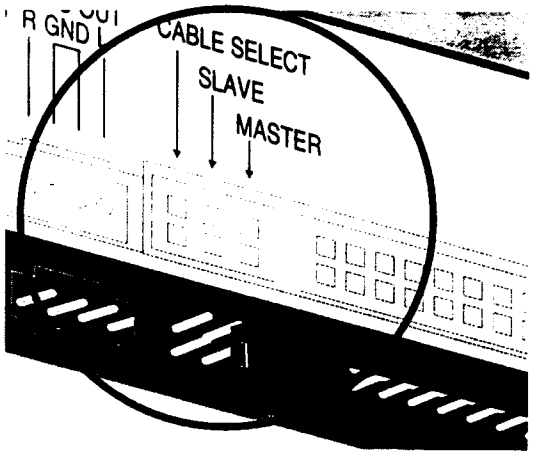


EIDE Connector

The CRX120E uses a standard 40-pin IDE connector to be attached to an Enhanced IDE/ATAPI port on the motherboard. See Chapter 3 which describes how to connect your CRX120E to your PC.

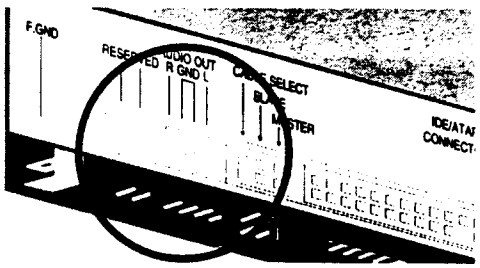
Drive Configuration Jumper

The drive configuration jumpers set your drive to be a master or slave drive on the EIDE port. The default position is with the jumper in the Master position. To set the CRX120E as a slave drive, place the jumper on the Slave position. The third jumper is for Cable Select.



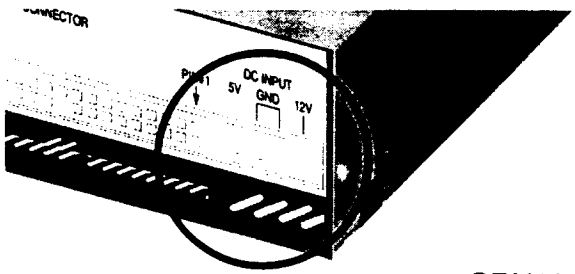
Audio Out Connectors

These connectors provide two channel, analog line level audio output which may be connected to a sound card.



DC Power Inlet

The CRX120E attaches to your PC's standard power cable.



General Use Suggestions

The CRX120E is intended for installation in a PC and should be used in an environment suitable for computer equipment. Dust, moisture and lack of adequate ventilation are common causes of device failure. You should install your CRX120E in a location which is:

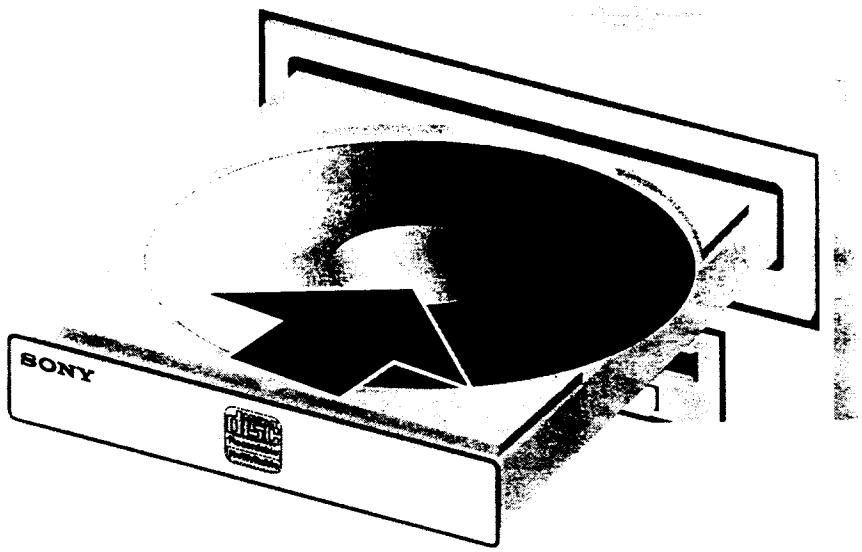
- Clean
- Dry
- Well Ventilated
- Dust Free
- Out of Direct sunlight

Inserting CD Discs

Put the writable/readable side of the CD media facing down in the tray, the label side up.

