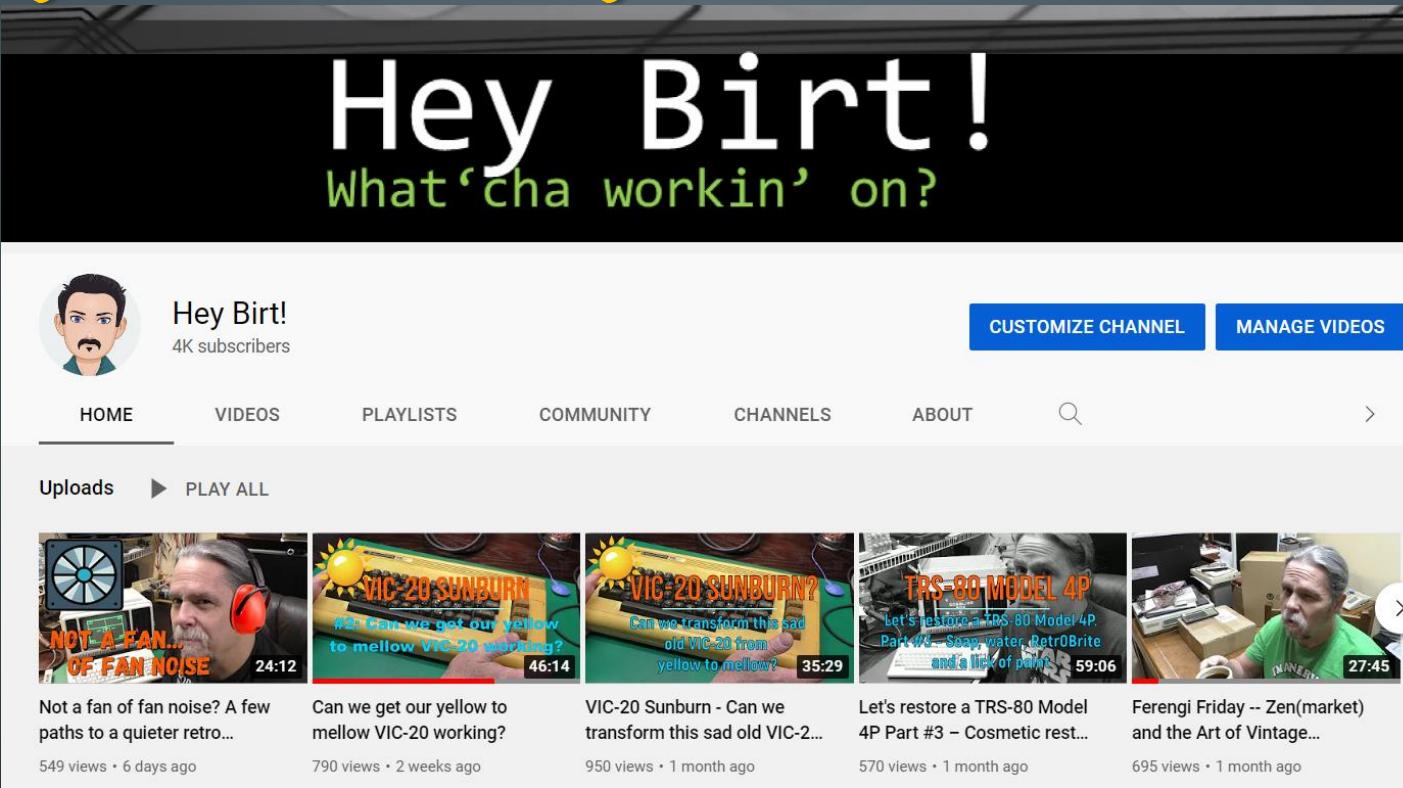


HISTORY OF TANDY POCKET COMPUTERS



Tandy Assembly

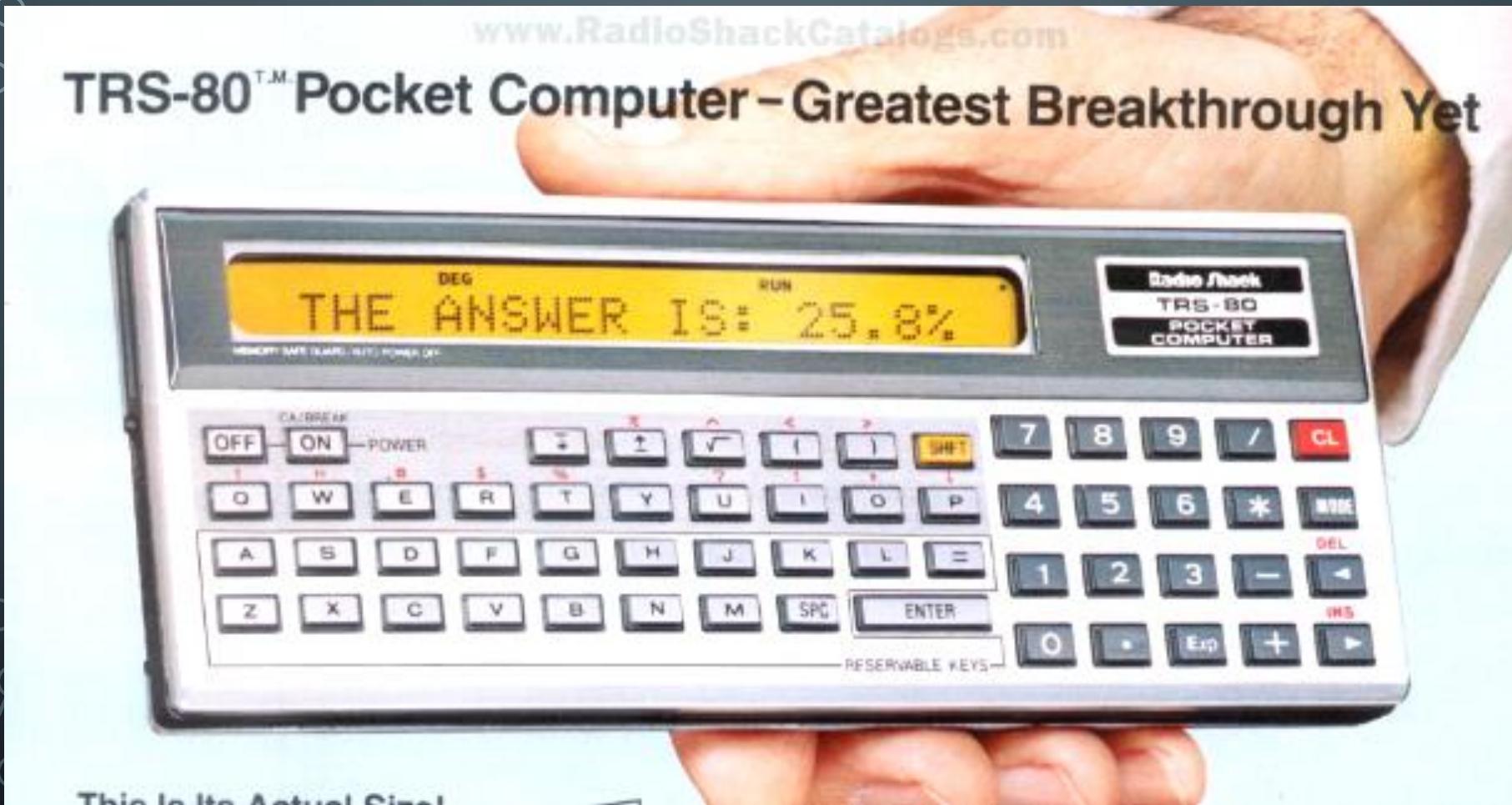
HISTORY OF TANDY POCKET COMPUTERS

Everything I knew about computers in
1981 was from the Radio Shack catalog

To my 12-year-old self computers were:

- Big
- Heavy
- Expensive

HISTORY OF TANDY POCKET COMPUTERS



1981
26-3501

PC-1

HISTORY OF TANDY POCKET COMPUTERS

1981
26-3501

This Is Its Actual Size!
Computer Power That Once
Filled a Room Can Now Be
Carried in Your Pocket!

