

# jrExcellerator Addendum

Please read the jrExcellerator Installation and Operation Manual first, then refer back to this addendum.

*The purpose of this addendum is two fold. First, to advise you of enhancements made to the jr-Excellerator since the manual was printed, and, second, to provide recommended "Initial Switch Settings" which will optimize performance with a variety of PCjr memory expansion products.*

## ENHANCEMENTS

### NEW COMMANDS

Two new commands are now supported. These commands provide greater flexibility than ever before. Both are executed from the jrExcellerator's ROM. This means you can enter either of these commands from the DOS prompt at any time (it doesn't matter whether you have a diskette in your diskette drive at the time).

### SLOWSPD

Enter this command at the DOS prompt, or include the SLOWSPD command in any batch file, to switch to the slow speed (4.77MHz).

### FASTSPD

Enter this command from the DOS prompt, or include the FASTSPD command in any batch file, to switch to the fast speed (9.54MHz).

## NEW FEATURES

### SPEEDCHK

The SPEEDCHK command can now be used to make decisions in batch files. Running the SPEEDCHK program sets the ERRORLEVEL flag to 0 if the jr-Excellerator is operating in the slow speed; and to 1 if the jrExcellerator is operating in the fast speed.

A typical application is shown below. Enter the following program and type NEWDIR at the DOS prompt. A normal directory of the default drive will be displayed if you are in the slow mode. If you are in the fast mode, DOS will pause after each page of the directory and wait for you to press ENTER to continue.

```
COPY CON NEWDIR.BAT
```

```
ECHO OFF
```

```
SPEEDCHK
```

```
IF ERRORLEVEL 1 DIR/P
```

```
IF NOT ERRORLEVEL 1 DIR
```

Now press Function key F6, then press ENTER.

For more information on programming with batch files, refer to the BATCH file section of your DOS manual..

## **GOOD NEWS FOR KEYBOARD BUFFER AND COMBO CARTRIDGE USERS**

The jrExcellerator manual states when using either of these cartridges, you must manually install the FASTKEY program (Switch 7 off ). This is no longer the case. The "Auto-install" feature (switch 7 on) now works with the Keyboard Buffer and Combo Cartridges.

Also note, if you are using either the Keyboard Buffer or Combo Cartridge, you must enter the DISKSYNC command AFTER you enter the JRSYNC command.

Note that this procedure is different from the procedure in the jrExcellerator manual. The manual states you must manually install the FASTKEY software, and that the DISKSYNC command must be entered BEFORE the JRSYNC command.

Example: If you use the jrExcellerator along with the PC Enterprises Keyboard Buffer Cartridge, your AUTOEXEC.BAT file might look something like this:

```
FASTKEY  
JRSYNC  
JRSYNC47  
DISKSYNC  
FASTMEM
```

The *FASTKEY* command lets you change speeds with the PCjr's keyboard (Remember: If you have switch 7 set on, you will not need to enter this command. In this case, the FASTKEY program will be automatically installed).

The *JRSYNC* routine activates the feature that lets you type while the disk drive is operating.

*JRSYNC47* is the command that increases the buffer size from 15 to 47 characters. The use of this command is optional.

*DISKSYNC* enables the *JRSYNC* routine to work with the jrExcellerator.

*FASTMEM* fills up slow (internal) memory causing all programs you load to run in memory above 128K (which is much faster).

*Note: If you follow this procedure and receive the "47 character buffer out of range" message, it means you must add a line at the beginning of your CONFIG.SYS file. The line is DEVICE=JRSYNCD.D.SYS. Refer to the manual that came with your Keyboard Buffer or Combo Cartridge for more information.*

## **JRCONFIG USERS**

If the name of the program you use to recognize your PCjr's added memory is JRCONFIG.NRD or JRCONFIG.DSK, you can use the -Y option of the JRCONFIG program. Refer to the file named JRCONFIG.DOC, that came with your JRCONFIG program, to determine whether you need the -Y1, -Y2, or -Y3 option.

If you receive the message "slow memory already filled", it means you do not need to enter the FASTMEM command. However, doing so will not hurt anything.



