Introduction

The Purpose of this Manual

This manual is specifically written to help the user to configure the 486 System Board. The user can optimize the system performance by changing the default configuration of the system board.

Features of System Board

● Support 80486SX, 80487SX, 80486DX/DX2, OverDrive™ CPU and Pentinum™OverDrive™ Processor.

● Support CPU speed running at 20/25/33/50/66MHz

● The memory configuration of DRAM memory is 1, 2, 4, 8, 16, 20, 32MB

● Support 256K, 512K, 1M and 4M DRAM SIMM

● Support 128KB and 256KB Write-back secondary cache

● Optional 32 bit Shadowing RAM for system and video BIOS

● Optional adapter BIOS shadowing in 32KB Block

Section 1
Memory Expansion

There are a total of 8 SIMM sockets which divided into two banks labelled 'Bank 0' and 'Bank 1', on the System Board. The system board can support 256K x 9 SIMMs, 512K x 9, 1M x 9 SIMMs or 4M x 9 SIMMs. The DRAM speed should be 70ns or faster.

The system board can also support 'x8' SIMMs provided the parity is disabled, refer to "Setup Menu" in Part B "BIOS Reference" for details on disabling parity.

The following are the supported DRAM configurations.

Bank 0	Bank 1	Total RAM
256KB	-	1MB
256KB	256KB	2MB
512KB	-	2MB
512KB	512KB	4MB
1MB	-	4MB
1MB	1MB	8MB
1MB	4MB	20MB
4MB	-	16MB
4MB	4MB	32MB

(i)   For location of banks on system board, refer to section 3
(ii)   "-" = Not installed

Section 2
System Board Configuration

Under some circumstances you may want to change the default configuration of the system board. These changes are made through jumper setting on the system board. The following section will describe the function of jumpers and connectors and their corresponding location on the system board will be shown in Section 3.

Jumper Setting & Connectors

JP1   **Upgrade Processor Select**

Note : FOR THE INSERTION OF PENTINUM™ OVERDRIVE™ PROCESSOR. NO CHANGE FOR THIS JUMPER IS REQUIRED

    UPGRADE PROCESSOR SOCKET VACANT

    UPGRADE PROCESSOR SOCKET OCCUPIED WITH 80486SX / 80486DX / 80486DX2 / OVERDRIVE™ PROCESSOR

JP2   **Cache Size Select**

    128K CACHE

    256K CACHE

JP8   **Battery Select**
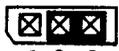
    ON-BOARD RECHARGEABLE BATTERY

    EXTERNAL BATTERY

JP9 — VL-Bus CPU Speed

VL-Bus SPEED <=33MHz

VL-Bus SPEED > 33MHz

JP10 — VL-Bus WB Support

VL BUS MASTER CARD DOES NOT SUPPORT WBACK# (WRITEBACK CACHE)

VL BUS MASTER CARD WITH WBACK# (WRITEBACK CACHE) SUPPORT

JP11 — Internal CPU Clock Multiplier (If Supported)

X3 (OPEN)

X2

X2.5   NOTE: THIS OPTION IS NOT SUPPORTED FOR PRESENT 5V PROCESSORS

JP12 — Keyboard Controller Select

INTERNAL KEYBOARD CONTROLLER

EXTERNAL KEYBOARD CONTROLLER

JP13 — CPU Speed

25 MHz   NOTE : THIS IS THE EXTERNAL CLOCK SPEED 486DX/2 - 50 HAS EXTERNAL CLOCK SPEED OF 25MHz
486DX/2 - 66 HAS EXTERNAL CLOCK SPEED OF 33MHz

33MHz

JP14 — MCLK Slect

DEFAULT

RESERVED

JP15, JP16 JP17, JP18 — Keyboard Controller Select

INTERNAL KEYBOARD CONTROLLER

EXTERNAL KEYBOARD CONTROLLER

JP19 — Monitor Type

CGA

MDA

(EITHER POSITION WORKS FOR EGA. VGA)

JP20   **BIOS Setup (Battery Backup)**
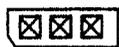
NORMAL OPERATION