NEW FOR '81

Only **249⁰⁰**

- Programs in BASIC
- "QWERTY" Alphabetic Keyboard
- 1.9K Random Access Memory
- Long Battery Life

TRS-80 Pocket Computer brings yesterday's science fiction to life at an amazingly low price! Today's advanced technology can always be within your reach to give you the answers you need for fast decision-making! It's easy to load with ready-to-run software from cassette tape (interface and recorder optional), or program it yourself in easy-to-learn BASIC. 24-character liquid crystal readout displays one line at a time. Automatic statement compaction squeezes every ounce of memory space. Computer features power-off retention of programs and data. Powerful resident BASIC language includes multiple statements, math functions, editing, strings, arrays and much more. You'll constantly find new uses for the pocket computer as you make it a part of your lifestyle! Carrying case and batteries included.

26-3501 249.00

TRS-80 Pocket Computer Software Tapes

Program	Cat. No.	Each
Real Estate	26-3510	24.95
Civil Engineering	26-3511	24.95
Aviation	26-3513	24.95
Math Drill	26-3514	14.95
Games I	26-3515	14.95
Business Statistics	26-3516	19.95
Business Financial	26-3517	19.95
Personal Financial	26-3518	19.95

Pocket Computer Accessories for Tape Programs

Cassette Interface **49⁰⁰**

Minisette-9 Recorder **79⁹⁵**

Cassette Interface. Load and save Pocket Computer programs and data on cassette tapes. Modular design interlocks with Pocket Computer. Requires "AA" battery. Works with Minisette-9 recorder. **26-3503** **49.00**

Minisette-9 Recorder. Fits in a briefcase. See page 39 for details. **14-812** **79.95**

RADIO SHACK — THE BIGGEST NAME IN LITTLE COMPUTERS

HISTORY OF TANDY POCKET COMPUTERS

1982
26-3501

149⁹⁵
Shown With
Pocket Computer
(not included)

**Paper
Tape
e
ncharger**
in your
dot-
an-
you're
in
the
list

Controls include paper advance, power on/off, print on/off, and remote (for keying recorder "remote" jack). Also a "low battery" indicator. Comes complete with rechargeable batteries and a U.L. Listed AC adapter/charger—Prints about 8,000 lines per battery charge. Also includes three rolls of paper, easily replaceable ribbon cartridge, cassette cable and manual. 1 $\frac{1}{4}$ "x11 $\frac{1}{4}$ "x3 $\frac{3}{4}$ " (with Pocket Computer installed). 26-3505 149.95

Specifications

Printer: 5x7 Dot-Matrix Impact Printing. Printing Capacity: 16 Columns Per Line with Automatic Wraparound. Print (and Paper Advance) Speed: Approximately One Line Per Second. Paper: Radio Shack Catalog No. 26-3506. 1 $\frac{1}{4}$ " Wide, 3 $\frac{1}{2}$ " Diameter (Maximum). Power Source: Built-In Rechargeable Ni-Cad Battery. Battery Capacity: Approx. 8,000 Printed Lines. Charging Time: Approx. 15 Hours. Power Consumption: 4.8V, 1.8W (DC) Charger/Adapter Included. U.L. Listed. Weight: 0.90 Pounds. Accessories: 3 Rolls of Paper, Ribbon Cartridge, Cassette Connection Cable.

PC-1

HISTORY OF TANDY POCKET COMPUTERS

26-3505

\$149.95

Pocket Computer Carrying Case

Take your Pocket Computer and accessories anywhere in this padded vinyl case. For complete system portability, use one for the Pocket Computer and interface and one for the Minisette-9 cassette recorder. Pockets hold extra paper, pen, reference cards. 26-3508



Low-Cost Cassette Interface

Connects your Pocket Computer to a cassette recorder for program or data storage. Includes cable with plugs for the Mini-sette-9 and other compatible recorders. Requires 3 "AA" batteries. 7/8x8 1/4x3 1/8". 26-3503



Our Recommended Compact Minisette®-9 Recorder

Save and load your own programs on cassette with the portable Minisette-9 recorder. Features Auto-Stop, tape counter, LED record mode/battery condition indicator, AC and DC adapter jacks, more. Requires 4 "AA" batteries. 1 $\frac{1}{2}$ " x 7 $\frac{3}{4}$ " x 4 $\frac{1}{16}$ ".



14-812 79.95
AC Adapter, U.L. listed
273-1454 5.95

Extra Printer Paper

For Pocket Computer Printer,
26-3506 6-Pak/1.75

Replacement Printer Ribbon



Spare fits easily in printer
case, 26-3507 2.75

**1982
26-3501**

PC-1

HISTORY OF TANDY POCKET COMPUTERS

1982
26-3501

READY-TO-RUN TRS-80 POCKET COMPUTER SOFTWARE



Civil Engineering

A valuable "on-site assistant." Includes Simple Beam Computations, Column Buckling, ASIC Column Formulas, Stress in Cylinders and Bolt Torque, Vector Computations, more. 26-3511 24.95



Aviation

A complete flight management system! Calculates altitude, airspeed, headings, Mach number, off-course correction and drift angles, more. Ideal as replacement or double check of slide rule computers. 26-3513 24.95



Real Estate

Especially created for the real estate investor and agent. This package includes: annuities, compound interest, depreciation calculations, cash flow analysis and residential purchase analysis. 26-3510 24.95



Electrical Engineering I

Includes low and high pass, active and passive filter design, complex impedance calculator, LF transistor amplifier designs, linear equations solutions, tables and calculations for RF coil design, more. 26-3520 24.95



Games Pack I

Fast-paced fun you can enjoy just about anywhere! Includes Cannibals and Missionaries, NIM for two players, Space Ship Landing, Treasure Hunt, Craps, more. 26-3515 14.95



Business Finance

A great helper in decision-making! Includes loans, annuities, bond price, yield, compound interest, depreciation, days and dates, internal rate of return, future value and much more. 26-3517 19.95



Surveying

Enables the surveyor to convert field measurements into final property boundaries. Includes leveling, volume, irregular area, closure, more. Modules include TAPE LEVEL, TRAP, CLOSE, CONVERT, DISP. 26-3512 29.95



Games II

More fun for the family. Includes Missile, Blackjack, Baccarat, Bandit (Las Vegas Slot Machine game), Aceyducey, Numbuzz, Pokeslot (Poker Slot Machine Game) and Craps. 26-3523 14.95



Personal Finance

A real timesaver that helps you manage the financial details of your household. Programs include Budget Management, Electronic Checkbook, Interest/Annuities, Metric/English Converter. 26-3518 19.95



Business Statistics

Ideal for business, marketing, and sales decisions. Includes seasonal variation, normal T/F distributions, descriptive statistics, forecasting, multiple regression, more. 26-3516 19.95



