Computer Specifications

CPU	608610 microprocessor 4 77MHz or 10MHz switch selectable clock speeds
MATH CO-PROCESSOR	8087 support (option), 477MHz or 10MHz
RAM	640KB, parity bit optional
ROM	16KB one socket
FLOPPY DISK CONTROLLER	Supports four drives maximum. 5 25 double-density (360KB) 3 5 (720KB)
I/O EXPANSION SLOTS	Five full length PC/XT compatible slots
SPEAKER	Internal. programmable
CLOCK/CALENDAR RAM	Real-time clock/calendar with battery backup
KEYBOARD	Detachable. 3 position, enhanced AT-style
POWER SUPPLY	Worldwide 115/230V AC 80 watts
MASS STORAGE	Two half height devices maximum
Standard	5 25 half height floppy disk drive. 360K storage capacity
Optional	5 25 half height floppy disk drive 360K storage capacity
Optional	3 5 half height floppy disk drive. 720K storage capacity
Optional	3 5 half height hard disk drive 20MB storage capacity
INTERFACES	
Standard	Centronics compatible parallel port
Standard	RS-232C compatible serial port

PHYSICAL CHARACTERISTICS

	CPU	Keyboard
Width	14.4 in	19.3 in
Depth	14.8 in	7 7 in
Height	5 7 in	1.8 in
Weight	19 8 lbs	3 9 lbs

POWER REQUIREMENTS
115V AC. 60Hz 17A
230V AC. 50Hz, 0 9A

OPTIONS
Display Adapters — Monochrome Display Adapter
Color Graphics Adapter
MGA (Multi Mode Graphics Adapter)
EGA (Enhanced Graphics Adapter)
Monitors — Monochrome Display (720 x 350 dots)
Color Display (640 x 200 dots)
Enhanced Color Display (640 x 200 or 640 x 350 dots automatically selectable)

Switch Settings

The CPU SPEED switch selects between 4.77 MHz and 10 MHz. When the computer is running at 4.77 MHz, the power light is orange, and at 10 MHz, the light is green.

System Configuration Switches

Switch 1								Function
1	2	3	4	5	6	7	8	
Off*								Enhanced Keyboard
On								Unenhanced Keyboard
	off							NPX Installed
	On*							NPX Not installed
		off*	Off*					RAM size = 640K
		On	Off					RAM size = 576K
		Off	On					RAM size = 512K
		On	On					RAM size = 256K
				off*	off*			Display = Monochrome
				On	Off			Display = Dolor 80
				Off	On			Display = Color 40
				On	On			Display = Reserved
						off	off	Number of FDDs = 4
						On	Off	Number of FDDs = 3
						Off	On	Number of FDDs = 2
						On	On	Number of FDDs = 1

I/O Configuration

Switch 2				Function
1	2	3	4	
off*	off*			Parallel port secondary
Off	On			Parallel port primary
On	Gff			Parallel port tertiary
On	On			Parallel port disabled
		off*	off*	Serial port primary
		On	Off	Serial port secondary
			On	Serial port disabled

* Factory Settings

Connector Pin Assignments

Parallel Port Connector
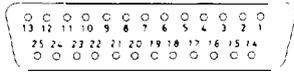
PIN NO.	SIGNAL NAME		DIRECTION	DESCRIPTION
1	-STROBE		0	Strobe
2	DATA	0	0	Data Bit 0
3	DATA	1	0	Data Bit 1
4	DATA	2	0	Data Bit 2
5	DATA	3	0	Data Bit 3
6	DATA	4	0	Data Bit 4
7	DATA	5	0	Data Bit 5
8	DATA	6	0	Data Bit 6
9	DATA	7	0	Data Bit 7
10	-ACK			-Acknowledge
11	BUSY		I	Busy
12	PE		I	Paper Empty
13	SLCT		I	Printer Selected
14	-AUTO	FD	0	-Auto Paper Feed
15	-ERROR		I	-Error
16	-INIT		0	-Initialize
17	-SELECTIN		0	-Select In
18 ~ 25	GND			Ground

Serial Port Connector
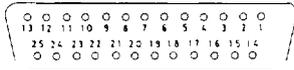
PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	NC		No connection
2	TRANSMITTED DATA	0	Transmitted Data
3	RECEIVED DATA	I	Received Data
4	REQUEST TO SEND	0	Request to send
5	CLEAR TO SEND	I	Clear to send
6	DATA SET READY	I	Data Set Ready
7	SIGNAL GROUND		Signal Ground
8	CARRIER DETECT	I	Carrier Detect
9-19	NC		No connection
20	DATA TRANSMIT READY	0	Data Transmit Ready
21	NC		No connection
22	RING INDICATOR	I	Ring Indicator
23-25	NC		No connection

