

***HOT-205B***

***Headland 286™-16 MainB***

***User's Manual***



**HOT-205B**

**MAIN BOARD**

**USER'S MANUAL**

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**MANUAL VERSION 1.00**

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# PREFACE

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**This manual is designed to provide the basic information necessary for the end users to understand and properly use the HOT-205B main board. It also contains the information necessary to set up more complex configurations and/or upgrade a 80286 based system.**

**We hope that this manual will provide all the information that you will need to operate your system. Your comment and suggestions will help us in our continuous effort to improve the quality. However should you require any further information, please contact your dealer who will be pleased to assist you.**

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# CHAPTER 0

## QUICK SERVICE

205B	SYMBOL	ASSIGNMENT/FUNCTION
J1	 1 2 3 4	ON-BOARD BATTERY
JP1	 1 2 3	COLOR MODE
	 1 2 3	MONO MODE
J2	O O	RESET
J3	O O	TURBO LED
J4	O O	TURBO
J5	O O O O	SPEAKER
J6	O O O O O	KEYLOCK

**QUICK SERVICE**

**CHAPTER 1****INTRODUCTION**

**The HOT-205B main board is a high performance AT-compatible main board that provides the simple logic in order to achieve the advanced personal computer. It is a high performance and high enhanced function board that offers the primary elements for building more advance system.**

**Full downward compatibility is provide with previous IBM AT and XT models, so all you will be able to run all your existing MS-DOS compatible software but at a greatly faster speed. In addition you can also run OS/2,UNIX. The AMI / QUADTEL BIOS used on the HOT-205 provides true compatibility with all peripherals designed for IBM hardware, and features an extended setup capability and built in diagnostics to allow you to easily configure your system.**



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## **Main features**

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**The system board offers the following advanced features:**

- 1. 80286 CPU run at 16 MHz.**
- 2. Headland HT-12 AT single chip.**
- 3. 80287 mathematical coprocessor socket on board.**
- 4. Clock speed 16MHz 0-wait state memory access.**
- 5. True hardware EMS 4.0 implementation.**
- 6. Maximum 4M memory on board by DIP or SIP.**
- 7. Shadow RAM support for system and video BIOS in 128K.**
- 8. 384K remapping in 64K blocks.**
- 9. Supports 1M,256K,64K Bytes DRAM in mixed mode.**
- 10. Hardware/Software switchable between lower and turbo mode.**
- 11. 8 expansion slots,5 for 16-bit slot,3 for 8-bit .**

12. AMI or QUADTEL ROM BIOS.

13. I/O speed:8MHz.

14. Mechanical: fit any baby AT or XT case.

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## System performance

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SPEED (MHZ)	POWER METER MIPS(V.1.30)	SI (V.4.5)	LANDMARK	
			(V.1.10)	(V.0.99)
16	3.174	17.5	20.3	21
12	2.431	13.7	15.5	15.9

## **CHAPTER 2**

# **INSTALLATION GUIDE**

**If your 80286-16 M/B is not installed in a computer system, then the following basic information will be useful. Due to the wide variety of case the HOT-205B can be installed in, it is not possible to provide exact installing instructions for every case. This section covers the common factors for installing the board in most situations.**

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### **Installing DIP or SIP DRAM**

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**Users can use Dual Inline Package (DIP) or Single Inline Package (SIP). The HOT-205A/B provides a flexible design for the DRAM types. You can install DIP 41256, 44256, or SIP 41256, 411000 to the system.**

<b>SIZE</b>	<b>BANK 0</b>	<b>BANK 1</b>
<b>0 K</b>	<b>0 K</b>	<b>0 K</b>
<b>512K</b>	<b>256K</b>	<b>0 K</b>
<b>1M</b>	<b>256K</b>	<b>256K</b>
<b>2.5M</b>	<b>256K</b>	<b>1M</b>
<b>2M</b>	<b>1M</b>	<b>0 K</b>
<b>4M</b>	<b>1M</b>	<b>1M</b>

**DRAM SPEED**

**80ns**

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**INSTALLATION GUIDE**

**NOTICE !**

**When you install DRAM on your HOT-205B main board, you will notice they are labeled: M1, M2, U21, U22, U25 to U28 (BANK 0).**

**M3, M4, U23, U24, U29 to U32 (BANK 1).**

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**External connections**

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**Most system cases have some controllers and indicators built on the front of the case, and have a speaker mounted somewhere inside . As mentioned in for connection to the above indicators. In addition, the system power supply leads must be connected to the board.**

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## Case connections

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**After installing the HOT-205B main board in a system case, you can connect the case connectors before closing the case.**

**If the wire leads from the front panel are not labelled, you can identify them by tracing the wire back to see which controller or indicator is attached to. Refer to the chapter 0 for more detail information.**

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## Power supply connections

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**The location of the power supply connectors:  
Two connector strips mounted side -by-side.  
These actually look as if they are one piece but**

they are not. A system power supply will have two board leads with six wires each extending from the supply . These leads, although they are not often marked, are easy to be distinguished. They will be shorter, and have a different connector than the drive power leads (usually there are four) which have only four wires.

To connect the power leads , as you plug them on , orient the two connectors so that the black wires from each are toward inside, abutting each other. The connectors will only plug on this way.