Math Drill

Designed for children in the primary grades. Teaches basic math skills through examples and repetition. Four levels of difficulty are provided, as are a math table display and test. 26-3514 14.95

HISTORY OF TANDY POCKET COMPUTERS

TRS-80 PC-1 Specs

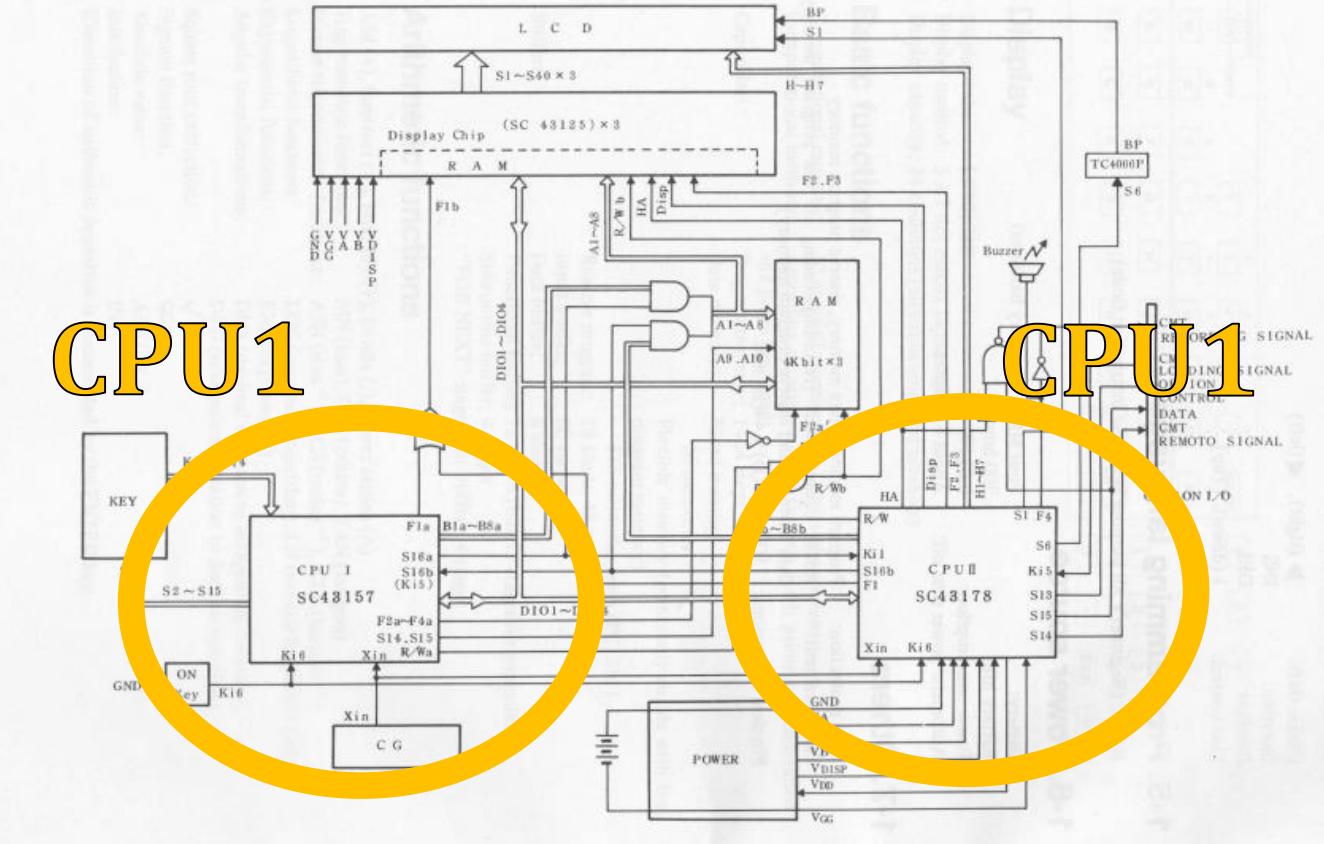
- PC-1 available 1980 - 1983
- Sharp PC-1211, available 1980
- CPU: Dual 4-bit CPUs @ 256khz
- LCD: 24-character, not dot-addressable
- RAM (free): 1920 (1425)
- Size: 175x70x15mm, 170g

26-3501

PC-1

HISTORY OF TANDY POCKET COMPUTERS

2. BLOCK DIAGRAM



26-3501

PC-1 Tidbits

PC-1

HISTORY OF TANDY POCKET COMPUTERS

CPU I

Key input routine
Acknowledgement of the remaining program
One instruction to one program step incorporation
Interpreter:
Program execute statement
Cassette control statement
Command statement
Printer control
Execution of manual operation
Power shut off control
Clock stop control

CPU II

Display processing routine
Input buffer
Computational result
Error
Arithmetic routine
Character generator
Cassette routine
Print routine
Buzzer
Recognition of printer
Power off
Clock stop

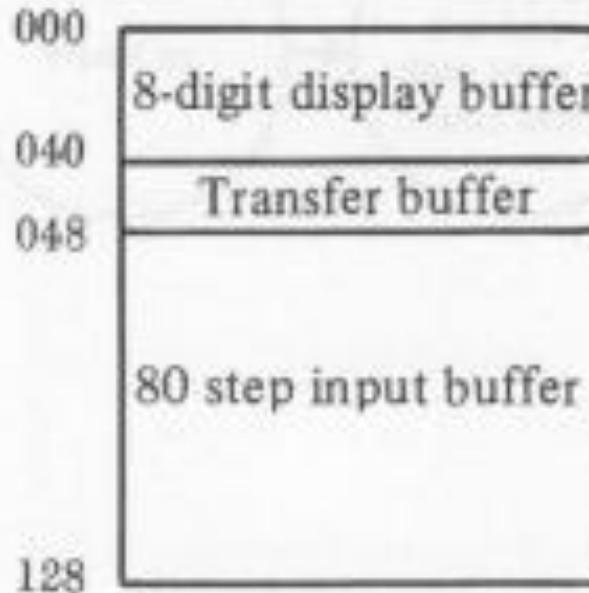
26-3501

PC-1 Tidbits

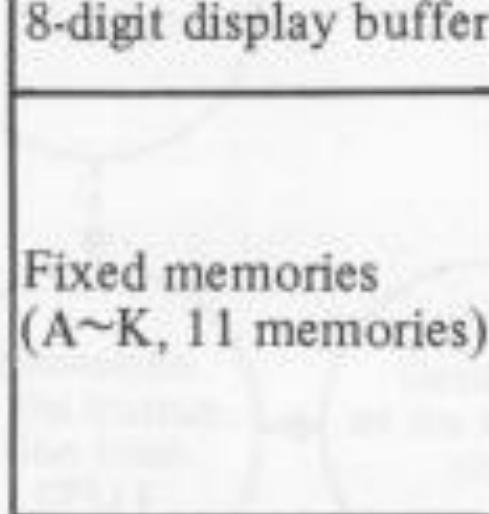
PC-1

HISTORY OF TANDY POCKET COMPUTERS

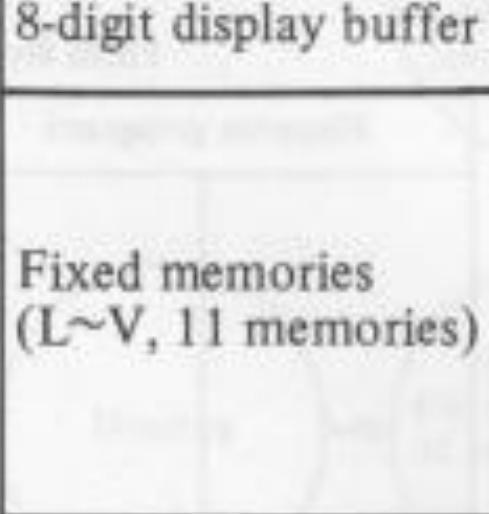
DISPLAY CHIP 1



DISPLAY CHIP 2



DISPLAY CHIP 3



26-3501

PC-1 Tidbits

PC-1

HISTORY OF TANDY POCKET COMPUTERS

PC-1: problems to look out for today

- Bad LCD, replacements now available
- Original MR44 1.35V Mercury cells
- Can use 675, PR44 zinc/air cells
- NiCad pack in printer/cassette unit

26-3501

PC-1

HISTORY OF TANDY POCKET COMPUTERS

1982
26-3601

TRS-80 POCKET COMPUTER MODEL PC-2

NEW! SECOND GENERATION!

