WILLY BYTE IN THE DIGITAL DIMENSION
Command Summary for Apple II, II+, IIe, IIc

TO START: Insert the disk in the drive with **SIDE TWO** facing up and then turn on your computer. Follow the on-screen prompts and flip the disk to side one when you're instructed to.

TO LEAVE DEMO: Press the **JOYSTICK BUTTON** or the **SPACE BAR**

TO SWITCH TO KEYBOARD CONTROL: Press **CONTROL K**

TO SWITCH TO JOYSTICK CONTROL: Press **CONTROL J**

TO EXIT POWER ROOM AT WILL: Press **CONTROL X**

TO RESTART GAME: Press **CONTROL R**

TO TURN SOUND ON/OFF: Press **CONTROL S**

PLAY COMMANDS
(FOR ALL ROOMS EXCEPT POWER)

KEYBOARD CONTROL		JOYSTICK CONTROL	
move left	J	move left	STICK LEFT
move right	L	move right	STICK RIGHT
move up	I	move up	STICK UP
move down	,	move down	STICK DOWN
jump/pick up tool	A	jump/pick up tool	BUTTON 0
drop tool	D	drop tool	BUTTON 1
stop	K	stop	HANDS OFF

POWER ROOM PLAY COMMANDS
(Willy can jump in eight directions in the POWER room.)

KEYBOARD CONTROL		JOYSTICK CONTROL
diagonally up and left	U	
up	I	
diagonally up and right	O	**TAP** BUTTON 0 to get started
left	J	
right	L	
diagonally down and left	M	Moving stick normally allows vertical,
down	.	horizontal, and diagonal jumps.
diagonally down and right	.	

SPECIAL FEATURES OF THE POWER ROOM

CTRL P (Program)—Allows you to construct your own pattern using hexadecimal code. Here's a brief description of how this works:

For each group of 4 power pads, 0 0 0 0, one value is given to denote which of those pads are present and which are not. In hexadecimal, we count from 0-15 using the standard decimals 0-9 followed by the six (hex) alpha characters, A-F.

This is how all possibilities for on-off variations of the four power pads can be represented using only **one** numeric place:

		X = OFF	0 = ON	
0 =	0 0 0 0	(ALL OFF)	8 = X 0 0 0	
1 =	0 0 0 X		9 = X 0 0 X	
2 =	0 0 X 0		A = X 0 X 0	
3 =	0 0 X X		B = X 0 X X	
4 =	0 X 0 0		C = X X 0 0	
5 =	0 X 0 X		D = X X 0 X	
6 =	0 X X 0		E = X X X 0	
7 =	0 X X X		F = X X X X	(ALL ON)

The row of numbers that appears across the top of the screen in Program mode shows the binary value for each vertical column of pads. Hexidecimal is just a faster, simpler way to represent binary patterns in two places, with the "1's" place representing the 8-4-2-1 pattern and the "10's" place representing the 80-40-20-10 pattern. Thus, by using both places together, you are able to control two congruous patterns of 4 at once, which is actually just one larger pattern of 8. This pattern of eight "on" or "off" pads symbolizes the same kind of organization as one byte (eight bits) of information inside the computer.

PRESSING **CTRL P** AGAIN RETURNS YOU TO GAME PLAY.

NOTE: IT IS POSSIBLE TO CONSTRUCT SITUATIONS WHICH ARE IMPOSSIBLE TO PLAY THROUGH. IF THIS OCCURS, PRESS CONTROL P AGAIN AND ENTER A MORE FEASIBLE PATTERN.

CTRL N — Allows you to move forward and backward (using > and <, respectively) to view and play higher (or lower) levels.

PRESSING **CTRL N** AGAIN RETURNS YOU TO GAME PLAY.

ASCII/HEXIDECIMAL/BINARY CONVERSION TABLE

ASCII	HEXADECIMAL	BINARY	ASCII	HEXADECIMAL	BINARY
SPACE	20	00100000	>	3E	00111110
!	21	00100001	?	3F	00111111
"	22	00100010	@	40	01000000
#	23	00100011	A	41	01000001
$	24	00100100	B	42	01000010
%	25	00100101	C	43	01000011
&	26	00100110	D	44	01000100
'	27	00100111	E	45	01000101
(	28	00101000	F	46	01000110
)	29	00101001	G	47	01000111
•	2A	00101010	H	48	01001000
+	2B	00101011	I	49	01001001
'	2C	00101100	J	4A	01001010
-	2D	00101101	K	4B	01001011
.	2E	00101110	L	4C	01001100
/	2F	00101111	M	4D	01001101
0	30	00110000	N	4E	01001110
1	31	00110001	O	4F	01001111
2	32	00110010	P	50	01010000
3	33	00110011	Q	51	01010001
4	34	00110100	R	52	01010010
5	35	00110101	S	53	01010011
6	36	00110110	T	54	01010100
7	37	00110111	U	55	01010101
8	38	00111000	V	56	01010110
9	39	00111001	W	57	01010111
:	3A	00111010	X	58	01011000
;	3B	00111011	Y	59	01011001
<	3C	00111100	Z	5A	01011010
=	3D	00111101	^	5E	01011110

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