## **RECOMMENDED INITIAL SWITCH SETTINGS**

The charts on the following pages describe the "Initial Switch Settings" recommended when you install your jrExcellerator for the first time.

The switch settings, which are optimum for your system, depend upon the brand of memory expansion product that you use.

Locate the chart that pertains to the memory expansion product you are currently using. To determine which memory expansion product you are using, inspect your memory sidecar for identification labels - or refer to the documentation that came with your memory sidecar.

The charts are referred to as "Initial Settings" because we cannot guarantee these settings will work with your memory board. Not all boards are exactly the same. If you happened to get a "slower than usual" memory board, you may need to deviate from the recommended settings. However, for the majority, the "Initial Switch Settings" will work perfectly.

## **IMPORTANT NOTICE FOR THOSE WHO HAVE HAD 128K SIDECARS UPGRADED TO 512K**

Most PCjr memory expansion sidecars, including most manufactured by IBM, Microsoft, AST, and Tecmar, were sold with only 128K. Today, many of these sidecars have been upgraded to 512K.

If you're using one of these expansions which have more than 128K, chances are someone replaced the original 64K memory chips with 256K chips. This upgrade will in no way adversely effect the performance, as long as the 256K chips installed were at least as fast as the 64K chips which were removed.

If you're unable to operate at the recommended settings, the first thing to check is the access time of your memory chips (located inside your sidcar). Normally, you'll need 150ns (-15) chips - or faster.

If your memory board uses 200ns (-20) or 250ns (-25) chips, you'll need to replace these slower chips with 150ns (or faster) chips in order to operate at the recommended Initial Switch Settings.

If your 128K memory expansion board was upgraded to 512K by PC Enterprises, you can be confident that the chips used are fast enough to work at the recommended settings. PC Enterprises has never used any chip slower than 150ns in any memory board upgrade.

<i>128K PCjr (No Memory Expansion)</i>		
SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	OFF	<b>FAST READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	OFF	<i>NOTE 3</i>

<i>PC Enterprises New jrSidecar Memory Expansion</i>		
SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	OFF	<b>FAST READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	OFF	<i>NOTE 3</i>

<i>Tecmar jrCaptain</i>		
SW 1	ON	<b>2 ADDED RAM WAIT STATES</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	ON	<b>NORMAL READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	OFF	<i>NOTE 3</i>

### *Microsoft Booster Memory Expansion*

SW 1	ON	<b>2 ADDED RAM WAIT STATES</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	OFF	<b>FAST READY</b>
SW 4	OFF	<b>DELAYED ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	OFF	<i>NOTE 3</i>

### *Quadram or Racore Expansion without DMA*

SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	ON	<b>NORMAL READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	OFF	<i>NOTE 3</i>

### *Racore Expansion with DMA*

SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	OFF	<b>1 ADDED ROM WAIT STATE</b>
SW 3	OFF	<b>FAST READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	ON	<b>PCJR MEMORY MODE</b>



<i>Quadram Expansion</i>		
<b>SW 1</b>	<b>OFF</b>	<b>1 ADDED RAM WAIT STATE</b>
<b>SW 2</b>	<b>OFF</b>	<b>1 ADDED ROM WAIT STATE</b>
<b>SW 3</b>	<b>OFF</b>	<b>FAST READY</b>
<b>SW 4</b>	<b>ON</b>	<b>NORMAL ALE</b>
<b>SW 5</b>	<b>OFF</b>	<b>MUST BE OFF</b>
<b>SW 6</b>	<b>OFF</b>	<i>Not Used</i>
<b>SW 7</b>	<b>ON</b>	<b>AUTOMATIC INSTALL</b>
<b>SW 8</b>	<b>ON</b>	<b>PCJR MEMORY MODE</b>