Press the Insert/Eject button to retract the tray.

CAUTION: Insert only CD discs, CD-R or CD-RW media into the CRX120E CD tray to avoid damaging the unit and voiding the warranty.



Installing Your CRX120E Chapter 3

This chapter describes the installation procedures for installing the CRX120E in a PC.

Requirements

- Pentium® 166Mhz or faster PC Computer with at least 32 MB RAM.
- Windows® 95, Windows 98 or Windows NT® 4.0.
- Bus mastering EIDE connection.
- Hard disk drive with less than 15ms access time and sustained throughput greater than 900Kb per second.

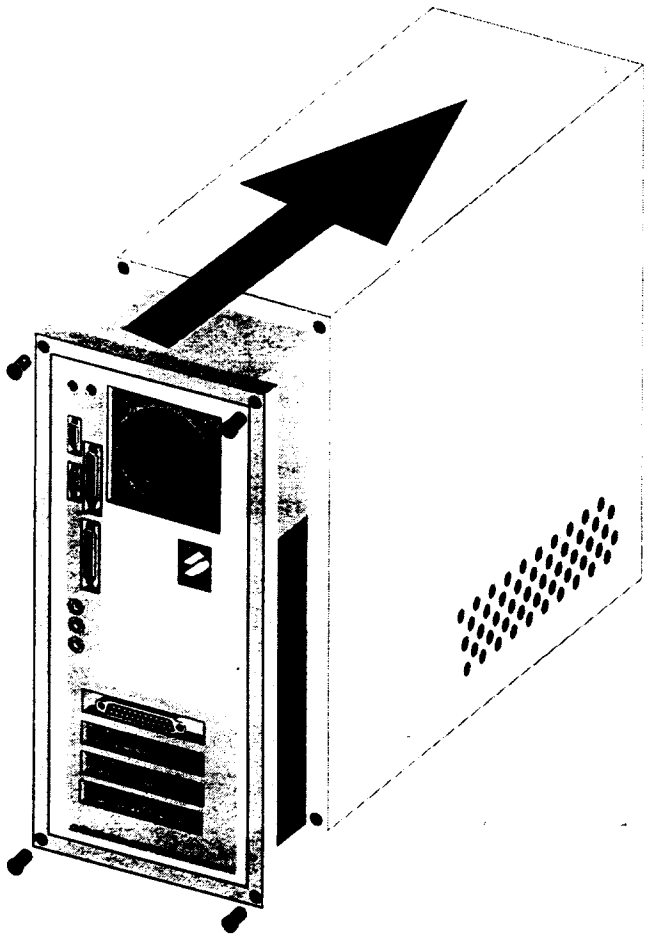
Installation Instructions

1. Unpack all essential materials and verify that all items are present. A list of items is in the Quick Start guide.

2. Save your work, and shut down your PC.

3. Remove any accessories and cables, including the power cable.

4. Remove the cover of the computer
   There are precautions you should be aware of any time you are opening the computer:



- Some manufacturers may void your warranty for the computer.