Model PC-2 **279⁹⁵**

- Extended BASIC — Faster, More Versatile Version of Pocket BASIC
- 2640-Character Program and Data Memory
- Plug-In Slot for Memory Expansion (ROM or RAM)
- Upper and Lower Case Alphanumeric Liquid Crystal Display
- Graphics! Fully Addressable 7x156 Dot Matrix
- Built-In Quartz Clock
- 60-Pin Input/Output Interface Connector

Specifications

Microprocessor: 8 Bit custom CMOS processor, 1.3 MHz internal cycle time. Keyboard: 65 keys alphanumeric, including 6 programmable function keys for each of 3 Reserve modes, 18 "softkeys" and 10 pre-programmed command keys. Display: 26-character alphanumeric Liquid Crystal Display (LCD). Automatic scrolling plus manual playback of lines longer than 26 characters. 80-character

The term "personal" computer now takes on new meaning! Here is a system that's so compact you can take it anywhere, yet it's as powerful

It's Expandable!
A recessed port on the back of the PC-2

PC-2

HISTORY OF TANDY POCKET COMPUTERS

1982
26-3601

TRS-80 POCKET COMPUTER MODEL PC-2

NEW! SECOND GENERATION!



SHOWN ACTUAL SIZE: ONLY 1 1/4" x 7 1/4" x 3 1/4", WEIGHS ONLY 16 OZ.

The term "personal" computer now takes on new meaning! Here is a system that's so compact you can take it anywhere, yet it's as powerful as many full-size microcomputers! It's ideal for engineers, students, businessmen . . . anyone with problems to solve on-the-go.

What Extended BASIC Means to You

This exceptionally powerful programming language has 42 different statements, with 34 built-in functions. It permits two-dimension arrays for both numeric and character data. It can process character strings of variable length to a maximum size of 80 characters.

Its Speed Will Surprise You

The Model PC-2 has a microprocessor that's as fast as many desktop computers.

Model PC-2 **279⁹⁵**

- Extended BASIC — Faster, More Versatile Version of Pocket BASIC
- 2640-Character Program and Data Memory
- Plug-In Slot for Memory Expansion (ROM or RAM)
- Upper and Lower Case Alphanumeric Liquid Crystal Display
- Graphics! Fully Addressable 7x156 Dot Matrix
- Built-In Quartz Clock
- 60-Pin Input/Output Interface Connector

Specifications

Microprocessor: 8 Bit custom CMOS processor, 1.3 MHz; internal cycle time. Keyboard: 65 keys alphanumeric, including 6 programmable function keys for each of 3 Reserve modes, 18 "softkeys", and 10 pre-programmed command keys. Display: 26-character alphanumeric Liquid Crystal Display (LCD). Automatic scrolling plus manual playback of lines longer than 26 characters. 60-character input buffer. Character Style: Full 7x5 dot matrix ASCII upper and lower case character set. Graphics: Fully-addressable 7x156 dot matrix LCD graphics permits generation of special characters. Memory: 16K bytes of system ROM, 1850 bytes BASIC program and data RAM, 600 bytes of fixed data memory, and 190 bytes reserve memory. Memory Expansion: Single plug-in slot accepts up to 16K of RAM or ROM or ROM/RAM combination. String Handling Ability: LEFT\$, MID\$, RIGHTS\$, LEN, VAL, CHR\$, and STR\$. Strings dimensionable to 80 characters in 2-dimension arrays. Clock: Real-time, quartz-controlled. Input/Output: All address and data lines, power, timing, and control signals accessible via 60-pin connector. Power Requirements: "AA" batteries (not included) or AC adapter. Battery Approx: 75 hours with "AA" Alkaline batteries.

4K Byte RAM Module

More than triples the amount of memory in your PC-2. Just plug it into the back. Individual memory modules are non-expandable. 26-3615 69.95



4K RAM
module

PC-2

HISTORY OF TANDY POCKET COMPUTERS

1982
26-3601

PC-2 PRINTER/CASSETTE INTERFACE

NEW! GET 4-COLOR PRINTOUTS AND CONTROL 2 CASSETTES

Printer Cassette Interface for PC-2 **239.95**

- Prints Graphics and Alphanumeric in Green, Red, Blue, and Black.
- Full XYZ-Axes Graphics With Special BASIC Statements for Easy Drawing and Plotting
- Prints Nine Character Sizes
- Store and Load Programs and Data Using One or Two Cassette Recorders
- Built-In Rechargeable Batteries Also Power Your Pocket Computer
- Auxiliary Input/Output Connector

The perfect companion for your Pocket Computer Model PC-2. Get four-color graphics and alphanumeric printouts and control two cassette recorders! The PC-2 Printer/Plotter adds twenty-five commands and statements to Pocket Computer BASIC, including special statements that make plotting easy. Print 256x4096 graphics with easily replaceable ball point pens in green, red, blue, and black. Dual-cassette control allows reading, updating and writing of data under program control, without the need to change tape cassettes. Makes automatic data logging and program overlays easy.

The PC-2 Printer/Interface is ready to use when you slide in your Pocket Computer Model PC-2. There's a built-in 60-pin I/O connector for use while your PC-2 is connected. Uses inexpensive 2 1/4" cash-register type paper, and includes a U.L. listed AC adapter/charger that also powers the PC-2.
26-3605 239.95

Specifications

Alphanumeric Printing: Upper and lower case characters in four colors. Height and width of characters depend upon the number of characters per line. Nine different column widths (from 4 to 36 characters per line) with automatic wraparound.

Print Speed: Average 11 characters per second.

Graphics/Plotter Printing: 256x4096 color graphics. Controlled by BASIC statements and exploiting full 3-dimension axes.

Colors: Black, Red, Green, and Blue.

Paper: 2 1/4" wide.

Power Source: Built-in rechargeable nickel cadmium battery also will power computer. U.L. listed AC Adapter/Charger, included, also powers computer.

Battery Capacity: Approx. 1100 printed lines. Charging time approx. 15 hours.

Physical: Weighs 28 oz. with batteries and measures 2 1/4" x 12 1/4" x 4 1/4".

Shown With Pocket Computer (not included)

www.RadioShackCatalog.com

53

PC-2

HISTORY OF TANDY POCKET COMPUTERS

1983
26-3601

Charging time 15 hours. Dimensions: 2 $\frac{1}{4}$ " x 12 $\frac{1}{8}$ " x 4 $\frac{1}{2}$ ". Weight: 28 oz.