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## **Installing an 80287 coprocessor**

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If you use certain graph or programming applications, you may want to install a math coprocessor to enhance the performance of your system. Note however ,that your application program must be specifically designed to

**take advantage of the math coprocessor to benefit from its presence in the system.**

**To install and configuration the math coprocessor:**

- 1. Use a 80287 the math coprocessor.**
- 2. Locate the empty socket.**
- 3. Carefully insert the coprocessor making sure that the notch of the socket connector on the main board.**

**If your 80287 comes with a protector , it may be assembled by folding it into a loop. Then insert the coprocessor into the safety protector making sure that the notch in the safety protector is on the same end as the notch as in the coprocessor.**

**The coprocessor is static sensitive . Reduce static by touching the system frame with one hand while installing the coprocessor in your system unit.**



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## **EMS 4.0 installation**

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**If you want to use EMS 4.0 function, you must resetup one time. When your system memory size is 1MB, you only choose either shadow RAM or EMS. If you choose EMS, extended memory of the motherboard have to setup zero, EMS memory size setup 384MB. When your system memory size is above 1MB.EMS, shadow RAM and extended memory may exist at the same time. For example, if the memory size is 4MB and EMS is 2MB, then the base memory will be 640KB, 384KB of shadow RAM and 1MB of extended memory.**

**To use the EMS 4.0 function, pls. refer to the procedure listed below:**

**If your system have a hard disk (drive C). The first step you insert utility diskette into drive A. The second step you copy the HT12EMM.SYS file driver from your utility diskette onto your bootable disk drive (drive C).**

**TYPE:**

**C > A: < Enter >**

**A > copy A:HT12EMM.SYS C: < Enter >**

**Adding the following line to your CONFIG.SYS  
file on your boot drive:**

**DEVICE = HT12EMM.SYS**

**\* If your DOS have CONFIG.SYS file, you may  
used EDLIN command to add original data of  
CONFIG.SYS file. EDLIN command may  
avoid losing original data of CONFIG.SYS file**

**\* If your DOS have not CONFIG.SYS file, you  
must copy CONFIG.SYS file to DOS.**

**TYPE:**

**C > COPY CON CONFIG.SYS < Enter >**

**DEVICE = HT12EMM.SYS < Enter >**

**PRESS < CTRL > "Z" OR "F6" KEY < Enter >**

## **CHAPTER 03**

### **CARE & MAINTENANCE**

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#### **Replacing the external battery**

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**The battery in the battery pack or the special battery that the H0T-205B main board uses to maintain the configuration information in the on-board CMOS memory will eventually require replacement . This can be done by your dealer or any qualified service personnel . If you want to replace the battery by yourself,remember not to void the warranty on your system when you open your system case .**

**To replace the battery do as follows:**

**\* Open your system case according to the instructions in the system manual. Always remember to take precautions against static electric damage and see that all electric devices are disconnected from the computer and unplugged from their power source.**

**\* Unplug the battery connector lead from the H0T-205B main board.**

**\* No matter your system uses a multiple battery pack or a single battery design, remove the exhausted batteries and replace them with a new ones of the same specification.**

**\* Attach the wire lead from the battery pack or battery to the battery connector properly such that the pin 1 wire connects to pin 1 of the battery connection on the board. Pin 1 of the battery connector on the H0T-205B main board is marked on the board.**

**When you have completed replacing the battery supply for the CMOS RAM, close your computer case and reassemble your system according to the directions in your system**

**manual. Once you have done this you will need to reenter the configuration information for your system using the setup programs described in the appendix.**

**Using the battery will preserve the setup information in the CMOS memory . If you don't preserve the information in this way, it will be necessary to reenter all configuration data every time the system is power on.**

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## **Troubleshooting & diagnostic**

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**This section describes checks to make if the main board does not work properly.**

**WARNING !!**

**ONLY QUALIFIED SERVICE TECHNICIANS SHOULD ATTEMPT REPAIR OF COMPUTER EQUIPMENT. THESE PROCEDURE ARE FOR REFERENCE ONLY. CONTACT YOUR SUPPLIER IF THERE IS ANY PROBLEM IN GETTING YOUR SYSTEM TO WORK IMPROPERLY.**

**It is important to note that problems on a new system should be treated differently than those on a old one .**

**Particularly , if a used system suddenly fails ,the first thing to check is the most recent upgraded to the system , either hardware or software. Installing new programs or system equipment can sometimes result in subtle changes to the way a system operates and affect the system operation. Always try backing out of the upgrade , de - installing the new hardware or software to see if the problem goes away. If this is the case, review the installation**

steps taken and contact the supplier of the new equipment or software for help in installing their product.

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## **Hardware failures**

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**Hardware failures are generally due to malfunctioning or improperly equipment installed.**

**Review the following symptoms and suggested actions. Most common problems can be solved by following these suggestions . If all fail, contact your supplier for assistance.**

**SYMPTOM / POSSIBLE CAUSE / SOLUTION****NO DISPLAY**

- 1.SET THE BRIGHTNESS & CONTRAST CONTROL TO THEIR MID-RANGER.
- 2.CHECK THE SW SETTING ON THE VIDEO CARD.
- 3.MAKE SURE THE VIDEO SIGNAL CABLE IS SECURELY CONNECTED.