Note. The CURRENT LOOP functions are not supported. Standard RS-232C
Interfacehas its function described below,
  Pin 9 :   TRANSMIT CURRENT LOOP RETURN
  Pin 11:   TRANSMIT CURRENT LOOP DATA
 Pin 18:   RECEIVE CURRENT LOOP DATA

Keyboard Connector
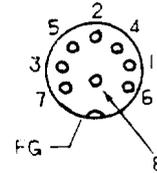
PIN NO.	SIGNAL NAME	DIRECTION	DESCRIPTION
1	KBD CLK	I/O	Keyboard Clock
2	KBD DATA	I/O	Keyboard Data
3	-KBD RESET	0	-Keyboard Reset
4	GND		Ground
5	+5V		Power
6 ~ 8	NC		No connection

I/O Port Addresses

Address	Function
000 - 01F	DMA Controller
020 - 03F	Interrupt Controller
040 - 05F	Timer
060 - 07F	Programmable Peripheral Interface
080 - 09F	DMA Page Register
0AX	NMI Mask Register
200 - 20F	Game Control
210-217	Expansion Unit
21F	Reserved
278 - 27F	Parallel Printer Port 2
2B0 - 2DF	Alternate Enhanced Graphics Adapter
2E1	GPIB (Adapter 0)
2E2 -2E3	Data Acquisition (Adapter 0)
2F8 -2FF	Serial Port 2
300 - 31F	Prototype Card
320 - 32F	Hard Disk
348 - 357	DCA 3278
360 - 367	PC Network (low address)
368 - 36F	PC Network (high address)
378 - 37F	Parallel Printer Port 1
380 -38F	SDLC, Bisynchronous (BSC) 2
390 - 393	Cluster
3A0 - 3AF	Bisynchronous (BSC) 1
3B0 -3BF	Monochrome Display and Printer Adapter
3C0 -3CF	Enhanced Graphics Adapter
3D0 - 3DF	Color Graphics Monitor Adapter
3F0 - 3F7	Floppy Disk Controller
3F8 ~ 3FF	Serial Port 1
11B4	RTC Address Register (write only)
1185	RTC Data Register

Jumper Locations
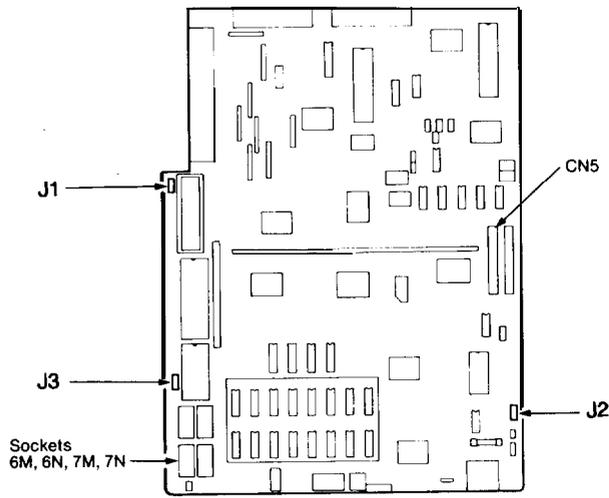
Jumper Settings for FDC, RAM, and EPROM Configuration

Jumper			Function
1	2	3	
A			FDC enabled
B			FDC disabled
	A		Parity RAM disabled
	B		Parity RAM enabled
		A	64KB/128KB EPROM selected
		B	256KB EPROM selected

Parity RAM Installation

The Equity I+ supports parity RAM checking to insure that the data stored in memory is valid. To install this option, insert two 50256 or 51256 chips in sockets 6M and 7M; and 4164 chips in sockets 6N and 7N. Then set jumper J2 as shown in the table above.