Shown with PC-2 (not included)

New! Ready-to-Run PC-2 Pocket Computer Software	
BUSINESS FINANCE	Personal Finance. Budget management, electronic checkbook, interest and annuities, metric/English converter, and more. 26-3700 19.95
	Business Finance. Loans, annuities, bond prices, compound interest, yield, depreciation, days and dates, and more. 26-3703 19.95
	PC-2 Games Pak. Sound Off, Hangman, Battleship, Football, Moonlander, Blackjack, Twister, Tic-Tac-Toe, Scratchpad. 26-3702 14.95
	Invasion Force. Explore unknown planets. Destroy enemy aliens before they destroy you. (4K RAM module required.) 26-3705 9.95

Handy Accessories for Your PC-2 Printer/Plotter	
	Padded Vinyl Carrying Case. Holds Printer (with PC-2 installed) and AC adapter/charger. Keeps pens, paper, etc. organized. 26-3608 29.95
	PC-2 Replacement Ballpoint Mini-Pens Replacement Pens. Three black. 26-1480 2.95 Replacement Pens. One each: red, blue, green. 26-1481 2.95
	PC-2 Printer Paper Cash register-type paper for PC-2 printer/plotter. 2 $\frac{1}{4}$ " wide. 26-3606 6 Rolls/2.49

www.RadioShackCatalogs.com

39

Early 1983

Now your PC-2 Pocket Computer can use most RS-232 devices with our new RS-232C Interface! It's programmable from 50 to 2400 baud, and plugs directly into the PC-2 or Printer/Plotter/Interface. New commands added to PC-2 BASIC make program control easy, and a built-in communications program lets you access services like Dow Jones News/Retrieval® and CompuServe® (requires modem and cable). Includes built-in rechargeable batteries and U.L. listed adapter/charger. 2 x 3 $\frac{3}{8}$ " x 4 $\frac{1}{2}$ ". 26-3612 199.95

New! RS-232C Interface	
199.95	
■ Communicate With Data Networks	■ Built-In Terminal Program in ROM
■ Adds 32 New Commands	

Ready-to-Run PC-2 Software	
Personal Finance. Budgeting, electronic checkbook, interest, annuities, and more. 26-3700 19.95	Business Finance. Loans, annuities, bond prices, compound interest, yield, depreciation, days and dates, and more. 26-3703 19.95
PC-2 Games Pak. Sound Off, Hangman, Battleship, Football, Moonlander, Blackjack, Twister, Tic-Tac-Toe, Scratchpad. 26-3702 14.95	Invasion Force. Explore unknown planets. Destroy enemy aliens before they destroy you. (4K RAM module required.) 26-3705 9.95
NEW! Math Pak I. Advanced math functions, polynomial math, calculus, 3-D vectors, complex numbers, triangles 26-3709 14.95	NEW! Math Pak II. Gaussian reductions, matrix inversion and multiplication, simultaneous linear equations. 26-3710 14.95
NEW! Math Plotter. Planar cartesian, planar polar, 3-D cartesian and cylindrical polar plotting. 26-3711 10.95	

Handy Accessories for Your PC-2	
New! Getting Started on the PC-2	
Anyone wanting to learn how to use and get the most from their PC-2 pocket computer system will appreciate this easy-to-read, tutorial manual. It covers commands and programming tips for the PC-2 and the Printer/Plotter/Interface. 26-3620 12.95	
Padded Vinyl Carry Case	
Holds Printer (with PC-2 installed) and AC adapter/charger. Protects against bumps while traveling. Keeps spare pens, extra paper, manuals, etc. organized. 26-3608 29.95	
Replacement Pens. 3 black. 26-1480 2.95	
Replacement Pens. 1 each: red, blue, green. 26-1481 2.95	
Printer Paper. Cash register-type, 2 $\frac{1}{4}$ " wide. 26-3606 6 Rolls/2.49	

Late 1983

PC-2

HISTORY OF TANDY POCKET COMPUTERS

TRS-80 PC-2 Specs

- Available 1982 - 1984
- Sharp PC-1500, 1982
- CPU: 8-bit @ 1.3MHz (LH5801 not Z80)
- LCD: 24-character, 156x7 dot addressable
- RAM (free): 3584 (1850), expandable
- Size: 195x86x25.5mm, 375g