**NO KEYBOARD RESPONSE**

- 1.MAKE SURE THE KEYBOARD LOCK SW IS IN THE UN-LOCKED POSITION.
- 2.SOME KEYBOARD HAVE SWITCHES FOR SETTING TO XT OR AT COMPATIBLE. MAKE SURE THE KEYBOARD IS IN AT COMATIBLE . YOU MUST TURN OFF THE SYSTEM WHEN DOING THIS.
- 3.WHEN YOU FIRST TURN ON THE SYSTEM,THE CAPSLOCK,NUMLOCK LEDS SHOULD BRIEFLY LIGHT UP DURING POWER-ON SELF-TEST.IF THEY DON'T LIGHT UP,CONTACT YOUR SUPPLIER FOR ASSISTANCE

**LOST COFIG. OR ,TIME AFTER TURNING OFF POWER**

- 1.MAKE SURE THE BATT. IS CONNECTED PROPERLY.
- 2.BATT. MAY BE WORN DOWN.

**PARITY ERROR**

POSSIBLE MEMORY DEVICE FAILURE.RUN A MEMORY DIAGNOSTIC OR CONTACT YOUR SUPPLIER FOR ASSISTANCE.

**CARE & MAINTENANCE**



**FIXED DISK DOESN'T WORK**

1. MAKE SURE ALL CABLES ARE CONNECTED PROPERLY AND SECURELY.
2. MAKE SURE ALL DISK DRIVERS ARE CONFIGURED FOR DRIVE 0.
3. THE DRIVE WAS NOT PHYSICALLY FORMATTED, PARTITIONED, OR DOS FORMATTED OR ALL THREE.

**DISKETTE DRIVE DOESN'T WORK**

1. MAKE SURE ALL CONNECTORS ARE CORRECT AND SECURE.
2. THE DRIVE ACTIVITY LED SHOULD BRIEFLY LIGHT UP DURING POWER-ON SELF-TEST. IF IT DOESN'T, CHECK THE DRIVE FOR FAILURES.

**FRONT PANEL LEDS DOESN'T LIGHT**

1. MAKE SURE ALL CONNECTORS TO THE MAIN BOARD ARE DONE CORRECTLY.
2. RUNNING A BENCHMARK PROGRAM SUCH AS NORTON, SI, LANDMARK SPEED WILL TELL YOU IF THE TURBO/NORM SW IS HAVING AN EFFECT ON SYSTEM SPEED. IF IT HAS NO EFFECT AND THE LED DOESN'T CHANGE, THERE MAY BE A FAILED COMPONENT IN THE FRONT PANEL ELECTRONICS.
3. CONTACT YOUR SUPPLIER FOR HELP.

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## **Configuration errors**

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**Configuration errors are the result of a mismatch between the peripheral equipments and the main board . The computer has a bank of battery - powered memory that stores the equipment configuration while the computer is the turned off or unplugged.**

**Configuration errors are always the result of incorrect entries in the setup program and can be corrected by the proper configuration data.**

**In some cases, the battery that powers the configuration memory is not connected (this can happen when the system is transported). Sometimes the battery is damaged. When this happen , the computer will not remember the configuration data after power is turned off and you will get messages that state equipment mismatch or configuration error when the you first turn on the system. Another good indicator of a battery malfunction is repeated loss of data and time information in the computer.**

If the battery connection is alright and still get this type of errors, contact your supplier for a battery replacement.

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## **Compatibility problems**

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**Compatibility problems typically come from using hardware equipment or software programs. For hardware equipments check if the speeds of add-on cards are sufficient to match the expansion bus speed of the system. For software programs : Check if it is of the right version.**

**If the compatibility problems persist, contact your supplier immediately with the following information ready:**

- 1. System BIOS vendor and version number.**
- 2. Add-on cards list including manufacturer and version number.**

3. Current operating system and version number.
4. If it is a software problem, make a list of the name of the program, the version number ,and a complete description of the problem.

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## Occasional Cleaning

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Computer systems are sensitive to dust and dirt and become contaminated over time. Most computer users are familiar with the need to clean and maintain floppy disk drives. Your HOT-205B main board is much less sensitive to contamination but it is a good ideal to examine the board and the devices connected to it once or twice a year and clean them if necessary. How often this is necessary will of course depend on how clean your computing environment is . It is better to avoid placing your computer where it will become contaminated.

