

PC2Flop and Flop2PC (Micropolis Controller)

PC2Flop writes a Micropolis 330K floppy disk with a disk image transmitted from a PC. Flop2PC saves an image of a Micropolis 330K floppy disk to a PC. The disk image is transferred through serial port A or B on a Bitstreamer II, or through serial port A on the ZCB Z-80 CPU board. The XMODEM CRC or checksum protocol is used for the transfer. The image is read or written directly from/to the floppy in raw format (270 bytes per sector, 16 sectors per track, 77 tracks). Numerous disk images are available in the "Disk Images" directory.

These programs run standalone at 0x100 or under CP/M. Any type of disk (e.g., MDOS or other O/S) can be read or written even if running under CP/M. The program works with a serial port or Flashwriter based console, however, one of the serial ports listed above must be present in the system. A 56K computer configuration is required (i.e., Monitor 4.x at E000 and the Micropolis FDC at F800).

Standalone operation may be required to create a bootable disk (e.g., CP/M) when no other bootable disk is available. Use the monitor's P (program) command to type in the hex bytes of the program listed in LOADER.PRN. Execute the loader by running from zero (G 0000). Send the program PC2FLOP.COM through port B on the Bitstreamer II (port A on the ZCB). After transmission is complete, reset the computer and run PC2FLOP at address 100h by typing G 0100.

As an alternative, an Intel hex loader ROM at EC00 (the printer ROM location) is available as HEXLOAD.HEX in the "ROMs" directory for Vector Graphic .

When copying a disk image to the PC (Flop2PC), the program attempts several retries, including restoring the track both from zero and from past the current track. If the read still fails, the error is noted and the copy process continues so that the remainder of the disk can still be recovered.

The disk image format matches the Vector Graphic Image (VGI) format defined by Howard Harte for his VG work on the Simh emulator. Each sector in the PC file is 275 bytes in length, organized as follows:

Length	Content
1	Sync byte (always 0xff)
1	Track number (0-76)
1	Sector number (0-15)
266	Sector data payload (CP/M uses last 256 bytes of this)
1	Checksum
4	ECC for HD-FD controller (not used by floppy)
1	ECC valid flag (not used by floppy)