26-3601

PC-2

HISTORY OF TANDY POCKET COMPUTERS

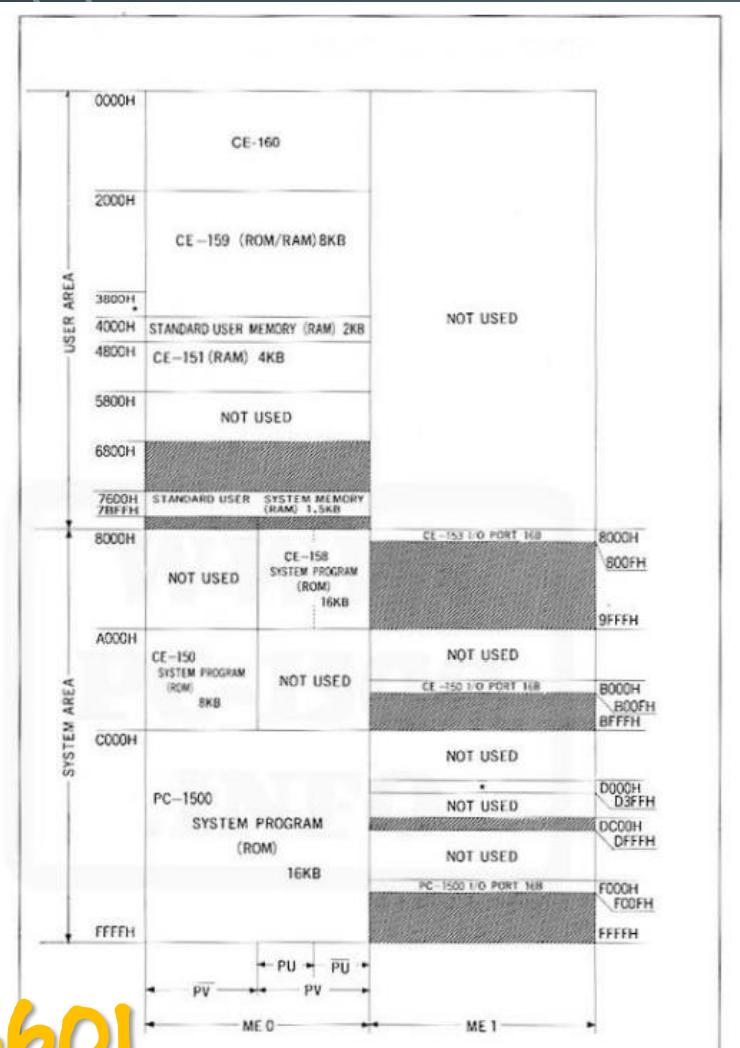


26-3601

PC-2 Tidbits

PC-2

HISTORY OF TANDY POCKET COMPUTERS



26-3601

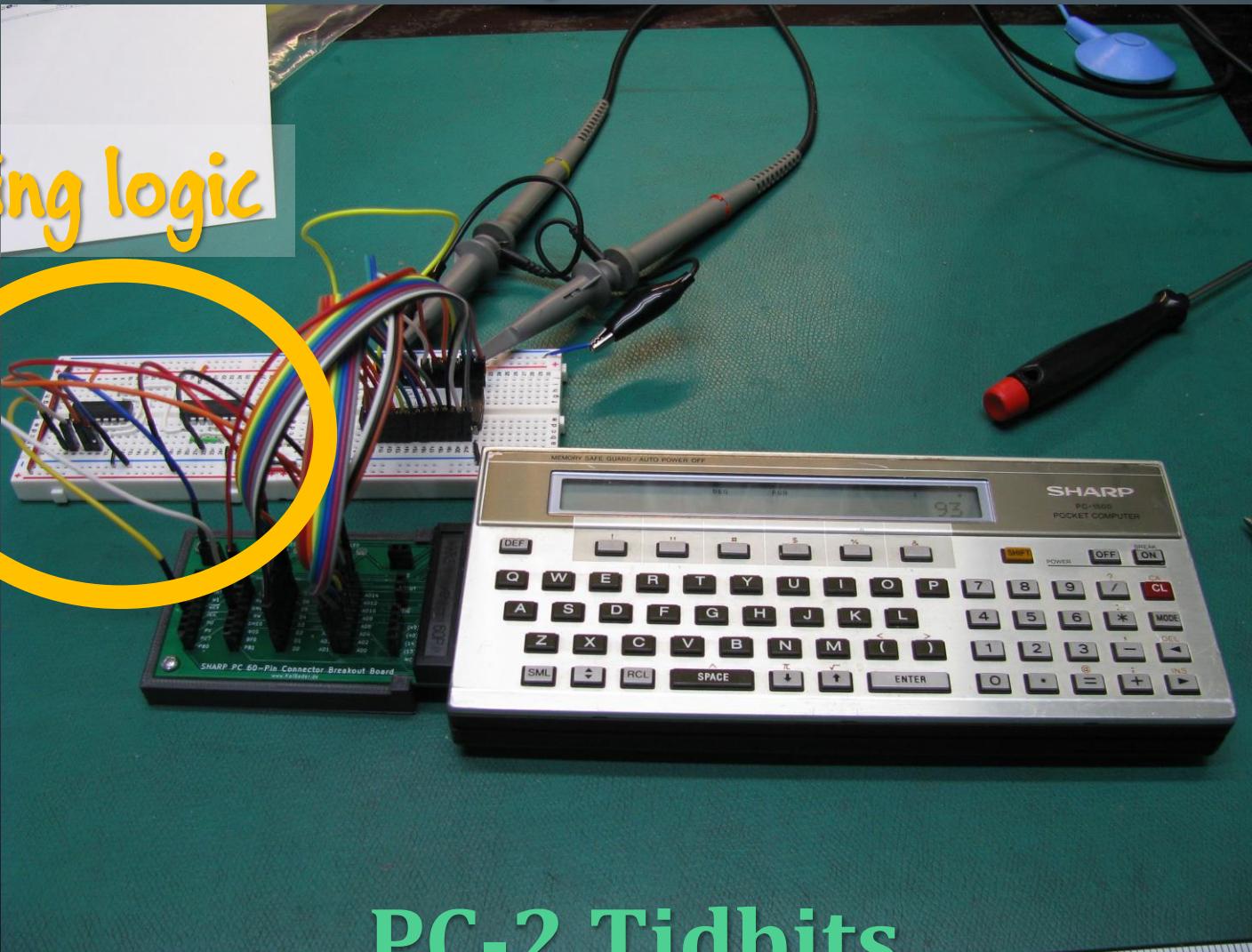
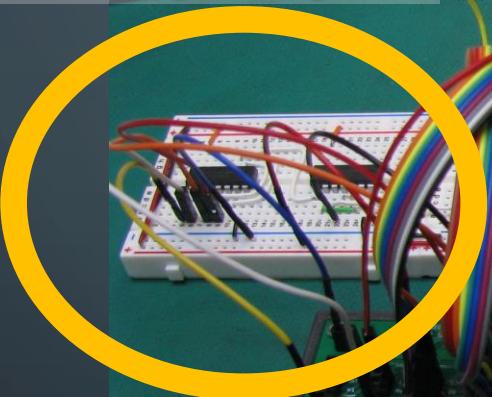
PC-2 Tidbits

- Accessories contain own ROM which extends BASIC
- 128K of memory addressable w/banking
- Users reversed engineered
- Extensive Sharp documentation
- Can program in assembly