1 2 3

ERASE BIOS SETTINGS

1 2 3

JP21   **PS/2 Mouse Interface**

DISABLE MOUSE INTERUPT (IRQ 12)

1 2

ENABLE MOUSE INTERUPT (IRQ 12)

1 2

JP32   **CPU Type**
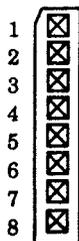
238 PIN PROCESSOR BASED ON PENTIUM
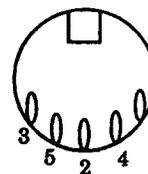TECHNOLOGY

1 2 3

ALL OTHER CPU TYPES

1 2 3

JP33   **CPUHRQ Select**

CPU BUS SPEED > 33 MHz

1 2 3

CPU BUS SPEED <=33MHz

1 2 3

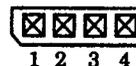**J1**   **Front Panel Connector**

1. N.C.
2. N.C.
3. GND
4. +5V
5. RESET
6. KEYBOARD INHIBIT
7. N.C.
8. GND

J2   **Keyboard Connector**
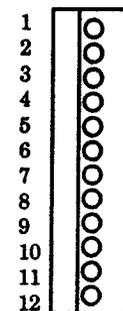
1. KEYBOARD CLOCK
2. KEYBOARD DATA
3. NOT USED
4. GND
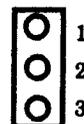5. +5V

J3   **Battery Connector**

1 2 3 4

1. +4.5V
2. N.C.
3. GND
4. GND

J7   **Power Connector**
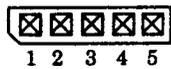
1
2
3
4
5
6
7
8
9
10
11
12

1. POWER GOOD
2. +5V
3. +12V
4. -12V
5. GND
6. GND
7. GND
8. GND
9. -5V
10. +5V
11. +5V
12. +5V
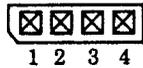
J10   **Processor Power Connector**