Precautions Before Opening the Computer

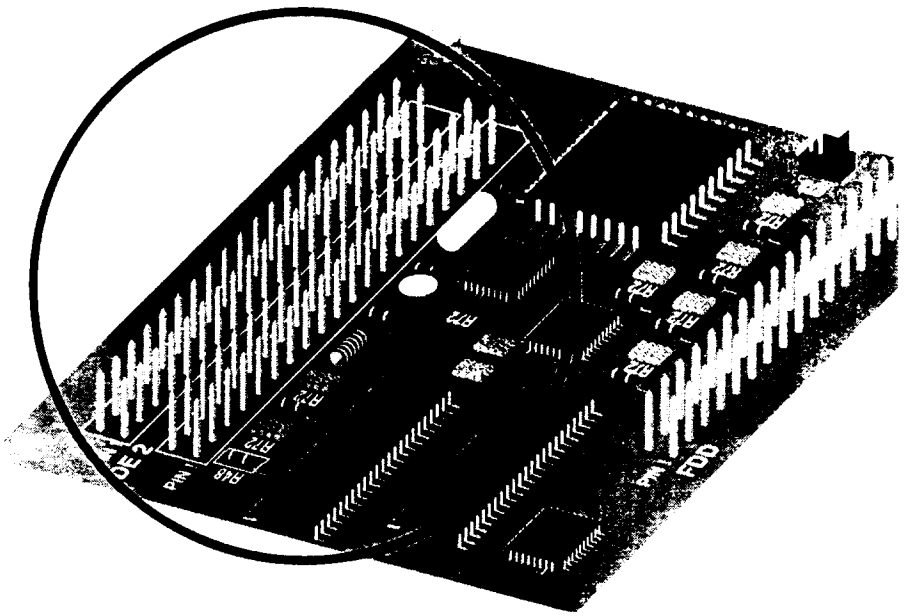
- As with any time you make significant changes to your system, please be sure your data is backed up
- Shut down and turn off the computer
- Disconnect all accessory cables, including the power cable.

Follow Electrostatic Discharge procedures any time you open the computer. These procedures include:

Electrostatic Discharge Precautions

- ❑ Make sure the computer is OFF when performing any removal or installation.
- ❑ Remove the power cord.
- ❑ Wait ten minutes before any removal or installation if the computer has recently been powered on.
- ❑ For best protection use a grounding strap when performing the installation.

5. Locate the EIDE Connector on your computer motherboard.

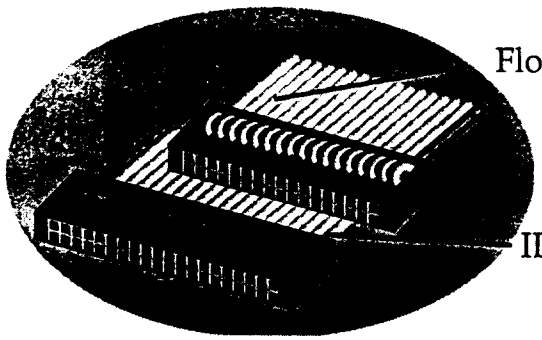


PC motherboards have two EIDE connectors. If you are unsure whether your computer supports Enhanced IDE, please consult your computer's documentation or

the computer's manufacturer. Different computer manufacturers have the EIDE connectors in different locations. The configurations inside the machine are usually clearly marked. However, the easiest way to locate the EIDE connector is to follow the cable as it is connected to existing CD drive or hard drive.

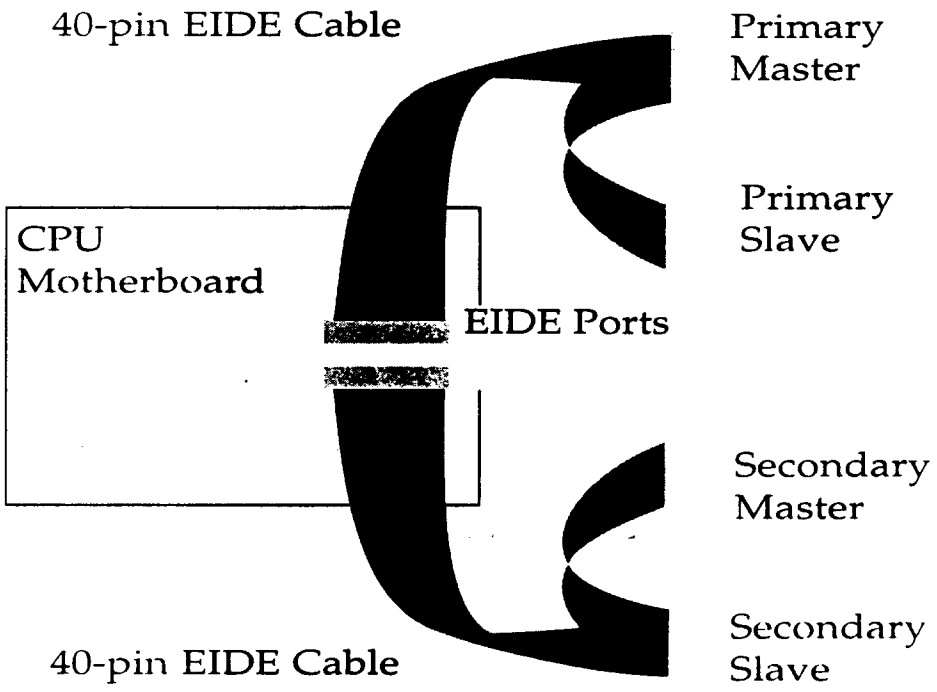
How to recognize EIDE cables.