PC-2

HISTORY OF TANDY POCKET COMPUTERS

Decoding logic



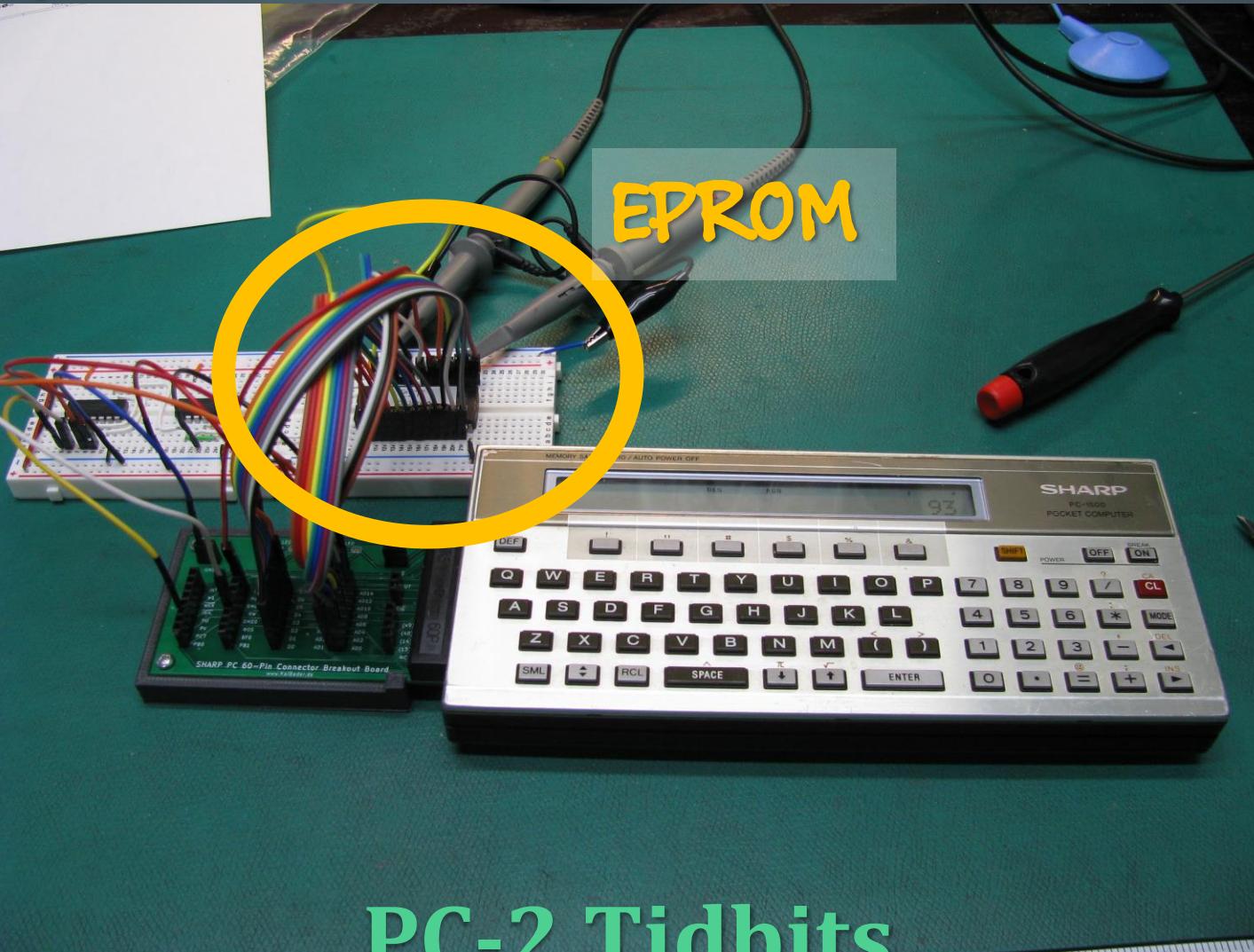
26-3601

PC-2 Tidbits

PC-2

HISTORY OF TANDY POCKET COMPUTERS

26-3601



PC-2 Tidbits

PC-2

HISTORY OF TANDY POCKET COMPUTERS

26-3601



PC-2 Tidbits

PC-2

HISTORY OF TANDY POCKET COMPUTERS

PC-2: Problems to look out for today

- AA battery corrosion
- NiCad pack in printer/cassette unit
- Printer gears, some replacements available
- Pens for printer
- NiCad pack in RS-232 interface

26-3601

PC-2

HISTORY OF TANDY POCKET COMPUTERS

1984

26-3590

26-3589

PC-3

Small Enough to Fit Pocket or Purse, Big Enough to Solve Tough Problems

NEW FOR '84

PC-3 Pocket Computer **99.95**

PC-3 Printer/
Cassette Interface **119.95**

• Programmable in BASIC or Use Ready-to-Run Software
• 16 Built-In Arithmetic and 8 String Functions

TRS-80 Pocket Computer Model PC-3. The PC-3 is small enough to go anywhere, yet it gives you real computer power—well beyond that of most programmable calculators! Features 24-character LCD, 1438-character memory, 10-digit accuracy, 2-digit exponents, multiple statements, arrays, edit and trace modes, $\frac{1}{2} \times 5\frac{1}{2} \times 2\frac{1}{4}$. Weighs 4 oz. With batteries and manual. 26-3590 99.95
Printer/Cassette Interface. Thermal dot printer prints 24 characters per line at one line per second, with "wrap-around". Add a recorder to store and load programs on cassette tape. Includes rechargeable batteries, U.L. listed AC adapter/charger, paper, cassette cable, manual. 26-3591 119.95
Printer Paper, $2\frac{1}{4}$ " wide. 26-3592 Pkg. of 5/2.49

Ready-to-Run Software for Your PC-3

Personal Finance. 26-3518	19.95	Engineering Math II.	26-3526	14.95
Business Finance. 26-3517	19.95	Engineering Math III.	26-3527	10.95
Business Statistics. 26-3516	19.95	Engineering Math IV.	26-3528	7.95
Statistical Analysis. 26-3522	24.95	Math Drill. 26-3514	14.95	
Real Estate. 26-3510	24.95	Games I. 26-3515	14.95	
Surveying. 26-3512	29.95	Games II. 26-3523	14.95	
Electrical Engineering I. 26-3520	24.95	Calendars. 26-3529	19.95	
Engineering Math I. 26-3525	14.95	Golf Scoring. 26-3532	14.95	

HISTORY OF TANDY POCKET COMPUTERS

TRS-80 PC-3 Specs

- Available 1984 - 1986 (Sharp 1983)
- Original PC-3, 26-3590, Sharp PC-1250
 - RAM (free): 2048 (1438)
- Later PC-3, 26-3589, Sharp PC-1251
 - RAM (free): 4096 (3486)
- CPU: 8-bit @ 576kHz
- LCD: 24 character, not dot-addressable
- Size: 135x70x9.5mm, 115g

26-3590

26-3589

PC-3

HISTORY OF TANDY POCKET COMPUTERS



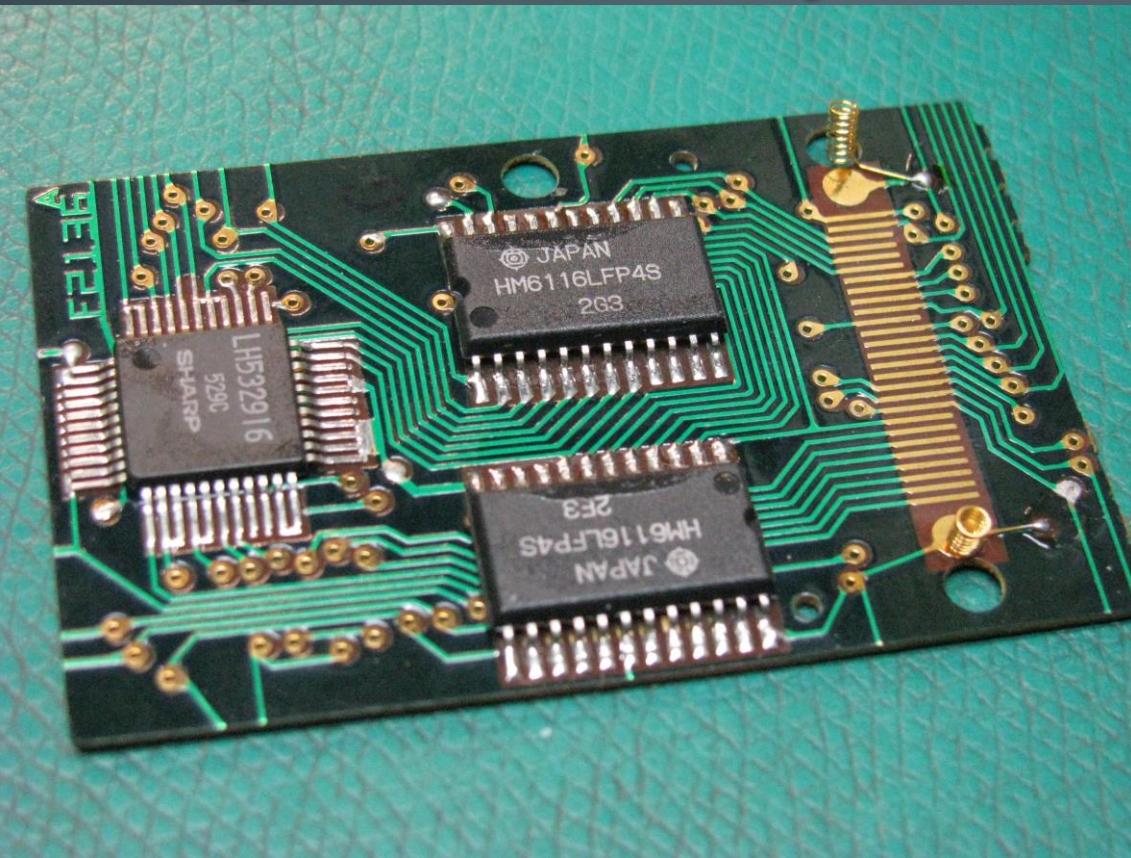
- Removeable
ROM/RAM PCB

26-3590
26-3589

PC-3 Tidbits

PC-3

HISTORY OF TANDY POCKET COMPUTERS



- Removeable ROM/RAM PCB
- Why? Run-Only version from Sharp
- ROM built into processor too

26-3590

26-3589

PC-3 Tidbits

PC-3

HISTORY OF TANDY POCKET COMPUTERS

- BASIC does include PEEK, POKE, CALL
- Can program in BASIC and Assembly
- Homebrew assemblers
- Homebrew RAM expansions

26-3590

26-3589

PC-3 Tidbits

PC-3

HISTORY OF TANDY POCKET COMPUTERS

PC-3: Problems to look out for today

- Bad LCD, replacements available

26-3590

26-3589

PC-3

HISTORY OF TANDY POCKET COMPUTERS

1984

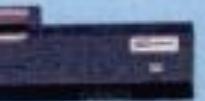
26-3650(A)(B)

PC-4

Introducing the Lowest Priced TRS-80 Ever
For Affordable On-the-Go Computing Power!