1
2
3

1. +3.3V/+5V
2. GND
3. +3.3V/+5V

J27   **PS/2 Mouse Connector**

⊠ ⊠ ⊠ ⊠ ⊠
1 2 3 4 5

1. +5V
2. N.C.
3. MOUSE DATA
4. GND
5. MOUSE CLOCK

J29   **Speaker Jack**

⊠ ⊠ ⊠ ⊠
1 2 3 4
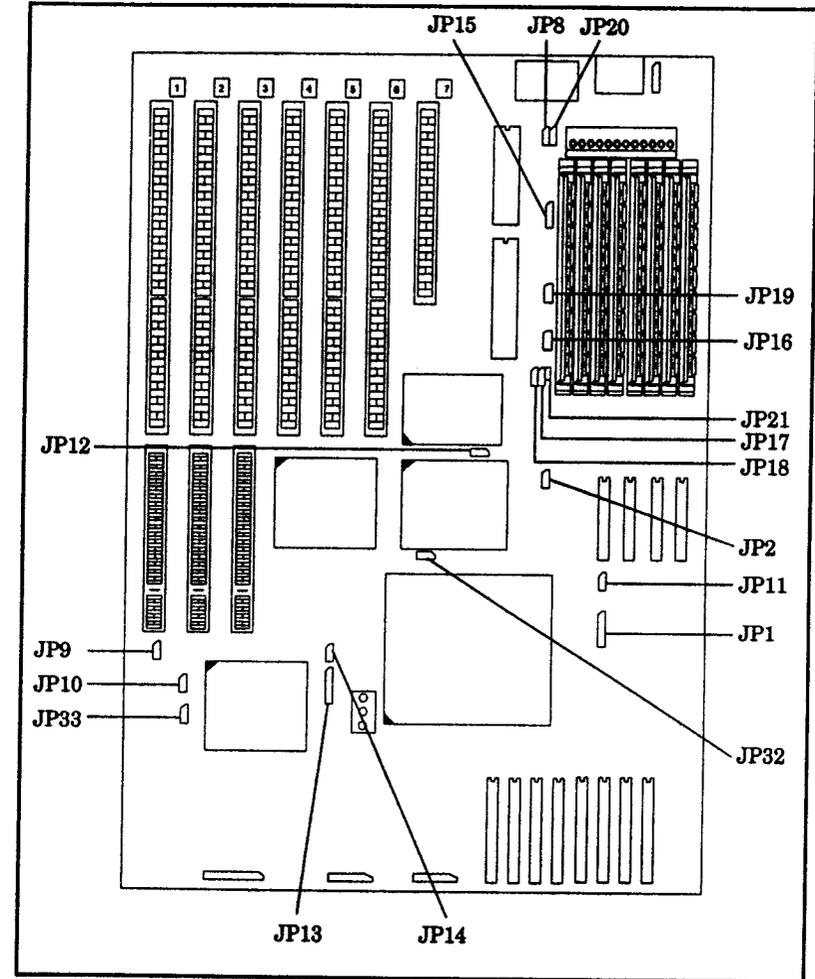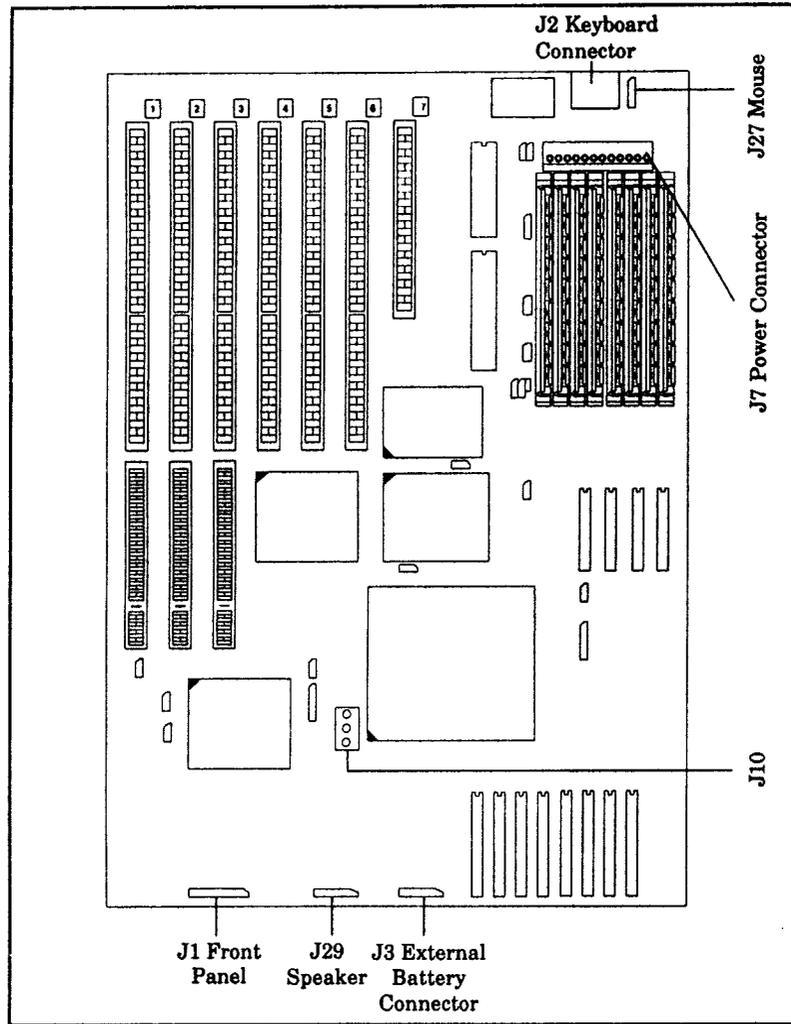
1. +5V
2. SPEAKER DATA
3. +5V
4. SPEAKER DATA

Section 3
System Board Layout

The following diagrams show the relative positions of the jumpers, connectors, major components and IO ports on the system board.

Jumpers

I/O Connectors Location

J2 Keyboard
Connector

J27 Mouse

J7 Power Connector

J10

J1 Front
Panel

J29
Speaker

J3 External
Battery
Connector

Memory Banks and Major Compment Location

Keyboard
Controller   BIOS

VL BUS MASTER

VL BUS

VL BUS

DRAM
BANK 1

DRAM
BANK 0

TAG
BANK 1

TAG
BANK 0

Upgrade
Socket

Cache
Bank 0

Cache
Bank 1