**Cleaning can generally be limited to a thorough vacuuming. Do not attempt to open your system if it will void the warranty. If you will do the work yourself rather than taking the system to a dealer or service center, do the following:**

- \* Turn off and disconnect all connections to the system.**
- \* Observe static precaution as mentioned in the installation section.**
- \* Open the case according to the directions in your system manual.**
- \* Examine the interior for obvious irregularities. If something does not look right, stop, close the system and take it to a dealer or service center.**
- \* Use a miniature vacuum designed for cleaning this type of equipment to thoroughly clean the interior. Be careful not to loosen or disconnect anything. When it is finished, check if all connections are intact. Then close the case and reattach the peripheral connections.**

**It is also a good idea to use dust cover to prevent the interior of the computer from developing excessive deposits of the dust inside. The key board should be similarly protected. Taking such precaution in advance will help reduce the frequency that your system will require maintenance.**

# APPENDIX A

## TECHNICAL REFERENCE

### I/O ADDRESS MAP

HEX RANAGER	DEVICE	USAGE
000-01F	DMA CONTROLLER 1	SYSTEM
020-03F	INTERRUPT CONTROLLER 1	SYSTEM
040-05F	TIMER	SYSTEM
060-06F	8042 (KEYBOARD)	SYSTEM
070-07F	REAL TIME CLK	SYSTEM
080-09F	DMA REGISTER	SYSTEM
0A0-0BF	INTERRUPT CONTROLLER 2	SYSTEM
0C0-0DF	DMA CONTROLLER 2	SYSTEM
0F0	CLEAR MATH COPROCESSOR	SYSTEM
0F1	RESET MATH COPROCESSOR	SYSTEM
0F8-0FF	MATH COPROCESSOR	SYSTEM
1F0-1F8	FIXED DISK	I/O
200-207	GAME	I/O
278-27F	PAR. PRINTER PORT 2	I/O
2F8-2FF	SERIAL PORT	I/O
300-31F	POROTYPE CARD	I/O

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<b>360-36F</b>	<b>RESERED</b>	<b>I/O</b>
<b>378-37F</b>	<b>PAR. PRINTER PORT 1</b>	<b>I/O</b>
<b>380-38F</b>	<b>SDLC BISYNC 2</b>	<b>I/O</b>
<b>3A0-3AF</b>	<b>BISYNC 1</b>	<b>I/O</b>
<b>3B0-3BF</b>	<b>MONO /PRINTER ADAPTER</b>	<b>I/O</b>
<b>3C0-3CF</b>	<b>RESERVED</b>	<b>I/O</b>
<b>3D0-3DF</b>	<b>COLOR ADAPTER</b>	<b>I/O</b>
<b>3F0-3F7</b>	<b>DISKETTE CONTROLLER</b>	<b>I/O</b>
<b>3F8-3FF</b>	<b>SERIAL PORT 1</b>	<b>I/O</b>

## TIMERS

<b>CHANNEL</b>	<b>FUNCTION</b>
<b>0</b>	<b>SYSTEM TIMER</b>
<b>1</b>	<b>REFERSH REQUEST GENERATOR</b>
<b>2</b>	<b>TONE GENERATION FOR SPEAKER</b>



**DMA CHANNELS**

<b>CHANNEL</b>	<b>FUNCTION</b>
0	SPARE
1	SDLC
2	FLOOPY DISK
3	SPARE
4	CASCADE FOR DMA CONTROLLER 1
5	SPARE
6	SPARE
7	SPARE

**PAGE REGISTER ADDRESSER**

<b>PAGE REGISTER</b>	<b>I/O HEX ADDRESS</b>
DMA CHANNEL 0	0087
DMA CHANNEL 1	0083
DMA CHANNEL 2	0081
DMA CHANNEL 3	0082
DMA CHANNEL 5	008B
DMA CHANNEL 6	0089
DMA CHANNEL 7	008A
REFERSH	008F

**INTERRUPTS**

<b>LEVEL</b>	<b>FUNCTION</b>
<b>0</b>	<b>SYSTEM TIMER O/P 0</b>
<b>1</b>	<b>KEYBOARD O/P 2</b>
<b>2</b>	<b>INTERRUPT FROM CONTROLLER 2</b>
<b>3</b>	<b>SERIAL PORT 2</b>
<b>4</b>	<b>SERIAL PORT1</b>
<b>5</b>	<b>PARALLEL PORT 2</b>
<b>6</b>	<b>DISKETTE CONTROLLER</b>
<b>7</b>	<b>PARALLEL PORT</b>
<b>8</b>	<b>REAL TIME CLOCK</b>
<b>9</b>	<b>SOFTWARE REDIRECTED TO INT 0AH</b>
<b>10</b>	<b>RESERVED</b>
<b>11</b>	<b>RESERVED</b>
<b>12</b>	<b>RESERVED</b>
<b>13</b>	<b>80387</b>
<b>14</b>	<b>HARD DISK DRIVE</b>
<b>15</b>	<b>RESERVED</b>

## DMA CONTROLLER REGISTERS

HEX ADDRESS	COMMAND CODES
0C0	CH0 ADDRESS
0C2	CH0 WORD COUNT
0C4	CH1 ADDRESS
0C6	CH1 WORD COUNT
0C8	CH2 ADDRESS
0CA	CH2 WORD COUNT
0CC	CH3 ADDRESS
0CE	CH3 WORD COUNT
0D0	READ/WRITE REGISTER
0D2	WRITE MODE REGISTER
0D4	READ TEMPORARY/WRITE REGISTER
0D6	WRITE MODE REGISTER
0D8	CLEAR BYTE POINTER FF.
0DA	READ/WRITE MASK CLEAR
0DC	CLEAR MASK REGISTER
0DE	WRITE ALL MASK REGISTER BITS

