

**MAXPORT**

**PART # 4017**

**USER MANUAL**

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# SECTION 1.

## INSTALLATION

THE MAXPORT CAN BE INSTALLED IN ANY OF THE PC EXPANSION LOTS, EXCEPT J8 ON THE ORIGINAL IBM XT AND PORTABLE. BE SURE TO SET THE ADDRESS AND JUMPER OPTIONS BEFORE INSTALLATION. REMOVE THE PC CASE, REMOVE THE BLANK METAL SLOT COVER, AND INSERT THE BOARD. REPLACE THE SCREW, REPLACE THE COVER, AND YOU ARE DONE.

# SECTION 2.

## ADDRESS SELECTION

THE MAXPORT OCCUPIES 8 CONSECUTIVE I/O LOCATIONS. A DIP SWITCH IS USED TO SET THE BASE ADDRESS FOR THESE LOCATIONS. BE CAREFUL WHEN SELECTING THE BASE ADDRESS AS SOME SELECTIONS CONFLICT WITH EXISTING PORTS. THE FOLLOWING TABLE SHOWS SEVERAL EXAMPLES THAT USUALLY DO NOT CAUSE A CONFLICT. SW1 SETS THE I/O ADDRESS FOR THE MAXPORT BOARD.

ADDRESS	BINARY		SWITCH POSITION SETTINGS						
	A9	A0	1	2	3	4	5	6	7
238-23F	1000111	XXX	OFF	ON	ON	ON	OFF	OFF	OFF
280-288	1010000	XXX	OFF	ON	OFF	ON	ON	ON	ON
2A0-2A8	1010100	XXX	OFF	ON	OFF	ON	OFF	ON	ON
2E8-2EF	1011101	XXX	OFF	ON	OFF	OFF	OFF	ON	OFF
300-308	1100000	XXX	OFF	OFF	ON	ON	ON	ON	ON
328-32F	1100101	XXX	OFF	OFF	ON	ON	OFF	ON	OFF
3E8-3EF	1111101	XXX	OFF	OFF	OFF	OFF	OFF	ON	OFF

TYPICALLY COM1;=3F8h; COM2;=2F8h; COM3;=3E8h; COM4;=2E8h.

FIGURE 1

THE FOLLOWING ILLUSTRATION SHOWS THE CORRELATION BETWEEN THE DIP SWITCH SETTING AND THE ADDRESS BITS USED TO DETERMINE THE BASE ADDRESS. IN THE EXAMPLE BELOW, THE ADDRESS 300 HEX THROUGH 307 HEX IS SELECTED. 300 HEX =110000 0XXX IN BINARY REPRESENTATION.

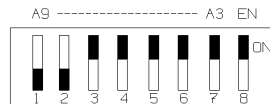


FIGURE 2

NOTE THAT SETTING THE SWITCH "ON" OR "CLOSED" CORRESPONDS TO A "0" IN THE ADDRESS, WHILE LEAVING IT "OFF" OR "OPEN" CORRESPONDS TO A "1".

## SECTION 3.

### OPTION SELECTION

THE BOARD CONTAINS SEVERAL JUMPER STRAPS FOR THE PORT WHICH MUST BE SET FOR PROPER OPERATION. FOR JUMPER LOCATION, REFER TO FIGURE 6.

#### PORT ENABLE / DISABLE

THE PORT ON THE MAXPORT CAN BE ENABLED OR DISABLED WITH SWITCH POSITION 8 ON THE DIP SWITCH (SW1). THE PORT IS ENABLED WITH THE SWITCH "ON" AND DISABLED WHEN "OFF" OR "OPEN" (REFER TO FIGURE 2). IF THE PORT IS DISABLED, BE SURE TO ALSO DISABLE THE INTERRUPT REQUEST FOR THAT PORT BY REMOVING THE IRQ JUMPER (REFER TO FIGURE 3).

#### IRQ SELECTION

E2 - SELECTS THE INTERRUPT REQUEST FOR THE MAXPORT. IF NO INTERRUPT IS DESIRED, REMOVE THE JUMPER.