There are generally two types of data cables used internally in PCs. These data cables are Floppy Drive cables which have 34 pins and IDE cables which have 40 pins. EIDE and IDE cables are the same. EIDE is a standard which has an enhanced command set which contains commands for use with newer drives.



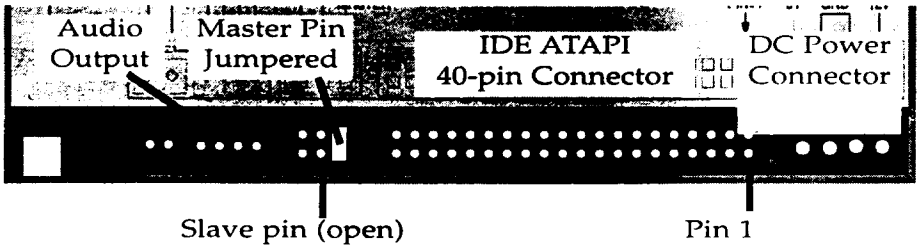
6. Set the CRX120E drive configuration jumpers.

Each IDE port can support two devices. The position of the devices does not determine whether the device is Master or Slave. Master/Slave is determined by the configuration jumpers on IDE drives. Please check the Master/Slave jumper position of each device and consult the manufacturer's user's guide to avoid conflicts.

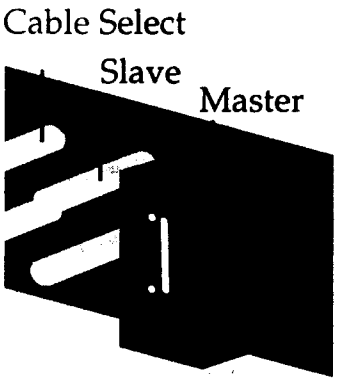


You may have other devices attached to your Primary and Secondary IDE ports such as a hard disk, DVD-ROM or both. Typically there is writing on the logic board for "Pri" and "Sec" or "1" and "2." Should you have trouble determining which IDE port is Primary and which is Secondary, refer to your computer user's guide.

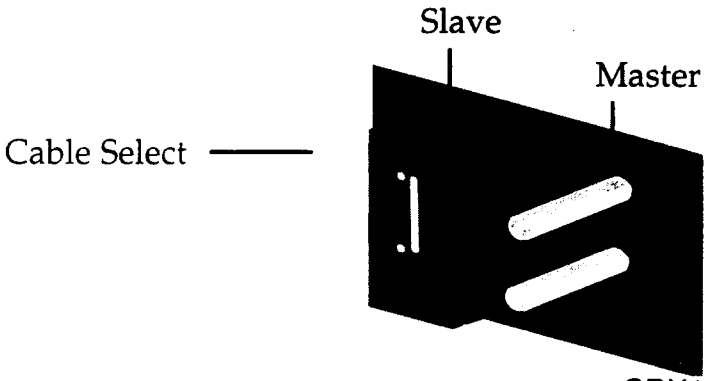
The CRX120E comes pre-configured as an IDE Master device as shown below with the Master pin jumpered.