**I/O CHANNEL(SLOT1-SLOT8)**

<b>PIN NO</b>		<b>PIN NO</b>	
<b>A1</b>	<b>-I/O CH CK</b>	<b>B1</b>	<b>GND</b>
<b>A2</b>	<b>SD7</b>	<b>B2</b>	<b>RESET</b>
<b>A3</b>	<b>SD6</b>	<b>B3</b>	<b>+5V</b>
<b>A4</b>	<b>SD5</b>	<b>B4</b>	<b>IRQ2</b>
<b>A5</b>	<b>SD4</b>	<b>B5</b>	<b>-5V</b>
<b>A6</b>	<b>SD3</b>	<b>B6</b>	<b>DRQ2</b>
<b>A7</b>	<b>SD2</b>	<b>B7</b>	<b>-12V</b>
<b>A8</b>	<b>SD1</b>	<b>B8</b>	<b>0WS</b>
<b>A9</b>	<b>SD0</b>	<b>B9</b>	<b>+12V</b>
<b>A10</b>	<b>-I/O CHRDY</b>	<b>B10</b>	<b>GND</b>
<b>A11</b>	<b>AEN</b>	<b>B11</b>	<b>- SMEMW</b>
<b>A12</b>	<b>SA19</b>	<b>B12</b>	<b>- SMEMR</b>
<b>A13</b>	<b>SA18</b>	<b>B13</b>	<b>-IOW</b>
<b>A14</b>	<b>SA17</b>	<b>B14</b>	<b>-IOR</b>
<b>A15</b>	<b>SA16</b>	<b>B15</b>	<b>-DCK3</b>
<b>A16</b>	<b>SA15</b>	<b>B16</b>	<b>DRQ3</b>
<b>A17</b>	<b>SA14</b>	<b>B17</b>	<b>-DACK1</b>
<b>A18</b>	<b>SA13</b>	<b>B18</b>	<b>DRQ1</b>
<b>A19</b>	<b>SA12</b>	<b>B19</b>	<b>-REFERSH</b>

A20	SA11	B20	CLK
A21	SA10	B21	IRQ7
A22	SA9	B22	IRQ6
A23	SA8	B23	IRQ5
A24	SA7	B24	IRQ4
A25	SA6	B25	IRQ3
A26	SA5	B26	-DACK2
A27	SA4	B27	T/C
A28	SA3	B28	BALE
A29	SA2	B29	+5V
A30	SA1	B30	OSC
A31	SA0	B31	GND

## I/O CHANNEL(SLOT9-15)

C1	SBHE	D1	-MEMCS16
C2	LA23	D2	I/O CS16
C3	LA22	D3	IRQ16
C4	LA21	D4	IRQ11
C5	LA20	D5	IRQ12
C6	LA19	D6	IRQ15
C7	LA18	D7	IRQ14
C8	LA17	D8	-DACK0
C9	-MEMR	D9	DRQ0
C10	-MEMW	D10	-DACK5
C11	SD08	D11	DRQ5
C12	SD09	D12	-DACK6
C13	SD10	D13	DRQ6
C14	SD11	D14	-DACK7
C15	SD12	D15	DRQ7
C16	SD13	D16	+5V
C17	SD14	D17	-MASTER
C18	SD15	D18	GND

## APPENDIX B

The Table of Hard Disk Types For BIOS Setup

Type	Cyln	Head	WPcom	L Zone	Sect	Size
1	306	4	128	305	17	10 MB
2	615	4	300	615	17	20 MB
3	615	6	300	615	17	31 MB
4	940	8	512	940	17	62 MB
5	940	6	512	940	17	47 MB
6	615	4	65535	615	17	20 MB
7	462	8	256	511	17	31 MB
8	733	5	65535	733	17	30 MB
9	900	15	65535	981	17	112 MB
10	820	3	65535	828	17	20 MB
11	855	5	65535	855	17	35 MB
12	855	7	65535	855	17	50 MB
13	306	8	128	319	17	28 MB
14	733	7	65535	733	17	43 MB
16	612	4	0	663	17	20 MB
17	977	5	300	977	17	41 MB

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18	977	7	65535	977	17	57 MB
19	1024	7	512	1024	17	60 MB
20	733	5	300	732	17	30 MB
21	733	7	300	732	17	43 MB
22	733	5	300	733	17	30 MB
23	306	4	0	336	17	10 MB
24	925	7	0	925	17	54 MB
25	925	9	65535	925	17	69 MB
26	754	7	754	754	17	44 MB
27	754	11	65535	754	17	69 MB
28	699	7	256	699	17	41 MB
29	823	10	65535	823	17	68 MB
30	918	7	918	918	17	53 MB
31	1024	11	65535	1024	17	94 MB
32	1024	15	65535	1024	17	128 MB
33	1024	5	1024	1024	17	43 MB
34	612	2	128	612	17	10 MB
35	1024	9	65535	1024	17	77 MB
36	1024	8	512	1024	17	68 MB



37	615	8	128	615	17	41 MB
38	987	3	987	987	17	25 MB
39	987	7	987	987	17	57 MB
40	820	6	820	820	17	41 MB
41	977	5	977	977	17	41 MB
42	981	5	981	981	17	41 MB
43	830	7	512	830	17	48 MB
44	830	10	65535	830	17	69 MB
45	917	15	65535	918	17	114 MB
46	1224	15	65535	1223	17	152 MB

## APPENDIX C

### QUADTEL and AMI BIOS SETUP

The followings are the CMOS setup table references. The contents of setup can be modified by the user from the setu screen to follow the instructions step by step.

