News Release

H H C™

THE MOST POWERFUL HAND HELD COMPUTER IN THE WORLD

The Base HHC Computer (Panasonic Version)
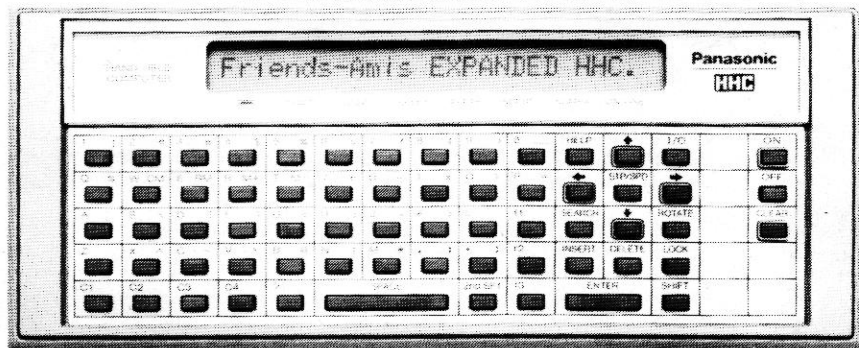
½ Actual Size

Friends Amis, Inc. and the Matsushita Corporation have jointly created The most powerful Hand Held Computer in the World. The HHC computer is based on the 6502 microprocessor and a 16K operating system in ROM. It is powered by rechargeable batteries. The computer is expandable, when combined with the Friends Amis **DATA**SHUTTLE™ (see reverse side), to 40K of non-volatile RAM and 96K of ROM. The system can be connected to a variety of portable peripherals. These include 40 and 80 column printers, four color plotters, RS232 ports, modems, and a video adaptor with color graphics.

There are RAM modules up to 16K each. They retain information when disconnected from the computer! Six such modules may be connected to the system. A portable EPROM burner lets HHC system users burn their own EPROMs using SnapBASIC, SnapFORTH, and other Friends Amis languages. Up to five 16K ROM capsules may be inserted simultaneously in the expanded HHC computing system. Distributors are now being appointed by Friends Amis for specific markets in the United States and other countries.