If the CRX120E is the only drive on the EIDE port then the CRX120E should be the master drive. To make the CRX120E the master drive you put the jumper block on the Master pin position

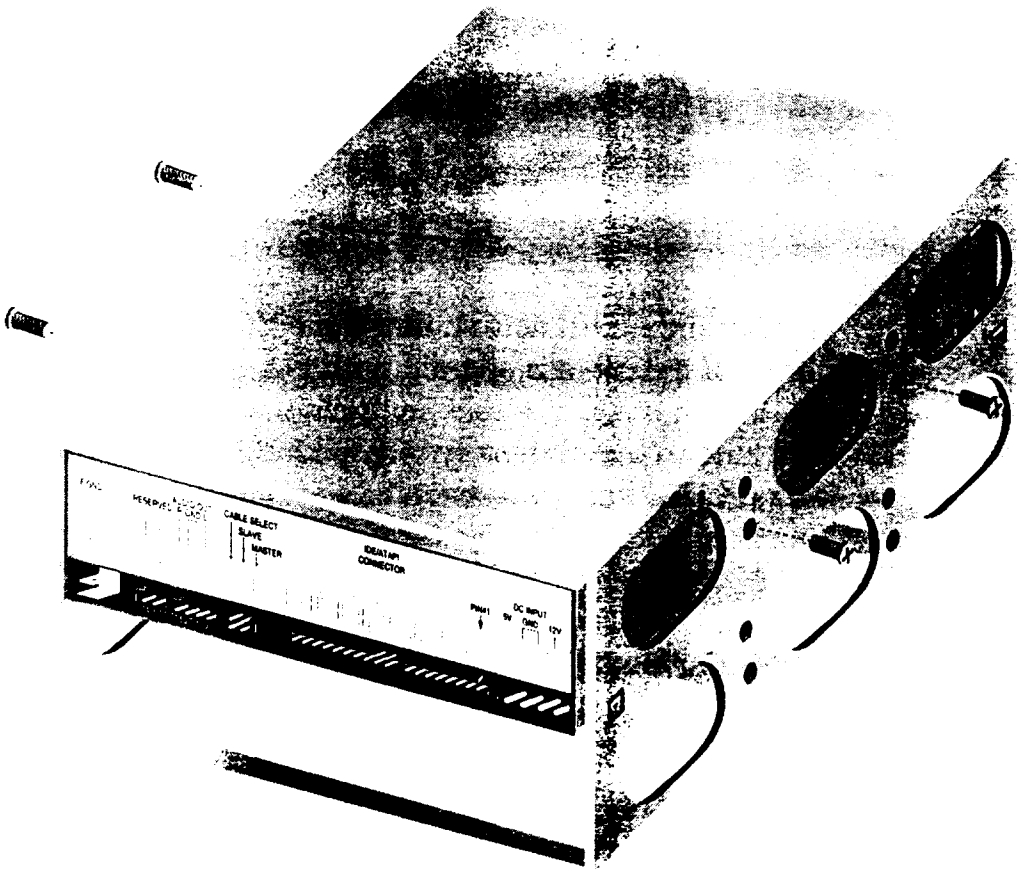


If the CRX120E will be using the same port with a hard drive. then the hard drive should be set as the master and the CRX120E as the slave drive. To make the CRX120E the slave drive you put the jumper block on the Slave pin position.

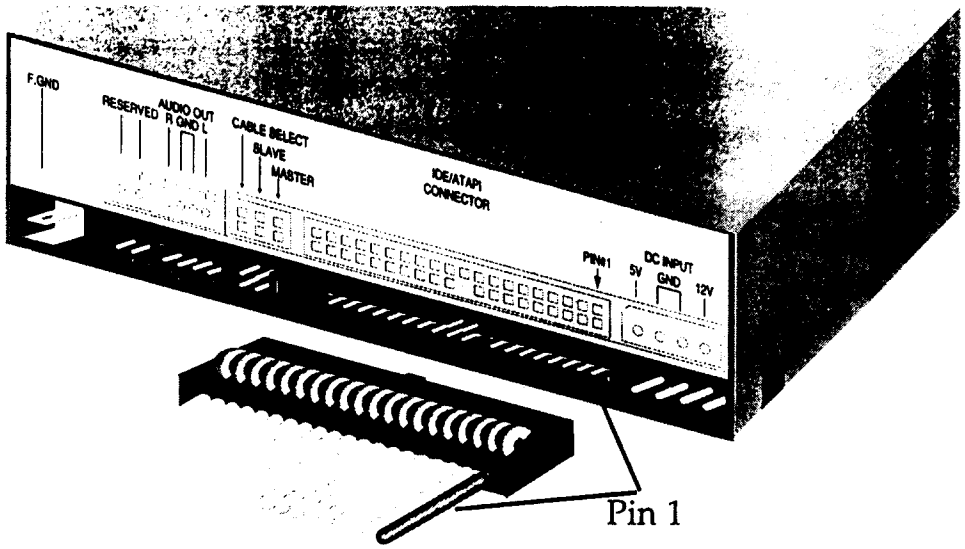


7. Install the CRX120E drive.

   To install the CRX120E drive you position the drive in the drive bay so that the screw holes of the drive are aligned with the screw holes in the drive bay. Then tighten the screws until they are firm. Do not over tighten the screws.