# I. QUADTEL BIOS

**EXTENDED BIOS SOFTWARE  
COPYRIGHT 1989,QUADTEL CORP.**

**SETUP**

**EXTENDED BIOS FEATURES  
SYSTEM INFORMATION  
SYSTEM SECURITY  
PARK FIXED DISKS  
FORMAT FIXED DISK**

**MOVE ENTER SELECT ESC EXIT**

**EXTENDED BIOS SETUP-COPYRIGHT 1989,1990 QUADTEL CORP.**

**CURRENT DATE:[02/07/1991] VIDEO SYSTEM:[EGA/VGA]**

**CURRENT TIME:[15:44:55]**

**640K SYSTEM MEMORY POWER UP SPEED[NORMAL]**

**[0K]EXTENDED MEMORY BIOS SHADOW:[SYSTEM IN ROM]**

**[384K]EMS MEMORY[VIDEO IN RAM]**

**0K SHADOW MEMORY WAIT STATE:0,ALL BANKS**

**DISKETTLE DRIVE 0:[1.2MB ,5 1/4]**

**DISKETTLE DRIVE 1:[NOT INSTALLED]**

**FIXED DISK 0:TYPE [USER] CY:[642]HD:[8] ST[17] LZ[0] WP[0]**

**FIXED DISK 1: TYPE [NONE]**

**MOVE F5 PREVIOUS VALUE F9 AUTOMATIC CONFIGURATION**

**F1 HELP F6 NEXT VALUE F10 SAVE CONFIGURATION**

**ESC EXIT**

**EXTENDED BIOS FEATURES,COPYRIGHT 1989,QUODTEL CORP**

**AUTO-PARK DISK:[NO] KEYBOARD CLICK:[NO]  
QUICK BOOT:[NO] KEYBOARD DELAY:[3/4 SEC]  
SCREEN SAVER:[DISABLED]KEYBOARD RATE:[22/SEC]  
NUMLOCK BOOT STATE:[AUTO]**

**MOVE PREVIOUS VALUE F9 AUTO CONFIGURATION  
ESC EXIT F6 NEXT VALUE F10 SAVE CONFIGURATION**

**SYSTEM INFORMATION,COPYRIGHT 1989,QUADTEL CORP.**

**PROCESSOR :80286 LPT1 ADDRESS:0278H  
COPROCESSOR:NONE LPT2 ADDRESS:UNUSED  
BIOS ID :02604444C LPT3 ADDRESS:UNUSED  
BIOS REV.03 .05 .03. COM1 ADDRESS :03F8H  
COM2 ADDRESS:UNUSED  
PROGRAMABLE:512K COM3 ADDRESS:UNUSED  
OTHER MEMORY:384K COM4 ADDRESS :UNUSED**

