

FLEX Installation to SD - SWTPC

This FLEX 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 FLEX utilities. It also contains several versions of BASIC, the Intral C Compiler and numerous other utilities. The source code for FORMAT, NEWDISK, SET6818 is also contained on the boot disk. If you have an SBUG/OS9 dual boot select the SBUG position.

Insert an SD memory card in the SD/IDE adapter and power-up your computer. You must have the SD memory card inserted before turning your computer on. The SD system does not support hot swap.

Boot FLEX from a GoTek or floppy using the "U" command. This version of FLEX reads the date from the SS30-146818 clock board. If you don't have the clock board you will need to use the DATE command to set the date. If you have the clock board run the command SET6818 using the following format to set the date and time. On first power up the clock will have garbage for the date and time. You should also install a CR123a battery in your SS30-146818 so you don't need to re-enter the date and time every time you start your computer.

SET6818 [hh:mm:ss dow mm-dd-yy [ap]]

dow = mon, tue, wed, thu, fri, sat or sun

If you are planning to use OS9 it is suggested that you use 24 hour format.

DATE [<month,year,day>] Use this command if you don't have a clock.

Press "U". It should take about 5 seconds for your computer to boot. Your screen should look like this: User input is in red.

```
S-BUG 1.82 - 56K
```

```
>u  
6809 FLEX V3.01
```

```
15:28:28 Sat 05-18-24 hr
```

```
+++
```

On boot from GoTek/floppy these will be the FLEX drive assignments:

- 0 - Floppy
- 1 - SD - Partition 0
- 2 - SD - Partition 1
- 3 - SD - Partition 2

It is necessary to format the SD memory card before you can use it. Enter the command below. User input is in red.

```
+++format 1

Hard Disk Format V2.1
SWTPC IDE SLOT 6
Peripheral Technology 2024

Do You Wish to Continue ? y
Number of Cylinders ? 256
Volume Name ? SWTPC.FLEX
Volume Number ? 0

Drive Descriptor - Drive 01

Disk   = Hard Disk
Offset = 0

Formatting Options

1 = FLEX Format
2 = Abort

Select Option ? 1
Flex Sector Linking
01
```

The number at the end will increment as the format program runs; each number represents 256 sectors being prepared for use. When formatting completes you will get the following message:

```
INITIALIZE DIRECTORY AND FREE SPACE CHAIN

FORMATTING COMPLETE !
+++
```

Now you will copy the contents of the GoTek/floppy to the SD:

```
+++COPY 0 1

0.STARTUP .TXT TO DRIVE #1   COPIED
0.ERRORS  .SYS TO DRIVE #1   COPIED
0.FLEX    .FLP TO DRIVE #1   COPIED
```

There will be a long list of files as they are copied to the SD memory card.

Now enter

```
+++LINK 1.FLEX3.IDE
```

This completes the copying of the GoTek image to the SD. You are ready to boot from the SD card. You can enter the "MON" command or press your reset button and boot from SD.

```
+++mon
S-BUG 1.82 - 56K

>w
6809 FLEX V3.01

15:42:09 Sat 05-18-24 hr

+++
```

Your FLEX drive assignments are now.

```
0 - SD - Partition 0
1 - SD - Partition 1
2 - Floppy/GoTek
3 - SD - Partition 3
```

You can format other partitions and copy other GoTek images to your SD Memory card. Preloaded SD memory cards from Peripheral Technology have the SD Basic Compiler on Partition 1, and Partition 2 is formatted and ready to use.

The utility "DRIVES" will allow you to change the assignments of partitions to FLEX drive numbers. "DRIVES" with no parameters will give you the current drive assignment.

```
+++DRIVES
drive 0: type = win drive number = 0 partition = 0
drive 1: type = win drive number = 0 partition = 1
drive 2: type = flp drive number = 0
drive 3: type = win drive number = 0 partition = 2
+++
```

You can change the assignment of drives to FLEX with the "DRIVES" command.

command line format:

report current settings

drives<cr>

hard drive assignments have 4 parameters

drive n t d p n = logical drive
 t = type W or F
 d = physical strapped drive (0=Master,1=Slave)
 p = partition on hard drive(0-255)

floppy drive assignments have 3 parameters

drive n t d n = logical drive
 t = type W or F
 d = physical strapped drive (0-3)

```
+++DRIVES 3 F 1        - will set drive number 3 to a floppy with floppy select of 1.
+++DRIVES 3 W 0 4     - will set drive number 3 to the SD card - Drive 0 - (Master) - Partition 4.
+++DRIVES 2 W 0 99    - will set drive number 2 to the SD card - partition 99.
```

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>

Floppy Maintenance 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.

The format on the SD card used by FLEX and OS9 is not PC compatible. You cannot use a PC to directly read or write to the SD card using the PC file system. There are utilities to allow for reading and writing raw sectors to the SD memory card by a PC. One program is Win32DiskImager. It is a free program and is available here -

<https://win32diskimager.org/>

This will allow you to backup you SD memory Card to your PC and/or restore it.

Sources for FLEX/OS9 Disks

You can access many disk images for FLEX and OS9 from this site.

<http://ftp.flexusergroup.com:8080> Login ID - flexuser Pass - flex

<http://www.swtpcemu.com/swtpc/Downloads.htm> - Other downloads here.