SWTPC OS9 Installation Information

VERY IMPORTANT - The floppy controller "ready mode" must be set to 6800. If you fail to configure the floppy controller for 6800 ready mode, the drive may give error 246 (Not Ready) and may have read and write errors.
   You will need to change this jumper back to 6809 mode to use FLEX.

This OS9 Boot disk is on an 80 track image. It is bootable in a GoTek. Should you have the means to transfer the image to an 80 track floppy you may boot it from a real floppy. This image contains the standard OS9 utilities. It also contains BASIC09, C and the source code for the boot ROM and drivers. The use of this source is not necessary since a binary image of the boot ROM is available for download.

This disk is almost completely filled so to do anything useful you will need either a second floppy or a hard drive.

 It is strongly suggested to use the PT-SS30-IDE board and an SD/IDE adapter board rather than trying to work with a second floppy. SD/IDE adapters sell for around $15 on AMAZON, and SD memory cards can be purchased for around $12 for 2. We suggest using SDs of no less than 32GB in capacity.

Device descriptors for this boot disk:

/dd - default device - on this boot disk it is a floppy. On the SD card it will be the HD device.
/d0 - 80 track floppy
/d1 - 80 track floppy
/h0 - the default size is 322,580 sectors about 85MB. Up to 4GB can be formatted.
/h1 - the default size is 322,580 sectors about 85MB. Up to 4GB can be formatted.
/h2 - the default size is 322,580 sectors about 85MB. Up to 4GB can be formatted.
/h3 - the default size is 322,580 sectors about 85MB. Up to 4GB can be formatted.

/term - serial terminal at $E004
/T1 - serial - $E000

/p - parallel printer - slot 7
/p1 - serial printer - $E000

The clock module on this disk has been rewritten to use BCD mode for the MC146818. Formerly the mode was set for binary mode, and this caused the date and time to be lost when switching between OS9 and FLEX.

/h0, /h1, /h2 and /h3 refer to different partitions on the same SD memory card.
At this point read the "quick start instructions" for the SS30-IDE board. Plug the SD/IDE adapter into the SS30-IDE. The quick start instructions assume that you have a pre-loaded SD memory card so you won't be able to boot either FLEX or OS9 until you transfer OS9 to the SD Card. The quick start instructions explain how FLEX and OS9 are stored on the SD memory card.

Transferring OS9 to SD Memory Card

1) Place a 32GB or larger SD memory card in the SD/IDE adapter. A 32GB will support 3 OS9 partitions; a 64GB will support 7 OS9 partitions.

2) Turn power on and boot OS9 . In several seconds you should be prompted to enter the date and time.

```
Please enter the date and time

        yy/mm/dd hh:mm:ss
Time ?
```

3) Enter the following commands: User input is in RED.

```
OS9:format /h0

          OS-9 Disk Format Utility

           TABLE OF FORMAT VARIABLES

          Number of Cylinders:      5
           Number of Surfaces:    254
      Sector Interleave Offset:     24


                    Disk type:  HARD
               Sectors/Track:    254

Formatting drive /h0
y (yes), n (no), or q (quit)
Ready?   y
Both PHYSICAL and LOGICAL format? n
Disk name: OS9/PT69-5
Physical Verify desired? n

Number of good sectors: $00EC14

OS9:
```
 (It will take a few minutes for the SD to format before giving the OS9 prompt)

Enter the command below to transfer OS9 to the SD Memory card.

OS9:xfersd

The xfersd file is a script file containing several OS9 commands. The file takes about 10 minutes to run. When the "xfersd" file completes you should have a bootable SD card. Remove the USB drive from the GoTek and press your reset button. In a few seconds your computer should boot from the SD memory card. You should get the same prompt you got when booting from the floppy.

It is possible to add either files or partitions to the SD Memory card on your Windows PC. Download "Floppy Maintenance" from this website - http://www.swtpcemu.com/swtpc/Downloads.htm

It will allow you to extract a partition and add files to it. The partition can be rewritten to the SD memory card when you are finished.

Assuming you have installed a battery for your SS30-146818 clock board you don't need to enter the date and time every time you start OS9.   Only the first time do you need to enter the date and time to set the onboard clock. Afterwards when the "Time" prompt is shown, just press the "ENTER" key; and the date and time is read from the MC146818 clock chip. If you enter the command "today" the date and time of the clock will be displayed. OS9 does not read the clock chip to determine the time after booting. The date and time is only read at startup to set a software clock. OS9 keeps time by using a software clock.