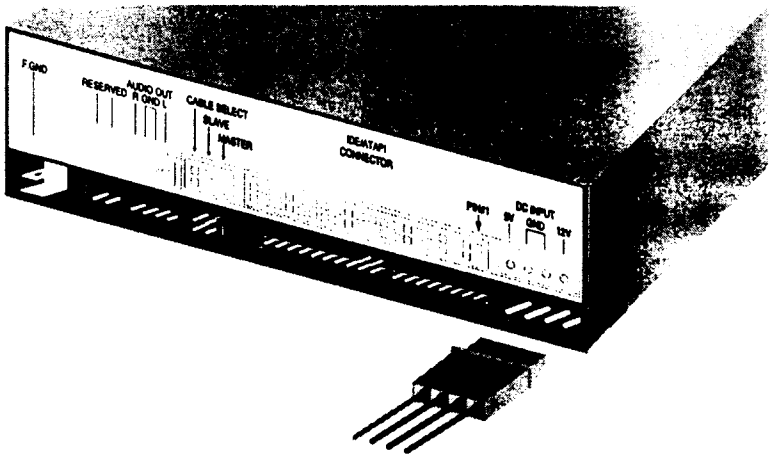


8. Attach the IDE cable



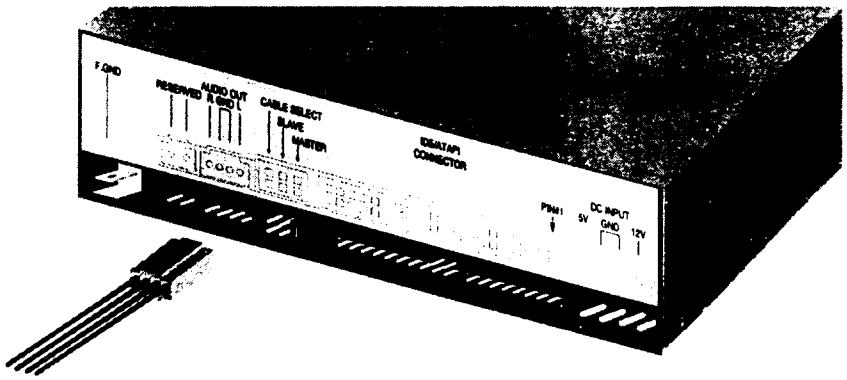
Attach the EIDE cable so that the red line that signifies Pin 1 of the cable is aligned with Pin 1 on the CRX120E. Although the cables that Sony includes with the unit are keyed so that they may only be installed properly, other cables may not be keyed the same. If you use your existing cable, please be sure to align it properly.

9. Attach the DC power cable.
Plug your standard power connection to the CRX120E.



10. Connect the audio cable.

    If you have a sound card you can attach the audio cable to the audio out connectors.



11. Power up system and Install the CD Recording software that came with your drive.

12. Restart System.

If there are any difficulties in completing the operations outlined in this manual please see the troubleshooting guide in Chapter 5. You may also contact the Sony Technical Support Center.

Troubleshooting Chapter 4

This Chapter discusses the basics of troubleshooting the CRX120E.

A few words about CD-ROMs

The laser in a CD reads the difference in reflectivity from one spot to the next. This difference in reflectivity is simply created from a difference in the depth of pits either burned or stamped into the CD ROM Media.

Large production runs of CDs are stamped to create the pits. The Sony CRX120E burns recordable CD media, or alters the state of the substance within CD-RW media to change its reflectivity by means of a finely controlled laser beam

The pits that the laser of the CD reader senses are either the one or the zero bits that are interpreted as data, music, photographs depending on the format with which the disc is recorded. The CD is covered in a transparent shield that the laser can read through or burn through. Scratches, smudges or particles on the bottom read/write surface can impede the functioning of your CD-RW, CD-R or CD-ROM device.