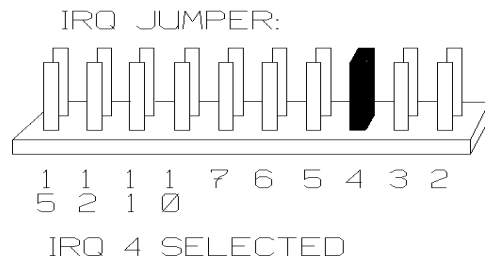
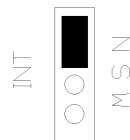


FIGURE 3.

E3 "N" INDICATES THE (N)ORMAL, SINGLE INTERRUPT PER PORT MODE. THE "S" INDICATES THE (S)HARED INTERRUPT MODE, WHICH ALLOWS MORE THAN ONE PORT TO ACCESS A SINGLE IRQ . THE (M) INDICATES THE INCLUSION OF A 1K OHM PULL-DOWN RESISTOR REQUIRED ON ONE PORT WHEN SHARING INTERRUPTS.



SET JUMPERS TO "S" FOR SHARED INTERRUPT MODE ON ALL BLOCKS SHARING AN IRQ EXCEPT ONE. SET THAT PORT BLOCK FOR "M". THIS PROVIDES THE PULL-DOWN RESISTOR CIRCUIT THAT MAKES SHARING OF IRQ'S POSSIBLE. IF YOU ARE USING MORE THAN ONE MAXPORT OR A COMPATIBLE CARD IN A BUS YOU SHOULD ONLY HAVE ONE PORT SET TO "M". THIS EXAMPLE SHOWS ALL FOUR PORTS SHARING A SINGLE IRQ.

SET JUMPER TO "S" IF YOU ARE USING MORE THAN ONE MAXPORT IN A BUS OR YOU WISH TO COMPLETELY REMOVE THE PULL-DOWN RESISTOR FOR HARDWARE COMPATIBILITY. SETTING THE BOARD IN THIS CONFIGURATION WHEN IT IS NOT ACCOMPANIED BY A PULL-DOWN OR PULL-UP WILL PREVENT THE PORTS FROM TRIGGERING AN INTERRUPT.

E1: THIS JUMPER CONTROLS THE CLOCK OPTIONS FOR THE MAXPORT.



- **EXT:**  
ON -CONNECTS THE OSCILLATOR OUTPUT TO THE RTXCA PIN PROVIDING A WIDER RANGE OF ON-BOARD BAUD RATE GENERATION OPTIONS.  
OFF -CLOCK IS AN INPUT ON THE RTXCA PIN **THIS IS THE DEFAULT MODE FOR MIDI APPLICATIONS**
- **SYNC:**  
SYNC PIN IS INTENDED FOR APPLICATIONS REQUIRING EXTERNAL MODEMS THAT GENERATE A SYNC SIGNAL **DEFAULT IS OFF UNLESS YOUR APPLICATION SPECIFICALLY REQUIRES THIS.**
- **WRD:**  
INTERRUPT ON TX OR RX ONLY WRITE REGISTER 1 MUST BE PROGRAMED PROPERLY. **DEFAULT IS OFF.**

## SECTION 4.

### **TECHNICAL DESCRIPTION**

THE MAXPORT PROVIDES AN IBM COMPATIBLE COMPUTER WITH AN "MACINTOSH" TYPE PORT FOR EASE IN PORTING SOFTWARE TO THE IBM COMPATIBLE. IT UTILIZES THE SAME 8530 SERIAL COMMUNICATION CONTROLLER (SCC) FOUND IN THE MACINTOSH.

THE RELATIVE I/O ADDRESS OF THE 8530 SCC REGISTERS ARE AS FOLLOWS:  
"BASE" IS THE SELECTED BOARD BASE ADDRESS.

