

## ...RapiDOS Features...

### DOS wedge on power up:

@ or > + [RET] gives error channel of active device.

@ or > with following give DOS commands:

\$ or \* = gives directory, one can follow standard CBM directory formats such as \$0:\*=SEQ; \$:FILE1,GAME?Z\*; etc.

8 and 9 = toggle active wedge device between 8 and 9. For higher device #'s poke location \$BA to the device #.  
A command can also follow the 8 or 9. Examples: @9\$0; >8N0:NAME,ID;  
>8"I0.

@ or > send DOS commands. Example: >S0:OLDFILE; >I0; @L0:GOODPROG (the 'L' command 'D' with RapiDOS Professional, toggles the file scratch protect bit, a new DOS command!); >I.

@ or > send DOS commands with special characters imbedded.  
Example: @"S0:AbCdE

@- = De-activate RapiDOS Professional super fast loader.

@+ = Activate RapiDOS Professional super fast loader.

Shift '-' + [RET] = clear memory. Fill memory from \$0400 to \$FFFF with "-" (\$2D).

Shift '+' + [RET] = soft reset. Reset the computer, the same as SYS 64738

### Keystroke commands on powerup:

[CTRL] = slow the screen scrolling, same as always.

Left [SHIFT] = stop screen scrolling.

[SHIFT LOCK] = lock the screen scrolling.

[CTRL] + [↵] = move the cursor to the bottom left hand corner of the screen.

[CTRL] + [CLR/HOME] = clear to end of screen.

[CTRL] + [INST/DEL] = clear to end of line.

[CTRL] + [+] = grab rest of screen line, to first quotation mark, and save in cassette buffer.

[CTRL] + [-] = print grabbed line on screen.

[CTRL] + [N] = switch to upper/lower case.

[CTRL] + [=] = switch to graphics/upper case.

[RUN/STOP] = escape quote/insert mode.

#### Programmed function keys on powerup:

[F1] = print [CLR/HOME] then LIST + [RET].

[F3] = print [CLR/HOME] then RUN + [RET].

[F5] = print LOAD + [RET], loads first file on disk.

[F7] = print [CLR/HOME] then >\$0 + [RET], gives directory.

[F2] = enter the IRQ-MON.

[F4] = disable wedge, keystroke commands, programmed keys, control character display, and base conversion.

[F6] = print SAVE "

[F8] = toggle printing >8 or >9 to switch active device and give error channel.

[SHIFT] or [COMMODORE] + [RUN/STOP] = LOAD + [RET] then RUN: + [RET]. Loads and runs the first file on the disk.

#### Screen Dump, always active:

[CTRL] + [\*] = prints the current text screen to a serial or parallel printer (device #4).

#### Features on cold Reset or computer turn on, hold down following key(s):

[COMMODORE] + [+] = sets up zero page, stack, BASIC & Kernal vectors, DOS wedge, and does a warm start keeping programs intact. This can be used with the [RESTORE] key as well.

[COMMODORE] + [SPACEBAR] = bypasses the auto-start cartridge sequence.

[COMMODORE] + left [SHIFT] = enters the IRQ-MON, continues reset after exit.

#### Base conversion:

Numbers preceded by a '\$' are converted to decimal (base 10) from hex (base 16). Examples: POKE \$D020,0, ?\$FF-128, X=\$0400+4\*\$100.

Numbers preceded by a '%' are converted to decimal from binary (base 2). Examples: POKE 55,(PEEK(55)AND%1010)OR%111011, ?%0011 1100.

Numbers preceded by a '&' are converted to decimal from octal (base 8). Example: ?&23\*&11/4.

Base conversion can be used in direct or in program mode.

RapiDOS Professional allows one to convert decimal to hex by using a wedge command (this cannot be used in program mode). Example:  
#32767 + [RET]  
= \$7FFF

### The IRQ/NMI monitor:

To enter it press [CMD] + left [SHIFT] during reset, press [F2] in direct mode, or press [CTRL] and hit [RESTORE].

The IRQ/NMI monitor lets you perform several commands:

M) Look at or modify memory. Examples:

M C000 + [RET] shows screen full of memory in hex and ascii beginning at \$C000.

M C000 A9 00 8D 00 10 + [RET] puts these bytes into memory at \$C000, then displays memory at \$C000.

CTRL + M lets you cursor around and change one line of hex memory.

X) Exits the monitor; if you are in the NMI-MON it will return where ever the computer left off.

G) Jumps to a machine language program. Example: G 2000 + [RET].

H) Convert hex number to decimal. Example: H 4000 + [RET] prints 16384, then displays memory at \$4000.

L) Loads a file. Example: L"ROUTINE" + [RET] does a non-relocating load, and does not affect BASIC pointers.

S) Save a section of memory. Example: S"MEM" 6000 8000 + [RET] saves memory from \$6000 to \$7FFF.

@) Accesses the built in DOS wedge; the same commands apply.

CLR/HOME shows memory starting at \$0000.

The IRQ/NMI monitor works in 'real time' and this enables you to watch registers being updated, zero page being changed, etc.