Symptom	Good Questions	Actions
You cannot access the device through software	• Are cables seated properly?	• Use the Device Manager in the Windows Control Panel to verify the drive is "seen." by the system. • Always verify that cable connections are seated properly by taking the connector off and reseating. Improper connections are the greatest point of failure with peripheral devices.
Unable to Create Multisession disc	• Is there enough space left on the media for another session?	• Writing a session requires lead in and lead out overhead (about 15 megabytes per session) in addition to the data that is recorded.

Symptom	Good Questions	Actions
Failed writing a CD using CD-R or CD-RW media	• Buffer Underrun (Something has interrupted the stream of data to the recorder) Following is a partial list of possible causes:	
	• Software related interruption. Is a screen saver, your internet or email program or other software application interrupting the write process?	• Disable functions that will interrupt the write operation.
	• Hard drive too slow?	• Make sure the hard drive is fast enough.
	• Fragmented hard drive?	• Defragment hard drive
	• Is it an older drive conducting a thermal recalibration in the middle of the write?	• Consult with manufacturer or vendor.
	• Bad or scratched media?	• Replace media.

Symptom	Good Questions	Actions
Unable to eject CD	• Is software locking the Tray?	• Unmount or eject through software first. • Use eject button • Shutdown computer and power off device. Wait 45 seconds; power on device only and attempt to use eject button again. • Use emergency eject hole if other methods fail.
Unable to Read Session after completing a successful write	• Can you read the CD in another CD Player? • Can you "see" previous sessions?	• It is possible that directory information is corrupt on the volume making it unreadable. • Check software documentation for troubleshooting suggestions.
	• Bad CD-R or CD-RW disc?	• Use Sony Recommended Media. **CD-R:** 74 min Sony CD-Recordable discs **CD-RW:** 74 min Sony CD-ReWritable discs

Contacting Technical Support Appendix A

Whenever you have any difficulty with your CRX120E, please follow the troubleshooting suggestions in this manual and in the software manuals. Please keep track of the steps you have taken with as much information about your computer system as you can. If you have any trouble resolving the problem, please call the Sony Technical Support Center and convey your troubleshooting steps.

The Sony Technical Support Center can be reached 24 hours per day, 365 days of the year by several methods:

Sony Computer Peripherals Technical Support Phone
(800) 597-5649

Sony FastFacts, FAX on Demand Service
(800) 883-7669

Sony Computer Peripherals BBS
(408) 955-5107

Sony Computer Peripherals Technical Support Web Site
http://www.sony.com/storagebysony

Specifications

HOST INTERFACE

Enhanced IDE/ATAPI

READ FUNCTION, Acceptable Discs

CD-ROM mode-1 data discs, CD-ROM XA discs,
CD Audio discs, Mixed Mode, CD Extra, CD Text,
CD-I discs, CD-I Ready Discs,
Photo CD (Single and Multisession), Video CD,
CD-R and CD-RW discs

WRITE FUNCTION, Applicable Formats

CD-ROM (Mode 1), CD-ROM XA, CD-Audio, Audio-combined
CD-ROM - Mixed Mode, CD-I, Video CD, CD Text, CD Extra

WRITING METHOD

Disc at Once
Session at Once
Track at Once
Multi-session
Fixed and Variable Packet Writing

WRITE/READ SPEED

Read (CD-ROM/CD-R):	1X, 2X, 4X, 8X, 10-24X (CAV) speed
Read (CD-RW):	1X, 2X, 4X, 8X speed
Read (unfinalized CD-R/CD-RW):	1X, 2X, 4X, 8X speed
Write (CD-R):	1X, 2X, 4X speed
Write (CD-RW):	2X, 4X speed

SUSTAINED DATA TRANSFER RATE

150 Kbytes/sec.	Mode 1	(1X, read/write)
300 Kbytes/sec.	Mode 1	(2X, read/write)
600 Kbytes/sec.	Mode 1	(4X read/write)
1,200 Kbytes/sec.	Mode 1	(8X read)
1,500-3,600 Kbytes/sec.	Mode 1	(10-24X, CAV)

