# Micropolis S-100 Documentation List

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**Micropolis**

Micropolis was an early manufacturer of floppy drives and of floppy drive controllers. They produced a 5.25-inch drive with track spacing of 100 tracks per inch (100 TPI) which preceded the later standard of 96 TPI. They also built microcomputer systems and hard drives. In the 1980's and 90's they primarily produced hard drives.

They developed an S-100 floppy disk controller and offered their own operating systems: MDOS and a disk-drive based "extended BASIC". Several companies offered such products in the mid and late 1970's, including Digital Research's CP/M which became dominant in the S-100 and Z80 world.

S-100 company [Vector Graphic](http://retrotechnology.com/herbs_stuff/d_vector.html) used Micropolis products and drives, before developing their own controller, operating systems, and later CP/M. Check my Vector Graphic Web page for more information.

In 2007-8, Andrew Lynch and others have discussed with me, the Tandon TM-100-4M drives and other drive brands used by Vector Graphic. These drives are 80-track (or used as 77-track); but the tracks are spaced at 100 TPI, not the standard 96 TPI used by other 80-track drives. For more information and discussion, [here's some notes and photos I did;](http://retrotechnology.com/herbs_stuff/tandon_TM100.html) and [here's some of that discussion.](http://retrotechnology.com/herbs_stuff/tandon_commodore_stein.txt) The discussion includes possible use of Commodore model external floppy drives as 100TPI drives, after replacing the Commodore electronics. From some of that discussion, and from my own Web searching, I came across some Web sites with more info about Commodore's use of Tandon and Micropolis 100TPI drives. [Here's my notes and some Web links.](http://retrotechnology.com/herbs_stuff/8050_8250_notes.txt)

Thanks to my colleagues Bill Degnan and Dan Roganti in 2008, for discussions and manuals from Micropolis on their floppy drives. Dan provided a manual on MDOS, Micropolis' Disk Operating System as well their various BASIC products.

Micropolis documents

Micropolis Floppy Disk Subsystems, binder, Maintenance Manual 1084-02, rev 1 1979

Drive number-pairs below are master drive (slave drive)

1057 (1037); dual drive 35 track 48 TPI 143KB per drive w/AC supply

1053 (1033) Mod II; dual drive 77 track 100 TPI 315KB per drive w/AC supply

1041 (1021) Mod I; single drive 35 track 48 TPI 143KB no AC power supply

1041 (1021) Mod II; single drive 77 track 100 TPI 315KB no AC power supply

1042 (1022) Mod I; single drive 35 track 48 TPI 143KB w/AC supply

1043 (1023) Mod II; single drive 77 track 100 TPI 315KB w/ AC supply

100085, 100086 & 100087, S-100 floppy controller 1071 "B" model 4/1977)

100070, 100071, 10072, floppy drive single "A" card (7/1977)

100163, 100164, floppy drive single "B" card (5/1978)

100059, 100060, 100061 floppy drive dual "A" card (12/1977)

pages for s-100 controller distributed thruout binder

Maintenance Manual by chapters:

index & intro, 10 pgs

General info 7 pgs

Installation & operation 16 pgs

Theory 44 pgs

test and adjust 22 pgs

Troubleshooting 7 pgs

Parts removal replacement 22 pgs

parts 2 pgs

Diagnostic test pgm 4 pgs (commands only)

Schematics & layouts, counts for 11 X 17 inch pages

100060 & 100061, 10 pgs (dual A disk board 100060)

operates both drives in dual cabinet

100071 & 100072, 10 pgs (single A disk board 100070, 100071)

100163 & 100164, 10 pgs (single B disk board 100063)

upgrade to single A, supports double sided

boards 100163-51-8 and -52-6 are GCR, others are MFM

100085, 100086 & 100087, 1071 "FD Control B" (S-100 floppy controller), 11 pgs M-

MDOS (Micropolis Disk Operating System)

M-DOS System ver 8.5, User's Guide Rev b, 1979, 56Kb systems

INtroduction, index - 22 pgs

General Info - 13 pgs

Installation, peripherals, disks - 24 pgs

Startup and operations - 6 pgs

MDOS (MIcropolis DOS) - 42 pgs, rev 7

Lineedit - 12 pgs

ZSM assembler - 12 pgs

utilities - 26 pgs

Micropolis BASIC - 50 pgs

Disk File I/O - 26 pgs

Disk subsystem theory - 40 pgs w/sources

Appendices - about 60 pgs. References all the above.

MDOS and MBASIC quick reference sheet, 2 pgs (refers to MDOS section above)

Micropolis 1040/1050 S-100 Floppy Disk Subsystems User's Manual

revision 7 March 1978, with revision 8 of Dec 1978 included

350 pages of documents on Micropolis Disk Extended BASIC 2.0, PDS 3.0,

and MDOS and its programs (Assembler, editor, etc)

also brief discussion of drives: 1053 1033, 1043 1023, 1041 1021,

and 1071 controller. Also several pages on disk format.

some source code, a few dozen pages.

Micropolis Disk Controller Board manual (by Vector), rev A 1980, 50 pgs

5 by 10 inch circuit board

also Technical Advisory, Feb 1981, rev 0 to rev 1 update, 5 pgs

also Technical Advisory, Feb 1981, rev 1 modifications

Micropolis 1040/1015 S-100 Floppy Disk Subsystems User's Manual, 100089-01, 348 pages

Revision 7 March 1978 + Revision 8 Dec 1978 documents

physical descriptions of following drives:

1053 1033 1043 1023 1041 1021, and 1071 controller

descriptions, installation of MDOS and Micropolis Disk Extended BASIC

hardware installation, drive and controller configuration

MDOS manual, features and programming, MDOS software tools

Micropolis Disk Extended BASIC manual, similar

Micropolis News #3, Jan 29 1979 newsletter, 44 pages

programming hints, third-party MDOS products,

notes & code on transferring programs and files from non-MDOS OS's

assembly code on "sort" program

User manual revision 8 errata

Micropolis Microdisk Maintenance manual for 8-inch hard drive, year 1982, hundreds of pages.

Printed by Micropolis, this binder has maintenance, installation,

theory, flowcharts, and MANY double-width schematics and parts layouts.

for 1201, 1202, 1203; 1221, 1222, 1223 models .

NOT for 1251, 1252, 1253 (drive w/ enclosure and AC supply)

NOT for 1261, 1262, 1263 (drive w/ enclosure, AC supply, and EPM Controller)

NOT for OSM100-H (S-100 card interface for drive)

page counts and chapters are:

24 ch 1 General Info

20 ch 2 Installation

160 ch 3 Theory of operation

4 ch 4 Tests and adjustments

6 ch 5 Troubleshooting (use of fault monitor only)

10 ch 6 Removal and replacment procedures

10 ch 7 parts lists

90 ch 8 Circuit board layouts and schematics (2-page spreads)

42 ch 9 1220 System Level operation

88 ch 10 Micropolis EPM controller theory of operation (2-page)

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454 pages (double width pages count as 2 pages)