



AVAL

PORTABLE ALL-IN-ONE COMPUTER

CP/M[®] *machine that goes into a suitcase.*

Version 2.2

With the sharply increased demands and more versatile applications, even higher performance and greater compactness are increasingly being required of microcomputers. To answer such demands, Toyo Telesonics Co., Ltd. has Successfully developed the AVC-777, the world's smallest CP/M[®] based microcomputer.

The AVC-777 is so compact that it will fit into a special portable carrying case.

Standard-equipped with numerous interfaces,

The AVC-777 microcomputer is amazingly versatile and is ideal not only for professional use in the field of software development because of its superb expandability, but also for measurement, data processing or as a portable intelligent terminal at factory, office or store.

The World's Smallest all-in-one CP/M[®] Machine

A compact unit measuring only 365 (W) x 375 (D) x 122 (H)mm, excluding the keyboard unit. It weighs only 11 kg,



enabling any adult to carry it with one hand. 5" CRT, 5" floppy, 5" thermal printer and other interface devices are all built in this compact unit.

With the optional inverter AVS-150, it can be powered by an automobile battery.

"The Software BUS" CP/M[®] based Software

The reduced cost of computer hardware has put computers within everyone's reach. The biggest problem today is the software development cost and the time required for such development. One of the solutions to this problem is the world's industry standard floppy disk operating system CP/M[®], developed by Digital Research Inc., with this world-famous software, AVC-777 can maximize its capability.

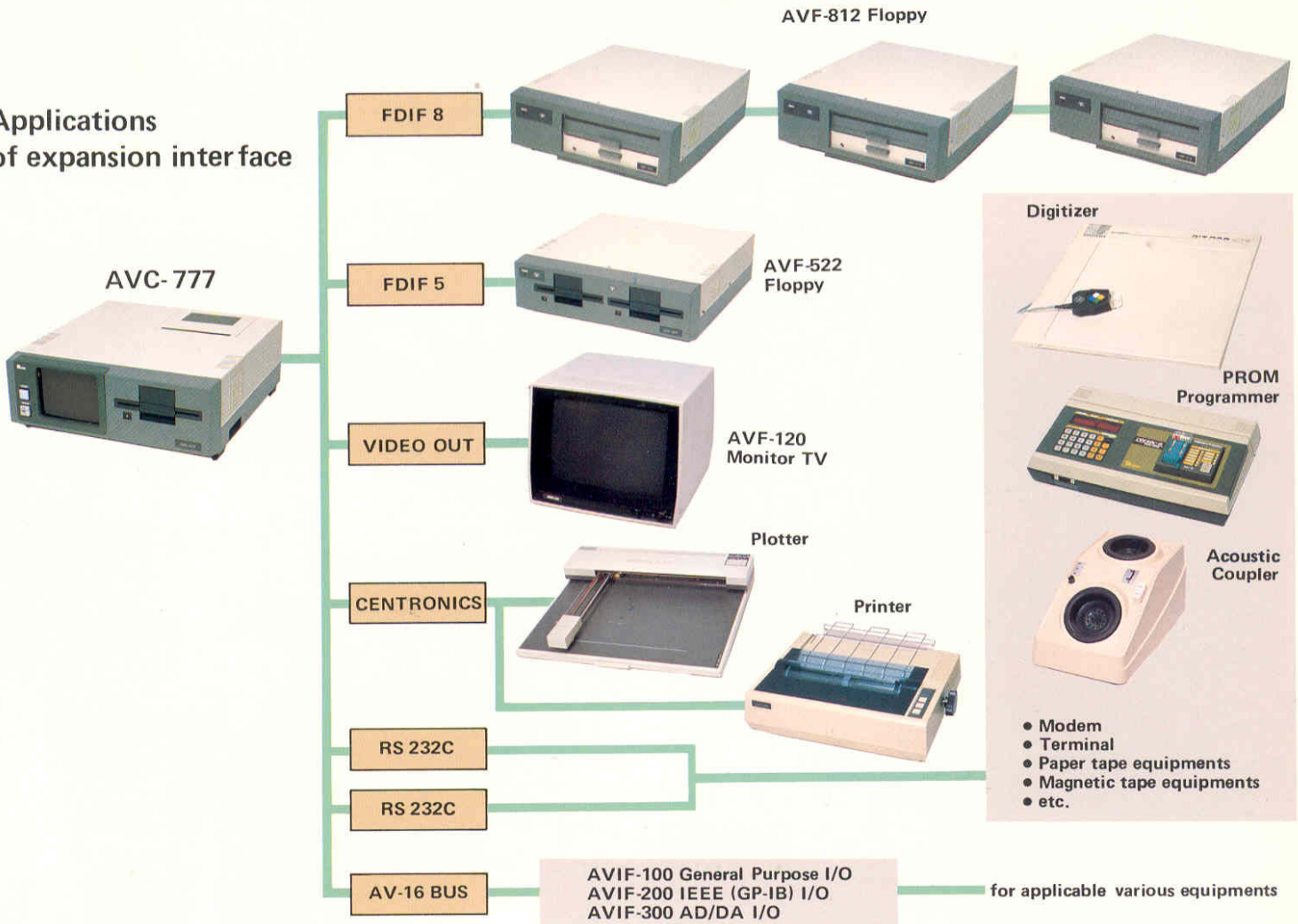


Excellent Expandability

The AVC-777 is an all-in-one microcomputer and is ideal for use anywhere. The built-in peripherals, controller and interfaces permit upgrading of the system. Thanks to the highly versatile peripherals, any system configuration is made possible to match applications in every field.