When you enter it, the NMI-MON shows the current program counter (before the NMI); locations \$AE and \$AF are used for this. This is great for debugging. It also resets the IRQ vector (\$0314,15), it is restored after exiting.

Entering the IRQ-MON with [F2] does not reset the IRQ vector so music or graphics driven on the IRQ continue operating.

### Default devices:

The disk drive is the default device for LOADs, SAVEs, and VERIFYs. On powerup this is device #8. Example:

LOAD "FILENAME" PRG

This will load the file from the active device, ignoring anything after the filename.

The secondary address defaults to 1, this makes all LOADs non-relocating. To do a relocating LOAD (load at \$0801 or current 'start of BASIC') use a ',8' after the filename.

Device number 4 is the default device for the OPEN command. The secondary address defaults to 7. Example:

OPEN1:CMD1:LIST

This will OPEN 1,4,7 and LIST the program in memory to that device.

Any attempt to access devices 1 (tape drive) or 2 (modem/rs-232) will give an 'illegal device error'.

### Loading/Saving conventions:

1. LOAD + [RET] = use the fast loader to load the first file on disk, don't relocate it.
2. LOAD "X" + [RET] = use the fast loader to load file "X" with no relocation.
3. LOAD "X",8 + [RET] = use the fast loader to load file "X" and relocate it to the start of BASIC.
4. LOAD "X",8,1 + [RET] = same as 2.
5. LOAD "X",8,2 + [RET] = same as 2, but don't use the fast loader... just use parallel.
6. LOAD "X",8,3 + [RET] = same as 5 but all the following loads do not use fast loader either. With RapiDOS Professional, one can use '@-' before loading to accomplish the same thing.
7. LOAD "X",8,4 + [RET] = same as 2 but 'end of BASIC' pointers are not changed.  
The next two options are valid with RapiDOS Professional only.
8. LOAD "X",8,0,xxxxxx + [RET] = where 'xxxxxx' is the start in memory to load the file (it can be in decimal or hex).
9. SAVE "X",8,0,xxxxxx,yyyyy + [RET] = where 'xxxxxx' is the start address of the save and 'yyyyy' is the end address plus 1.

Note: Any access of a non-parallel drive will default to the old slow serial routines.

#### Other RapiDOS features:

1. Will search for parallel printer and output to it (with ASCII conversion) if found. If not it will use a serial printer if present.
2. The fast loader will show the start and end addresses of the load. Example:  
LOADING FROM \$0801 TO \$3330
3. A new BASIC RND function using a much more random algorithm.
4. All keys repeat on powerup.
5. Smoother cursor control.
6. Works on 50hz machines.
7. Faster RAM test on powerup.
8. Shows special and control characters in directories and BASIC listings.
9. Notifies of error during SAVE command.

#### 1541 features:

1. Faster head step and new quick 'head-bang' helps reduce alignment problems.
2. Fast disk format command, 25 seconds with full data verification with RapiDOS and 18 seconds with RapiDOS Professional.
3. Motor-on disk seating when disk is inserted (not with RapiDOS Professional).
4. Faster GCR conversion routines that allow for quicker disk reading and writing. RapiDOS professional uses hardware methods when converting to and from GCR.
5. Checks if computer is parallel, if not defaults to slow serial routines.
6. Modified BAM update routines, helps stop save with replace problem (SAVE "@:FILENAME").
7. A new file 'scratch-protect' toggle command. Example: >L:NAME will lock this file (PRG<). Using it again will unlock it. Use >D: NAME with RapiDOS Professional.
8. Quick reset at powerup and after sending UJ command. Stops serial bus lockup.
9. File spooling capabilities from drive to parallel printer, bypassing computer.
10. Parallel port setup allows multiple drive use.

RapiDOS Professional extra DOS commands:

1. Change disk name and ID. Example: >DH:NEW NAME,DISK1 or DH:GAMES #1 the ID is not changed.
2. Lock/Unlock files. Example: >D:BACKUP FILE or D:\* to lock all files.
3. Format control. Example: >D4 will set the track limit to 40 tracks on the next format command. >D3 sets it back to the default 35 tracks.
4. Extend disk. Example: >DE will extend a 35 track disk to 40 tracks without altering the existing data. This gives 85 more blocks to use.
5. Verify Control. Example: >DN turns off write verify on file saving. >DY turns it back on.
6. Buffer Control. Example: >D- disables the full track RAM buffering to allow for greater compatibility. >D+ enables it again.
7. Save Control. Example: >DS- disables the fast save option. >DS+ enables it again.
8. Scratch & Validate. The standard scratch (S0:NAME) and validate (V0) will have greatly increased speed when the RAM buffer is ON.
9. Check RapiDOS Professional status. Example: >D? will give the status of the extra RapiDOS Professional features in the error channel. Example:

@D? + [RET]

@ + [RET]

0,0Y+3S+L+,0 <-- The drive status.

First two zeros mean all okay.

'Y' means save verify ON.

'+' means RAM track buffer ON.

'3' means 35 track mode.

'S+' means fast save ON.

'L+' means fast load ON.

The last zero also means all okay.

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[preliminary beta-test manual .1]