

CP/M for a Poly-88 Computer with a Micropolis Floppy Disk Controller

The target Poly-88 computer uses the same Micropolis floppy controller used in the Vector Graphic MZ computer. This makes CP/M for the MZ a good starting point for creating CP/M for this Poly-88.

The Vector Graphic branded CP/M uses Z80 opcodes in its BIOS, so it cannot be used with the Poly-88's 8080 processor. However, Lifeboat CP/M for the MZ does not use Z80 opcodes. The disk drives used with this Poly-88 are Micropolis MOD-I drives with 35 tracks. Lifeboat CP/M for the Vector Graphic MZ expects MOD-II drives with 77 tracks, so some disk parameters must be patched.

Lifeboat CP/M allows the end user to create custom serial I/O routines for the console, punch, reader and printer without having to modify the CP/M BIOS. 512 bytes of space is provided for custom drivers. The file "USER.ASM" provided by Lifeboat is a sample of a custom driver file. The file "POLYIO.ASM" is the custom serial driver file for the target Poly-88. The CP/M memory size equate in the driver file must be set properly so that the file assembles at the appropriate address for patching into the CP/M image prior to SYSGEN.

Listed below are the patches that must be applied. The command file PATCH.SUB automates application of these patches to a CP/M image file created with MOVCPM. See PATCH.SUB for more information.

Patch the maximum track number for each drive from 4C to 22 (76 to 34). This is a Lifeboat specific table used during a cold boot to patch the CP/M Drive Parameter Table.

In memory of 56K CP/M	Sysgen Ready In DDT	In Disk Image File	Original Value	New Value
D9FA	25FA	1683	4C	22
D9FB	25FB	1684	4C	22
D9FC	25FC	1685	4C	22
D9FD	25FD	1686	4C	22

Set the 0x10 bit in the Lifeboat MODE BYTE. When this bit is set, interrupts are re-enabled after disk I/O operations in the BIOS.

In memory of 56K CP/M	Sysgen Ready In DDT	In Disk Image File	Original Value	New Value
D9FF	25FF	1688	C0	D0

Patch the drive size that the Lifeboat BIOS copies during cold boot from its own table into the CP/M Drive Parameter Table. Value was 66 blocks of 2048 byte. Use 132 blocks of 1024 bytes instead.

In memory of 56K CP/M	Sysgen Ready In DDT	In Disk Image File	Original Value	New Value
DC45	2845	1F79	41	83

Patch BSH and BLM for 1024 byte blocks and DRM for 64 directory entries. These values are patched directly into the CP/M Disk Parameter Table as these parameters are not modified by the Lifeboat BIOS during cold start.

In memory of 56K CP/M	Sysgen Ready In DDT	In Disk Image File	Original Value	New Value
DC97	2897	1FCB	04	03
DC98	2898	1FCC	0F	07
DC9C	289C	1FDO	7F	3F

Move the assembled custom serial I/O driver (POLYIO) into the 512 byte patch area provided by Lifeboat.

In memory of 56K CP/M	Sysgen Ready In DDT	In Disk Image File	Original Value	New Value
DA00-DBFF	2600-27FF	--	--	--