<i>AST jrCombo Expansion</i>		
<b>SW 1</b>	<b>OFF</b>	<b>1 ADDED RAM WAIT STATE</b>
<b>SW 2</b>	<b>ON</b>	<i>NOTE 1</i>
<b>SW 3</b>	<b>OFF</b>	<b>FAST READY</b>
<b>SW 4</b>	<b>ON</b>	<b>NORMAL ALE</b>
<b>SW 5</b>	<b>OFF</b>	<b>MUST BE OFF</b>
<b>SW 6</b>	<b>OFF</b>	<i>Not Used</i>
<b>SW 7</b>	<b>ON</b>	<i>NOTE 2</i>
<b>SW 8</b>	<b>ON</b>	<i>NOTE 3</i>

<i>IBM Memory Expansion</i>		
<b>SW 1</b>	<b>OFF</b>	<b>1 ADDED RAM WAIT STATE</b>
<b>SW 2</b>	<b>ON</b>	<i>NOTE 1</i>
<b>SW 3</b>	<b>OFF</b>	<b>FAST READY</b>
<b>SW 4</b>	<b>ON</b>	<b>NORMAL ALE</b>
<b>SW 5</b>	<b>OFF</b>	<b>MUST BE OFF</b>
<b>SW 6</b>	<b>OFF</b>	<i>Not Used</i>
<b>SW 7</b>	<b>ON</b>	<i>NOTE 2</i>
<b>SW 8</b>	<b>ON</b>	<i>NOTE 3</i>

<i>Impulse or MicroProducts Memory Expansion</i>		
SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	OFF	<b>FAST READY</b>
SW 4	OFF	<b>DELAYED ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	ON	<i>NOTE 3</i>

Important Note: If your memory board includes a printer port and clock, and you experience printer or clock malfunctions: set J2 (speed jumper) to the slow position; then switch to fast speed after DOS has started by executing the FASTSPD command.

<i>Cromley Expansion (modified IBM)</i>		
SW 1	OFF	<b>1 ADDED RAM WAIT STATE</b>
SW 2	ON	<i>NOTE 1</i>
SW 3	OFF	<b>FAST READY</b>
SW 4	ON	<b>NORMAL ALE</b>
SW 5	OFF	<b>MUST BE OFF</b>
SW 6	OFF	<i>Not Used</i>
SW 7	ON	<i>NOTE 2</i>
SW 8	ON	<i>NOTE 3</i>

NOTE- Contact PC Enterprises for a special EPROM designed to correct conflicts between this expansion board and the jrExcellerator.

## **NOTES**

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### **NOTE 1**

Switch 2 is the ROM wait state switch. PC Enterprises recommends this switch always be set to the ON position (2 added ROM wait states), except when using RACORE DMA.

### **NOTE 2**

Switch 7 is the Auto-install switch. PC Enterprises recommends this switch always be set to the ON position, which will automatically install the FASTKEY program. The only exception is when you suspect that you have encountered a compatibility problem.

### **NOTE 3**

Switch 8 is the PC/PCjr memory mode switch. This switch permits DOS to recognize all your added memory (up to 736K) without memory software.

PC Enterprises recommends all beginners operate in the PCjr memory mode - except in situations where you need, or find it convenient, to use the PC memory mode. Experienced users are also encouraged to operate in the PCjr memory mode, until they become familiar with exactly what this feature does.

If you do NOT intend to install the external switch, and you want to select the PCjr memory mode all the time, set switch 8 ON.

If you DO intend to install the external switch, set switch 8 OFF.

The reason we recommend using the PCjr memory mode, until you become more familiar with this feature, concerns software designed to take advantage of the PCjr's 16 color mode. This is often the case with game software, including most titles published by Sierra On-Line.

If you try to run one of these programs in the PC memory mode, the program may not run correctly unless you also have a Configuration Cartridge to fool the program into running (in four colors) as it would on a PC.

There are at least three common situations where you will almost certainly want to use the PC Memory mode. First, self booting programs that require more than 128K will not run unless you use the PC Memory Mode.

Second, the PC Memory Mode increases DOS memory by 16K - so any time you need more memory, the PC Memory Mode may solve your problems.

Third, there are times when you will start your computer only to find that the diskette you used to start DOS did not have software on it to recognize your added memory. When this happens, simply flip the external switch, then re-boot and you'll be able to use all of your PCjr's memory.