FRIENDS AMIS started in 1978 with the invention of its hand held language translator, of which over 300,000 units have been sold. Later Friends Amis designed, built and sold over 25,000 programmable POI (Point of Information) rotating display units. The HHC computing system evolved from these revolutionary products. The base unit is manufactured under license from Friends Amis by the 14 billion dollar Matsushita Electric Industrial Company in Japan. It is marketed world wide by Panasonic, Quasar, Olympia and Friends Amis. Friends Amis currently manufactures the **DATA**SHUTTLE™ , which expands the base HHC computer into a complete very powerful hand held computer system. Friends Amis has developed ROM based HHC system software and application packages for Data Entry, Sales, Inventory Control, Word Processing, Accounting, Survey Work, and many other applications.
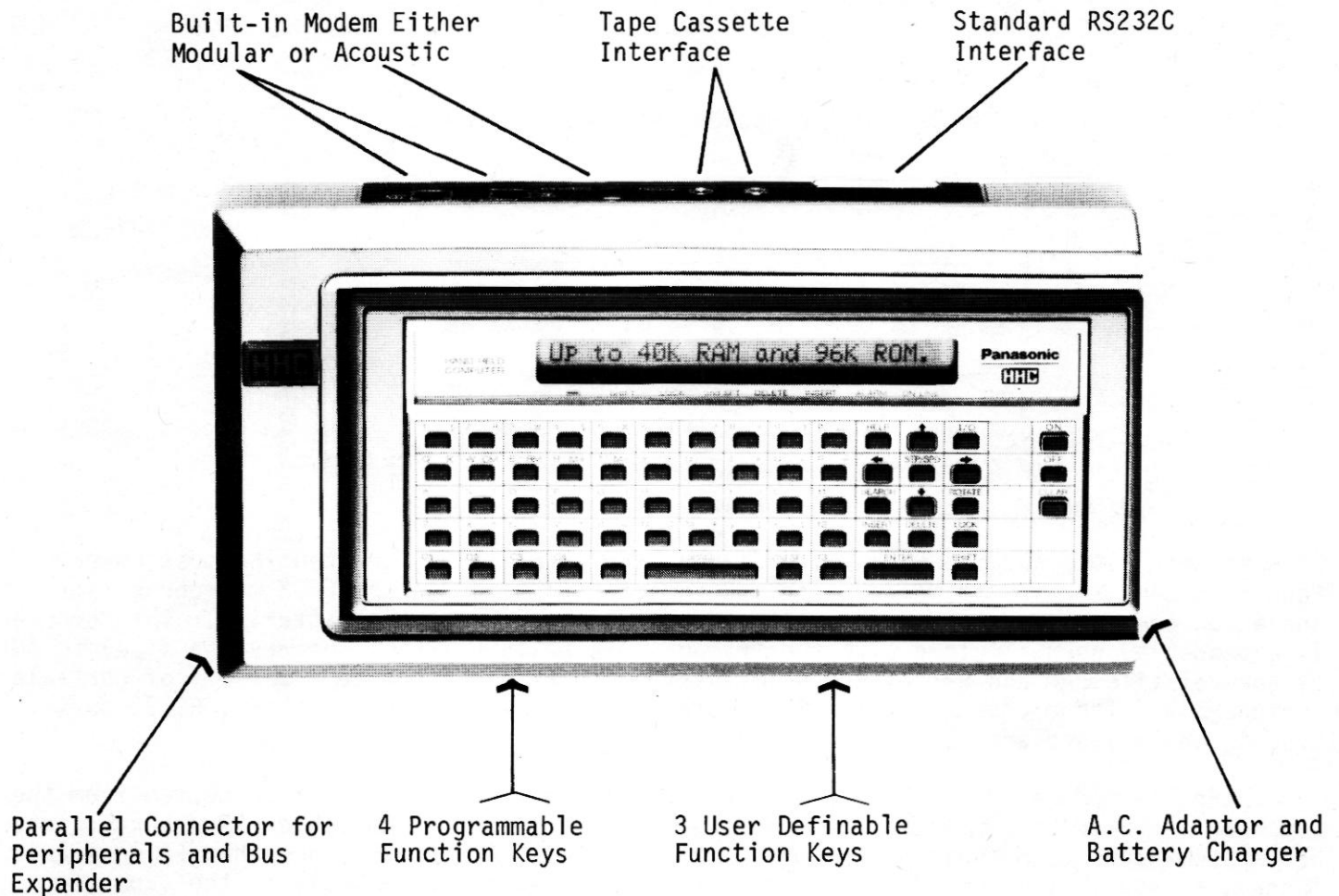

The Expanded HHC Computing System ...

THE HHC DATASHUTTLE SYSTEM

Built-in Modem Either
Modular or Acoustic

Tape Cassette
Interface

Standard RS232C
Interface

UP to 40K RAM and 96K ROM.

Panasonic
HHC

Parallel Connector for
Peripherals and Bus
Expander

4 Programmable
Function Keys

3 User Definable
Function Keys

A.C. Adaptor and
Battery Charger

½ Actual Size

System Features:

o 6502 Microprocessor

o Typewriter Style Keyboard

o Up to 40K Non-Volatile CMOS RAM

o Base HHC Removable from **DATA**SHUTTLE
Sleeve

o Up to 5 ROM Capsule Slots for Appli-
cation Programs

o Real Time Clock

o Full Editing and Cursor Control

o Optional Full Word Processing

o LCD Alphanumeric Display

o Compact and Lightweight

o Non-stop Battery Power

o A Full Spectrum of Languages, Sys-
tems, and Application Software

FRIENDS AMIS, INC., 505 Beach Street, San Francisco, CA 94133   June 10, 1982

Price List

(Prices subject to change without notice)

Item Description	Retail Price
(Note: All peripherals are fully portable and are independently powered by rechargeable batteries)	
HHC Base Computing System with 4K RAM plus built in 16K ROM	$ ~~418.00~~ 380 00
HHC Base Computing System with 8K RAM plus built in 16K ROM	~~528.00~~ 480 00
DATASHUTTLE Expansion Module for HHC includes space for up to 32K RAM, RS232 Port, Modem (modular and acoustic coupler), Cassette Port	695.00
8K RAM (CMOS) Expansion Pack for DATASHUTTLE (Takes up to 4 packs or 32K of internal RAM)	150.00
4K RAM (CMOS) Expansion Module independently powered	150.00
8K RAM (CMOS) Expansion Module independently powered	250.00
16K RAM (CMOS) Expansion Module attaches as a peripheral	350.00
I/O Adaptor with six slots	158.00
I/O Cable for Peripherals or I/O Adaptor	85.00
RS232C 50-9600 Baud Asynchronous Interface	254.00
RS232C Cable with DB25 Connector	35.00
Acoustic Coupler and Modem Without Cassette Interface	250.00
Acoustic Coupler and Modem with Cassette Interface	300.00
T.V. Adaptor 32 columns x 16 lines with color graphics	295.00
A.C. Adaptor and Battery Charger	50.00
Microprinter Alphanumeric 40 columns or 20 columns	300.00
Printer, Impact, Letter Quality, Alphanumeric with four color graphics; 16 character sizes, up to 80 columns on 5" paper	480.00
Attache Case for holding an integrated HHC Executive System	163.00