DMA Channels

Channel	Function
0	Refresh
1	Spare
2	FDD Adapter
3	HDD Adapter

Hardware Interrupts

Number	Function
IRQ0	Timer
IRQ1	Keyboard
IRQ2	EGA, PC Net, 3278/79
IRQ3	Serial 2
IRQ4	Serial 1
IRQ5	Hard Disk
IRQ6	Floppy Disk
IRQ7	Printer

Installation/Support Tips

Power

The Equity I+ has a power supply that is switchable between 115 V, for US and Canadian use, and 230 V, for use in other countries. The voltage switch is located at the rear of the CPU between the AC inlet and the AC outlet. (See figure below.)
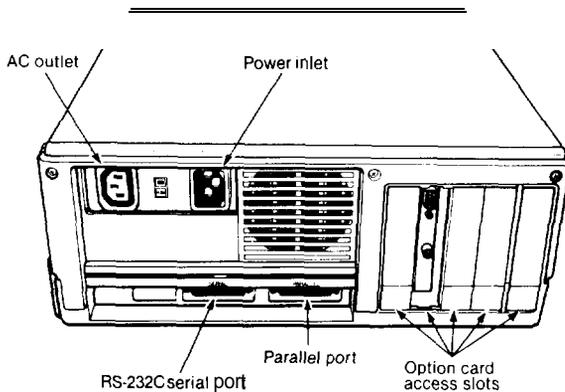
WARNING! The voltage is not changed between the AC inlet and the AC outlet. If the CPU is switched for 230 V in order to function in Europe, only peripherals certified for use at 230 V should be plugged into the outlet.

Video Adapters

- - - When using the Epson MGA video adapter in conjunction with a monochrome monitor with the Equity I+, set DIP switches 2- 1 and 2-2 both OFF. This will define the parallel port as secondary and avoid conflict with the address for a parallel port on the video adapter. The port itself is not installed on the adapter, but the address is in use.

- - - When using an EGA or VGA video adapter in the Equity I+, set DIP switches 1 -5 and 1 -6 both ON.

Installing Floppy Disk Drives

- When installing a floppy disk drive as drive B, remember to set the drive select jumper to the second position and attach the pass -through connector on the floppy drive controller cable to the drive, not the end connector.

Installing Hard Disk Drives

- If you are having difficulty in formatting the hard disk drive, try starting over with the Unconditional Format option in diagnostics.

Third Party Option Boards

- - - If you find that some third party option boards do not function properly in the Equity I+ at the higher speed, try setting the CPU speed back to 4.77 MHz.

Software Problems

- - - When installing a copy - protected software package on the Equity I +, set the the CPU speed to 4.77MHz. This has been found to have fewer conflicts with copy -protection. After the installation, the CPU can be switched back to the higher speed.

- If a software package does not appear to be compatible with the Equity I+, try switching the CPU speed to 4.77MHz before giving up. Some software packages (e.g., Disk Optimizer from Softlogic Solutions) have been found to function only at 4.77MHz.

Product Support Bulletins

S-0010	4/7/87	Equity It /III t Worldwide Power Selection
S-0011	6/8/87	MS-DOS 3.2 Select Command Manual Error
S-0016	8/25/87	ARNET - IDEA - 3COM - ARCNET Certifications
S-0018	9/16/87	SCO - Fox Research - Manzana Certifications
S-0019B	12/2/87	Equity/Apex Coprocessor Selection Guide
S-0023	10/29/87	Equity It With MGA Card - Parallel Port Setup
s-0026	11/19/87	Equity t Series Compatibility Certification
S-0031	12/14/87	Equity Series with Word and Serial Printers
S-0039	3/3/88	Equity Series Power Available and Consumption
S-0040	3/28/88	Equity It - Common Questions and Answers
S-0045A	6/7/89	Equity It File Creation Error Update
S-0047A	6/12/89	Using Expanded Memory with Equity and Apex
S-0050	5/16/88	Equity Series with PLUS HARDCARD 20
S-0054B	5/4/89	Using Math Coprocessors with Equity and Apex
S-0061	10/12/88	Equity t Series Novell Netware Certifications
S-0062A	6/9/89	Equity Series Computers - ROM History
S-0066	1/6/89	Equity Compatibility with the SOTA 286i and the 286 Express
S-0069	2/1/89	Equity It / EGA and VGA Video Adapters
S-0080	4/19/89	Apex/Apex Plus/Equity Series Keyboards
S-0097	6/13/89	Tape Backup Systems Test Results
S-0090	8/10/89	Equity It with Manzana 3.5" External Floppy Drives
S-0092	8/11/89	Novell Netware Compatibilty Results for Equity I+

Related Documentation

Q390A-AA		**Equity I+ Software Package. MS-DOS 3.2 and GW-Basic**
A806021		**Equity I+ Software Package. MS-DOS 3.3 Upgrade**
M-TM-EQI+		**Equity I+ Technical Manual**
M-PM-EQI+PRM		**Equity I+ Programmer's Reference Manual**
MPL-EQI +	5/9/88	**Equity I+ Parts List**
Y14499102101		**Equity I+ User's Guide**
Y14499102200		**Equity I+ Diagnostics Manual**