- BASE+0 CHANNEL B CONTROL PORT
- BASE+1 CHANNEL A CONTROL PORT
- BASE+2 CHANNEL B DATA PORT
- BASE+3 CHANNEL A DATA PORT
- BASE+4 BOARD CONTROL / STATUS PORT

	D7	D6	D5	D4	D3	D2	D1	D0
STATUS PORT(READ)	<b>A</b>	<b>B</b>	X	X	X	X	X	X
CONTROL PORT(WRITE)	<b>C</b>	X	X	X	X	X	X	X

- A = 0 IF INTERRUPT IS PENDING ON WRQ  
1 IF NO INTERRUPT IS PENDING ON WRQ.
- B = 1 IF INTERRUPT IS PENDING ON THE INT PIN.  
0 IF NO INTERRUPT IS PENDING ON THE INT PIN.
- C = 1 TO ENABLE INTERRUPTS.  
0 TO DISABLE INTERRUPTS. (BOARD POWERS UP WITH INTERRUPTS DISABLED)
- X = UNUSED BITS

**CHANNEL A:**

<b>SIGNAL NAME:</b>	<b>MINI-DIN 8 PIN NUMBER</b>	<b>SIGNAL DIRECTION</b>
TXDA +	P1-6	OUTPUT
TXDA-	P1-3	OUTPUT
HSKoA	P1-1	OUTPUT
HSKiA	P1-2	INPUT
RXDA+	P1-8	INPUT
RXDA-	P1-5	INPUT
GPIA	P1-7	INPUT
GND	P1-4	

FIGURE 4

**CHANNEL B:**

<b>SIGNAL NAME:</b>	<b>MINI-DIN 8 PIN NUMBER</b>	<b>SIGNAL DIRECTION</b>
TXDB +	P2-6	OUTPUT
TXDB-	P2-3	OUTPUT
HSKoB	P2-1	OUTPUT
HSKiB	P2-2	INPUT
RXDB+	P2-8	INPUT
RXDB-	P2-5	INPUT
GPIB	P2-7	INPUT
GND	P2-4	

FIGURE 5

## **SECTION 5.**

### **5.1 ENVIRONMENTAL SPECIFICATIONS**

<b>SPECIFICATION</b>	<b>OPERATING</b>	<b>STORAGE</b>
<b>TEMPERATURE RANGE</b>	<b>0 - 50 DEGREES C</b>	<b>-20 - 70 DEGREES C</b>
	<b>32 - 122 DEGREES C</b>	<b>-40 - 100 DEGREES F</b>
<b>HUMIDITY RANGE</b>	<b>0- 90% R.H. NON-CONDENSING</b>	<b>0- 90% R.H. NON-CONDENSING</b>

### **5.2 PERFORMANCE SPECIFICATIONS**

MTBF > 30,000 HOURS (CALCULATED)  
MTTR < .25 HOURS  
TURNAROUND FOR REPAIR - 5 WORKING DAYS

### **5.3 MANUFACTURING SPECIFICATIONS**

-IPC 610-A CLASS-III STANDARDS ADHERED TO WITH A 0.1 VISUAL A.Q.L. AND 100% FUNCTIONAL TESTING.  
-P.C. BOARDS ARE BUILT TO U.L. 94V0 RATING AND ARE 100% ELECTRICALLY TESTED. MOST BOARDS ARE SOLDER MASK OVER BARE COPPER. WHILE NOT FCC CERTIFIED, THEY ARE DESIGNED FOR FCC CERTIFICATION TESTING.

## SECTION 6.

### **WARRANTY**

Sealevel Systems, Inc. provides a lifetime warranty for this product. Should this product fail to be in good working order at any time during this period, Sealevel Systems will, at its option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Sealevel Systems assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Sealevel Systems will not be liable for any claim made by any other related party.

**RETURN AUTHORIZATION MUST BE OBTAINED FROM SEALEVEL SYSTEMS BEFORE RETURNED MERCHANDISE WILL BE ACCEPTED. AUTHORIZATION CAN BE OBTAINED BY CALLING SEALEVEL SYSTEMS AND REQUESTING A RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER.**

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