**ESC EXIT**

**BIOS PASSWORD CONTROL**  
**COPYRIGHT 1989,QUADTEL CORP.**

**ENTER NEW PASSWORD:[**  **]**

**VALIDATE NEW PASSWORD:[**  **]**

**F1 HELP ENTER ACCEPT ESC EXIT**

**EXTEND BIOS SOFTWARE**  
**COPYRIGHT 1989, QUADTEL CORP.**

**NOTICE!**

**OPERATION COMPLETE.**

**PRESS < ANY KEY >**

**MOVE ENTER SELECT ESC EXIT**

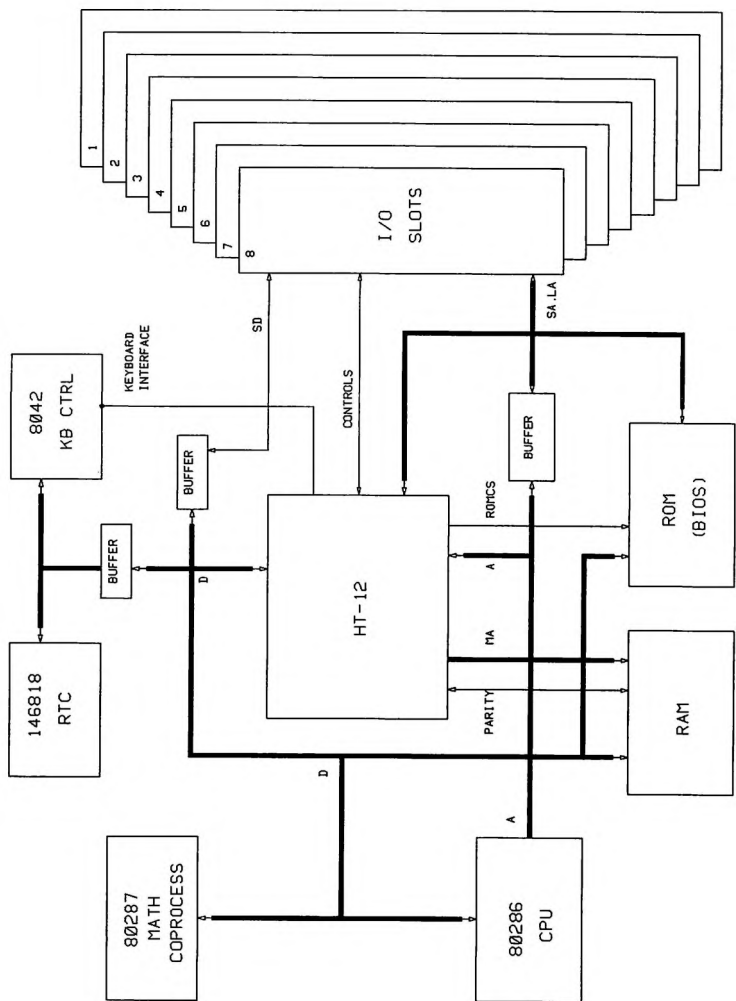
**FORMAT FIXED DISK**  
**COPYRIGHT 1989,90 QUADTEL CORP.**

**FIXED DISK 0**  
**DISK 1: NOT INSTALLED**

**MOVE ENTER SELECT ESC EXIT**

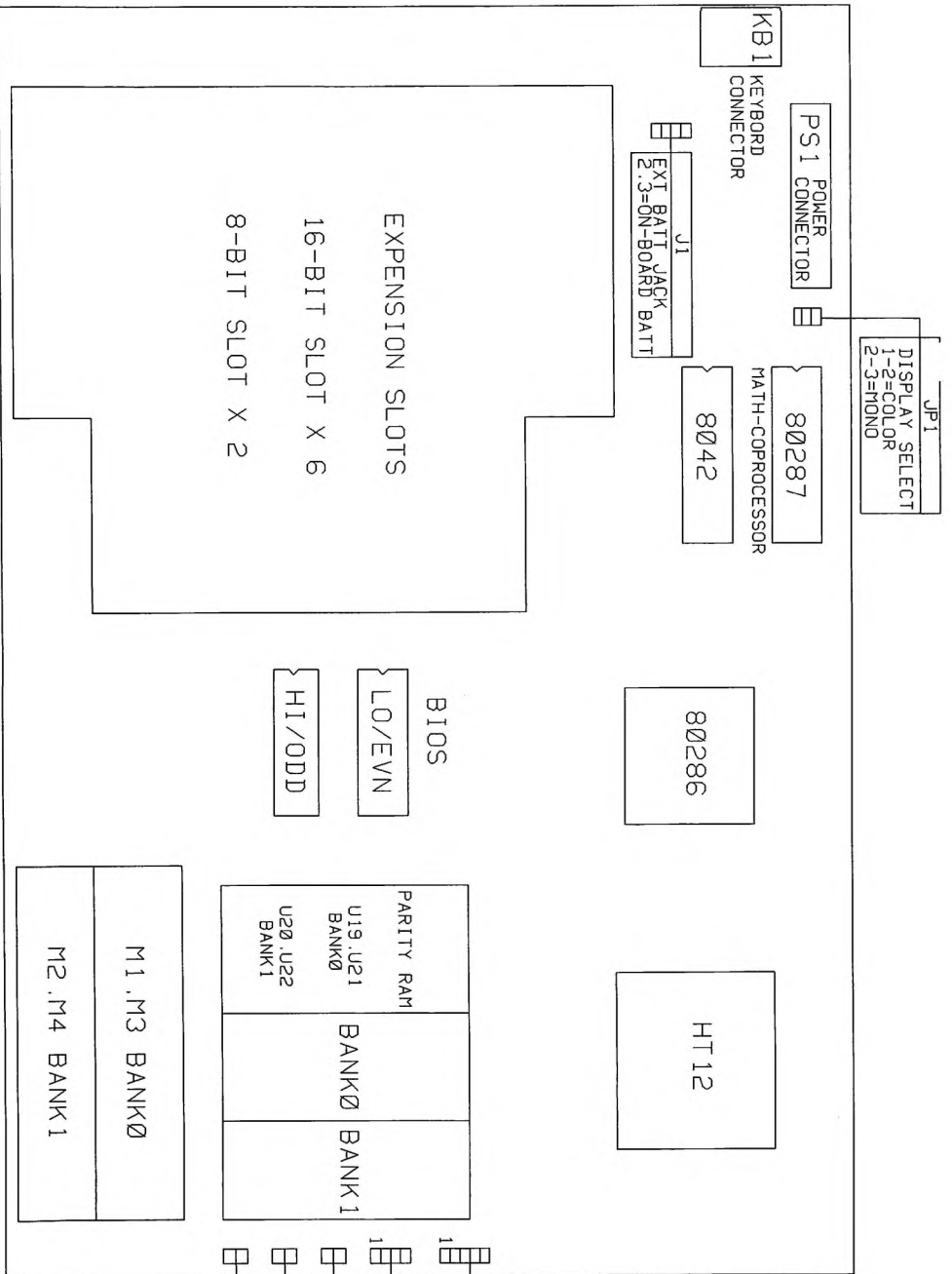
# II. AMI BIOS

CMOS SETUP (C) COPYRIGHT 1985-1990,AMERICAN MEGATRENDS INC.,										
DATE(MN/DATE/YEAR): SAT JAN 05 1980				BASE MEMORY SIZE:512 KB						
TIME(HOUR/MIN/SEC):05:41:45				EXT. MEMORY SIZE:0 KB						
FLOPPY DRIVE A: 1.2 MB ,51/4"				NUMERIC PROCESSOR:NOT INSTALLED						
FLOPPY DRIVE B: NOT INSTALLED										
HARD DISK C: 47 = USER TYPE	CYLN	HEAD	WPCOM	LZONE	SECT	SIZE				
