DOS/65 for the *N8VEM* 6502 COLOSSUS

DOS/65 IS A PRODUCT OF
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http://www.z80.eu/dos65.html

CONVERSION FOR THE N8VEM
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I. REQUIRED FOR OPERATION

- 6x0x Colossus board*
- PC Connected to serial port (P31) of 6x0x Colossus
- SD card (>32mb)

*Early versions of this board require fixes to function properly. Refer to the N8VEM WIKI for details.

II. BRINGING UP THE SYSTEM

1> Program the R52PPP.BIN rom image on to EPROM or EEPROM

The Rom Commands are as follows:

REGISTER	Print Processor Registers
DUMP XXXX YYYY	Dump memory from xxxx (in hex) to yyyy (in hex)
ENTER XXXX YY	Change Memory byte at location xxxx (in hex) to value yy
GO XXXX	Transfer execution to location xxxx (in hex)
LOAD	Load a Motorola format image
BOOT X	Load DOS/65 image from device X and boot it

- 0= SD CARD
- 1= FLOPPY
- 4= IDE

The following two commands are optional:

ASSEMBLE XXXX	Assemble a 6502 program from the console to location XXXX
DISASSEMBLE XXXX	Disassemble a 6502 program from location XXXX to the console

Note that optional commands and Floppy/IDE support may not be included in the Quick Start Image, to use optional features, download the latest DOS/65 source package from the N8VEM wiki.

2> Program the ParPortProp.eeprom rom image to the P.P.P. (ParPortProp) board

3> Power on system (should see 6502 monitor prompt on PPP)

4> Install second stage loader onto SD Card

On the P.P.P. "." prompt type:

```
LOAD
```

The P.P.P prompt will appear to freeze, but it is actually waiting for a Motorola "S19" file to be sent to the serial port from your PC. From a terminal program on your PC (9600 baud, 8 bit, no stop bit, no parity), do a file dump of the "PPPboot.S19". You may need to tell your terminal program to insert a delay between characters and between lines in order to ensure that you do not send the characters too quickly. On my TeraTerm, 5ms between characters and 10ms between lines seems to work out about right. If the file transfer is working normally, you should see the s19 file echoed to your pc terminal window. You should not see any "?" characters in the stream, if you do, there was a checksum error and you need to increase your delay settings. When the transfer is complete the P.P.P screen should return to the "." Prompt.

On the P.P.P. "." prompt type:

```
GO 0300
```

This will run the program and copy the second stage boot loader to the SD card inserted in the P.P.P.

5> Install DOS/65 onto the SD Card

Following the same process as step 4, load the following software
On the P.P.P. "." prompt type:

```
LOAD
```

Dump dos65.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "." prompt type:

```
LOAD
```

Dump pppwros.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "." prompt type:

```
GO 0800
```

This will load DOS/65 to the boot track of the SD card.

6> Boot DOS/65

At the P.P.P. "." prompt type:

```
BOOT 0
```

7> Clear SD directory track

At the P.P.P. "A>" prompt type:

```
ERA A:*.*
```

At the P.P.P. "ALL FILES(Y/N)" prompt type:

```
Y
```

The system will think for a bit -- the SD card is defined with a VERY large directory area so this will take some time. It is possible to speed SD disk access up by changing the number of directory sectors in the SIM. See the DOS/65 guides for more details.

8> Load file transfer utility

On the P.P.P. "A>" prompt type:

```
GO $FFDD
```

Dump S19.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "A>" prompt type:

```
SAVE 1 A:S19.COM
```

CONGRATULATIONS! You have just saved your first utility to the DOS/65 disk!

9> Load DBASIC

On the P.P.P. "A>" prompt type:

```
S19
```

Dump DBASIC.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "A>" prompt type:

```
SAVE 43 A:DBASIC.COM
```

* note: A new command was added to DBASIC that is not in the docs
  KILL – will return to DOS/65 from DBASIC

10>Load ALLOC

On the P.P.P. "A>" prompt type:

```
S19
```

Dump ALLOC203.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "A>" prompt type:

```
SAVE 2 A:ALLOC.COM
```

11>Load Asm

On the P.P.P. "A>" prompt type:

```
S19
```

Dump ASM211.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "A>" prompt type:

```
SAVE 39 A:ASM.COM
```

12>Load COMPL

On the P.P.P. "A>" prompt type:

```
S19
```

Dump COMPL203.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. "A>" prompt type:

```
SAVE 42 A:COMPL.COM
```

13>Load COMPR

On the P.P.P. “A>” prompt type:

```
S19
```

Dump COMPR202.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 12 A:COMPR.COM
```

14>Load COPY

On the P.P.P. “A>” prompt type:

```
S19
```

Dump COPY201.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 3 A:COPY.COM
```

15>Load EDIT

On the P.P.P. “A>” prompt type:

```
S19
```

Dump EDIT203.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 28 A:EDIT.COM
```

16>Load MKCOM

On the P.P.P. “A>” prompt type:

```
S19
```

Dump MKCOM202.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 5 A:MKCOM.COM
```

17>load MONITOR

On the P.P.P. “A>” prompt type:

```
S19
```

Dump MONITOR.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 1 A:MONITOR.COM
```

18>Load RUN

On the P.P.P. “A>” prompt type:

```
S19
```

Dump RUN205.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 43 A:RUN.COM
```

19>Load DEBUG

On the P.P.P. “A>” prompt type:

```
S19
```

Dump DEBUG202.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 14 A:DEBUG.COM
```

20>Load RTC

On the P.P.P. “A>” prompt type:

```
S19
```

Dump RTC.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 8 A:RTC.COM
```

21>Load FORMAT

On the P.P.P. “A>” prompt type:

```
S19
```

Dump FORMAT.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 12 A:FORMAT.COM
```

22>Load SYSGEN

On the P.P.P. “A>” prompt type:

```
S19
```

Dump SYSGEN.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 23 A:SYSGEN.COM
```

23>Load SEDIT

On the P.P.P. “A>” prompt type:

```
S19
```

Dump SEDIT.S19 to serial port from your PC terminal program, wait for the P.P.P to return to the prompt when the load is complete.

On the P.P.P. “A>” prompt type:

```
SAVE 16 A:SEDIT.COM
```