Applications of expansion interface



Interface with AVAL PROM Programmers.

The interface program for **AVAL** brand PROM programmers is delivered as the standard. This makes it possible to directly program from AVC-777 to **AVAL** PROM programmers. Also features powerful debugging function. Excellent performance as a development tool.



Sophistication Throughout

- **CPU**
Z80A CPU (4MHz)
- **Main Memory**
64K BYTE (64K bit D-RAM)
- **Video Memory**
16K BYTE (16K bit D-RAM)
- **Monitor**
3 display modes (80 charx24 lines,

73x24, 40x24) are available.
5" high-resolution CRT capable of displaying 2,000 characters. Two graphic modes: 512 x 220 and 311 x 220 dots in addition to character modes.

- **Thermal Printer**
Built-in 5" thermal printer. In addition to ordinary character print, it can produce a hard copy of screen image from CRT monitors. This adds another capability to the AVC-777's applications.
- **Floppy Disk**
5" double-sided, double-density mini-floppy with 250K BYTE storage capacity when formatted. Expandable up to 2M BYTE with optional floppy disk units.

A Choice of 3 Different Keyboards



The separate keyboards are all designed on the basis of human engineering, and provide excellent operation.



- **AVK-100**
Extremely thin, lightweight, flat, standard type with 66 keys. Most suitable for portable machine.
- **AVK-200**
Same 66-key typewriter quality standard unit as AVK-100. Provides better operational capabilities.
- **AVK-250**
Standard key specification and 15 independent function keys. Typewriter-quality keyboard with 20-key including numeric pad. Suitable for business use.



● CPU	CPU Clock RAM Bootstrap ROM	Z80A 4MHz 64K BYTE 2K BYTE
● CRT	CRT Fluorescence Display modes	5.5" P31 Character mode 1: 80 characters x 24 lines (5x7 matrix) Character mode 2: 73 char. x 24 lines (5x7 matrix) Character mode 3: 40 char. x 24 lines (5x7 matrix) Graphic mode 1: 512x220 dots Graphic mode 2: 311x220 dots
● Printer	Printer Print mode Print speed Form	5" thermal printer Character mode 1: 80 char./line Character mode 2: 73 char./line Character mode 3: 40 char./line Graphic modes 1, 2: hard copy 0.4 line/sec. Thermal form 127mmx50mm
● Floppy	Floppy disk Model Capacity	5" mini-floppy FD-274D (double-sided, double-density) 250K BYTE (formatted)
● Keyboard	Separate Key arrangement Key (max.)	ASCII 66
● Interface	RS-232C Centronics Video output signal Interface for expansion floppy disk	2 ports (one port can switch to TTL level.) 1 port 1 Vp-p 75 ohm AVF-522 AVF-812 (up to 3)
● Dimensions	Main unit Keyboard	365(W)x375(D)x122(H)mm AVK-100 365(W)x140(D)x25(H) mm AVK-200 365(W)x140(D)x40(H) mm AVK-250 465(W)x150(D)x75(H) mm
● Weight		11Kg
● Temperature		4°C~35°C
● Power supply		AC115V/220V/240V, 50/60Hz AVS-150 (Optional inverter)

CP/M CONFIGURATION		
● FDOS	BDOS BIOS	File control I/O control and other file control
● CCP	ERA DIR REN SAVE TYPE	Erases specified files. Lists file names in the directory. Renames the specified file. Saves memory contents in a file. Types the contents of a file on the logged disk.
● Transient commands	ASM ED DDT STAT PIP LOAD DUMP SYSGEN SUBMIT FORMAT COPYFILE DR SYSDEF TRMDEF HEADCL	Assembles source files. Generates and edits source files. Debugs and tests machine language programs. Obtains file storage and device assignment. Converts disk-file media. Loads and generates files. Outputs disk file contents in hexadecimal on the console. Generates CP/M systems on a new diskette. Implements commands for batch processing. Formats blank diskettes. Copies files on another diskette. Lists file names on a diskette, in alphabetical order. Defines system configuration. Sets AVC-777 to data terminal mode. Executes head cleaning.

CP/M SOFTWARE SELECTION	Editor Assembler Languages Utilities Cross-software Applications	EDIT-80·WORDMASTER MAC·MACRO-80 PASCAL/M, BASIC-80, BASIC-CMP, FORTRAN-80, COBOL-80, CIS-COBOL, PL/1-80, MU LISP-80, MU SIMP, and other high-level languages. DESPOOL, SUPERSOFT, SID, ZSID, and other utilities. XMACRO-86, XFORTAN-86, TRANS-86, XS-8000, A.C.T., and other cross-software. WORDSTAR, MAILMERGE, TEX, DATASTAR and other software applications.
-------------------------	---	--

* For improvement, specifications and design subject to change without notice.

AVAL TOYO TELESONICS CO., LTD.

5-37-30, SOSHIGAYA, SETAGAYA-KU, TOKYO 157 JAPAN
PHONE: 03-482-0521 TELEX: 2427622TTAVAL J