	642	8	0	0	17	MB				
HARD DISK C: NOT INSTALLED										
PRIMARY DISPLAY: MONOCHROME										
KEYBOARD : INSTALL										
BIOS SHADOW OPTION:MAIN& VIDEO BIOS										
SCARTCH RAM OPTION: 1										
EMS SIZE OPTION: 0KB										
0 WAIT STATE OPTION: ENABLED										
MEMORY RELOCATION: ENABLED										
MONTH: JAN,FEB,...,DEC										
DATE: 01,02,03...31										
YEAR: 1901,1902,...,2099										
ESC = EXIT, SELECT,PGUP/PGDN = MODIFY										
				SUN	MON	TUE	WED	THU	FRI	SAT
				30	31	1	2	3	4	5
				6	7	8	9	10	11	12
				13	14	15	16	17	18	19
				20	21	22	23	24	25	26
				27	28	29	30	31	1	2



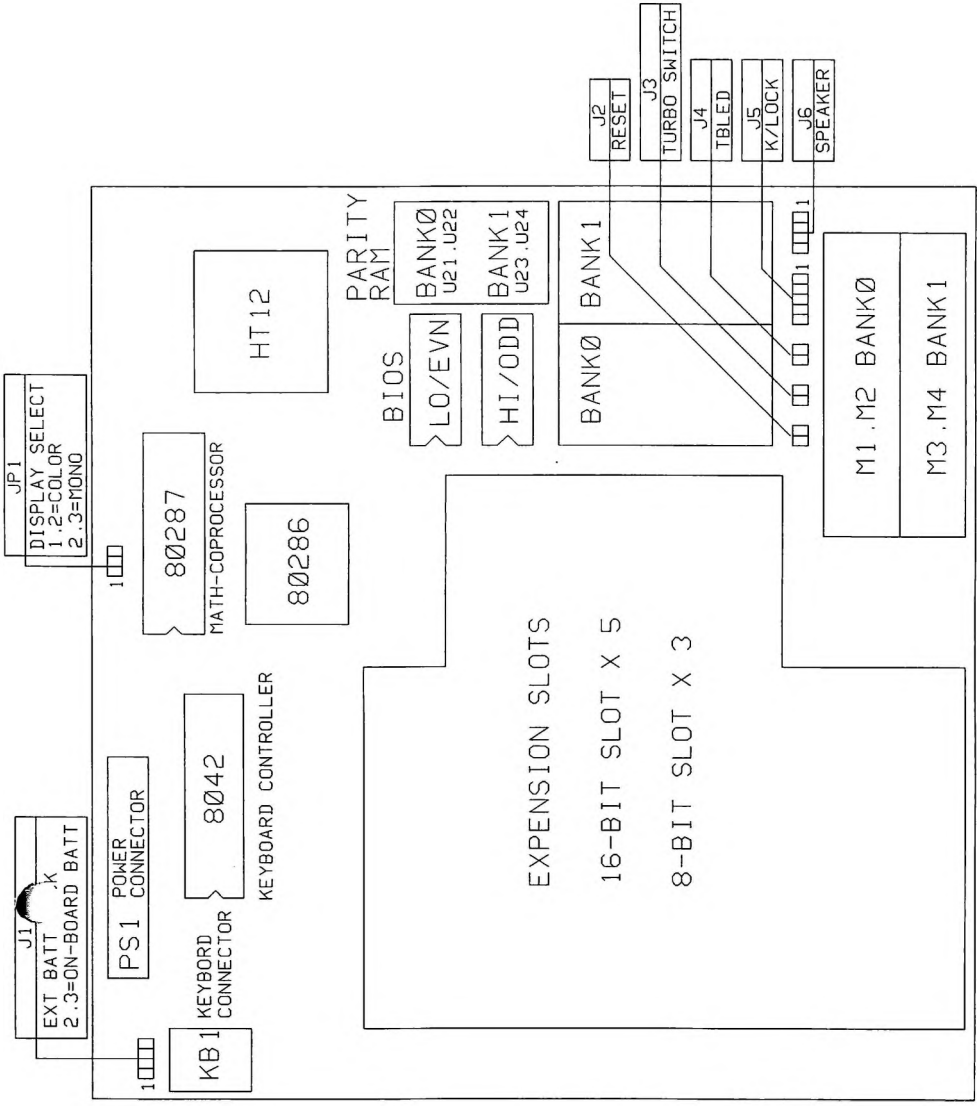
HOT-205 FUNCTIONAL BLOCK DIAGRAM

CONTRACT	-	SHUTTLE COMPUTER INTERNA	
DR	/ /		
CHK	/ /		
ENC	/ /		



HOT-205A LAYOUT DIAGRAM





H0T-205B LAYOUT DIAGRAM

# **HOT-205A/B MAIN BOARD MANUAL 1991**

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