BURST DATA TRANSFER RATE

16.7 Megabytes per second (ATA PIO Mode 4)
16.7 Megabytes per second (ATA Multi Word DMA Mode 2)

AVERAGE ACCESS TIME (including Latency)

150 ms [10-24X, CAV]

CACHE MEMORY (Read/Write)

2 Megabyte

DISC DIAMETER

12 cm (8 cm Read Only)

ROTATIONAL SPEED INNERMOST TRACK:

600 rpm	(1X)
1200 rpm	(2X)
2400 rpm	(4X)
4800 rpm	(8X)
5000 rpm	(10-24X, CAV)

ROTATIONAL SPEED OUTERMOST TRACK:

230 rpm	(1X)
460 rpm	(2X)
920 rpm	(4X)
5000 rpm	(24X)

ENVIRONMENTAL CONDITIONS

Temperature and humidity

Operating: 5° C to 45°C Maximum (41°F to 104°F)
no condensation

Transportation: -40°C to 60°C (-40°F to 140°F
10% to 90% relative humidity
(no condensation within 72 hours.)

Temperature and humidity gradients: 10 C/hour, 10%/hour

MTBF

100,000 POH (duty 25%)

MOUNTING

Horizontal or vertical

POWER REQUIREMENTS

+5V DC (1.0A), +12V DC (1.2A)

DRIVE DIMENSIONS

146mm W x 203mmD x 41.4mm H

DRIVE WEIGHT

940 g.

Glossary

Access times. The average amount of time to access an item of data.

Analog. (as opposed to digital) where digital is defined discrete items which can be reduced to zero and one bits, Analog is continous, so on any graphic representation of Analog data there are an infinite number of points between any two points. Digital Approximates by adding data points.

Buffer. RAM Cache that is faster than the data is being delivered. Buffers are used so data may be stored and delivered to the receiving item as it is needed.

Burn a CD. Recording a CD-R. Because a laser is used to write a CD it is also known as burning a CD.

Burst transfer. The fastest a device can transfer, usually from its buffer.

CD-R drive. A drive that can write to recordable CD-R media.

CD-RW drive. A drive that can write to recordable CD-R and Rewritable CD-RW media.

CD-ROM drive. A drive that can read from CD media.

Data stream. The flow of data that accomplishes a task, usually related to moving data from storage to computer RAM or between storage devices.

Digital. Discrete information that can be broken down to one or zero bits.

EIDE. Enhanced IDE supports two IDE ports unlike IDE's single port. Commonly referred to as IDE.

Host. A device on the SCSI bus is either a host or target. The host is also known as the initiator.

kb kilobyte. Basically this means 1000 bytes, but is actually 1024 bytes.

kb/s kilobytes per second. Means of measuring throughput.

Kilobyte. See kb

Mb. Megabyte. Basically means one million bytes, but is actually 1024 kilobytes or 1024 X 1024 bytes which is 1,048,576.

Mb/s. Megabytes per second. Means of measuring throughput.

Megabyte. see Mb

Record a CD. Burn a CD, Writing a CD. Uses special CD-Recordable discs which can be altered by the laser in a CD-R drive.

SCSI. Small Computer System Interface. A Standard used for communication on PCs.

Source hard drive. The drive which contains information that will be written somewhere else. In CD recording the source hard drive contains the information that will be written to the CD Recorder.

Sustained transfer. The rate which data can be transferred from one device to another. This rate is an average over a longer period of time than a burst transfer rate. Because the sustained transfer test is longer it means the testing will take into account both reading or writing from the storage device's buffer, as well as from the media. Reading and Writing from the media is a much slower operation, so the sustained transfer test is usually a much better test for determining the usability of a device in a real application, such as recording a CD.

Index

Technical Support Service Center

The Sony Technical Support Center can be reached
24 hours per day, 7 days of the week

Phone	(800) 597-5649
Sony FastFacts, FAX on Demand Service	(800) 883-7669
Sony Computer Peripherals BBS	(408) 955-5107
Web Site	http://www.sony.com/storagebysony

Storage by Sony

Spressa™ Professional