Additional hardware attachments - EPROM burners, High Speed Disk Units, Bar Code Readers, etc. are available or under development. All following software is in ROM.

SnapFORTH A FORTH-like Interpreter/Compiler	$ 190.00
SnapBASIC An extended 16K BASIC Interpreter/Compiler	165.00
MicrosoftBASIC A highly popular extended BASIC Interpreter	80.00
PortaWriter A versatile, powerful word processing system	90.00
PORTAFLEX A general purpose Data Entry System	165.00
PORTACALC A fast, convenient spread sheet analysis system	165.00
PORTALOG A personal time keeping and billing system	135.00
PORTABUDGET A complete accounting system	60.00
Scientific Calculator Conversion ROM	45.00
RS232C Protocol ROMs for many peripherals and computers	40.00 - 85.00
Telecommunication ROMs with various protocols	50.00 - 85.00

Software Development Packages for emulating the HHC computing system on a larger computer and developing SNAP code. Price depends on features desired.

Integrated System Packages	Price
BASIC HHC Computing System 4K HHC Computing System with MicrosoftBASIC	$ 498.00
Expanded HHC Computing System 4K Base Unit with the DATASHUTTLE	1113.00
Maximum HHC Computing System 8K Base Unit with 32K DATASHUTTLE	1823.00
HHC PortaWriter 4K HHC Computing System with Letter Quality Printer, Color Graphics, Plotter and PortaWriter Word Processing Software	998.00
Mass RAM HHC Computer System 8K HHC Computing System with five 16K RAM Modules plus Bus Expander in Attache Case	2599.00
Executive HHC System 8K HHC Computing System in Attache Case with 16K RAM Module, Microprinter, RS232 Port, Modem and Acoustic Coupler, Video Adaptor, Charger plus cables and connectors	2334.00

Following Application Software Packages for use on any of the above Systems can be custom configured for a fee according to the purchaser's specifications.

CPA Package General Ledger, Taxes, Auditing, Financial Planning

Survey Taking Package Preprogrammed Questionnaire Entry. Contingent Questions. Coded Answers.

Executive Package Contingent Planning, Bidding, Estimating, Time and Job Cost Accounting plus Telecommunications

Program Development Package Generate Object Code from SnapFORTH or SnapBASIC after programming in interpretive mode

Meter Reading Package Automatically Enter Meter Readings into Preprogrammed Forms; generate bills without errors

Insurance Salesperson Package Word Processing plus Generate and Print Results of Insurance and Investment alternatives

Process Control System Allows HHC Computing System to be used as a programmable process controller

Diagnostic System Allows HHC Computing System to be used as a programmable diagnostic tool for instruments and other computers

Robot Controller Allows HHC Computing System to be used as a programmable robot brain

Job Cost and Bid Estimator Allows HHC Computing System to estimate costs of jobs under variable contingencies

Inventory Controller Enables user to keep close track of inventory and inventory related costs. Versions for shoe stores, restaurants, department stores, etc.

Law Enforcement Aid Cross indexes stolen vehicles, license plates, most wanted criminal characteristics; data entry and report writing

Educator Preprogrammed trainer for technical tasks or machine operation; serves as intelligent manual

Light Pen Reader Can do inventory or accounting from light pen reader (includes light pen)

Field Engineer Collect, store, and analyze field data for entomologists, geologists, anthropologists, mining engineers, petroleum engineers, and other field workers.

Sales Entry Enter sales order and prepare invoice, wholesale or retail

Medical System Appointment scheduling, automated prescription writing, time accounting, billing

Legal System Time accounting and billing, word processing, cross indexing and referencing

Many other application packages are available or are easily configured from the HHC computing system software.