PC-4 Pocket Computer **69.95**


Cassette Interface **39.95**


PC-4 Printer **79.95**

NEW FOR '84

TRS-80 Pocket Computer Model PC-4. The PC-4 lets you keep up to ten short programs in its 544-character memory or combine the programming area to allow longer programs. BASIC language includes 23 commands, 15 functions and 10-digit numeric accuracy. Up to 16 commonly-used commands like GOSUB, LIST and STEP can be entered by pressing two keys! Programs can accept words and names as data (strings up to 30 characters). Big 12-character LCD scrolls to 62 characters. Edit and debug modes. $7\frac{1}{2} \times 6\frac{1}{2} \times 2\frac{3}{4}$. Includes batteries and manual. 26-3650 69.95

PC-4 Cassette Interface. Allows you to store and load programs and data at 300 baud using an optional cassette recorder. Requires two "AA" alkaline batteries. 26-3651 39.95

PC-4 Printer. Prints 20 characters per line (60 lpm) in an electro-thermal 5 x 7 dot matrix. Includes rechargeable batteries and U.L. listed adapter/charger. 26-3652 79.95

Add These Handy Accessories to Your PC-4

1K RAM Module. Triples memory! Inserts inside PC-4. Only one module may be used. 26-3653 19.95

System Carrying Case. Custom padded vinyl case protects PC-4, printer and cassette interface. 26-3654 7.95

Printer Paper. 65-711 Pkg. of 5/2.49

Buy the Book! In Your Complete Pocket Computer Headquarters

159

HISTORY OF TANDY POCKET COMPUTERS

1983

26-3650(A)(B)

PC-4

Add These Handy Accessories to Your PC-4

Cassette Interface. Allows you to store and load programs at 300 baud using an optional cassette recorder. Plugs into rear of PC-4. Weighs only 8 $\frac{1}{2}$ oz., including batteries. Requires two "AA" alkaline batteries. 26-3651 39.95

PC-4 Printer. Operates under control of PC-4 to print out programs and data. Use as a printing calculator, too. Prints 20 characters per line (60 lpm) in an electro-thermal 5 x 7 dot matrix. Includes rechargeable nickel-cadmium batteries and U.L. listed adapter/charger. 26-3652 79.95



1KB RAM Memory Module. Triples the memory of your PC-4. Gives 1024 steps of additional program and data power. Inserts within PC-4. Only one module may be used. 26-3653 19.95

Carrying Case. Custom padded vinyl carry case protects your PC-4 Printer and Cassette Interface while you travel or work in the field. Zippered opening. Internal pocket for AC adapter/charger. 26-3654 7.95



HISTORY OF TANDY POCKET COMPUTERS

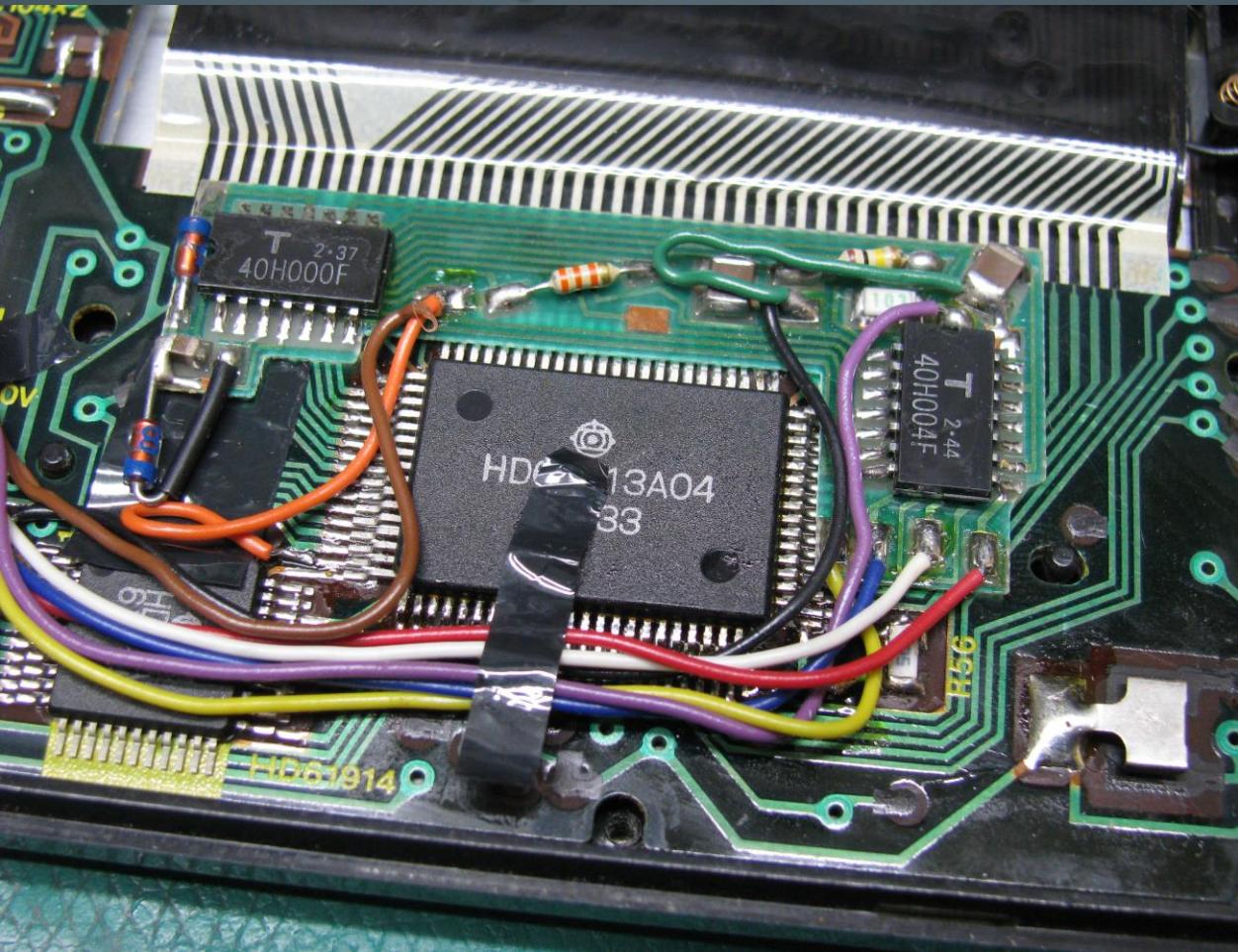
TRS-80 PC-4 Specs

- Available 1984-1987 (Casio 1983)
- CPU: (CMOS 4-bit) @ 200kHz
- LCD: 12-character, not dot-addressable
- RAM (free): 1024 (544)
- Size: 165x71x9.8mm, 116g
- Original PC-4, 26-3650(A) 1983, Sharp PB-100
- Later PC-4, 26-3650B 1983, Sharp PB-100F

26-3650(A)(B)

PC-4

HISTORY OF TANDY POCKET COMPUTERS

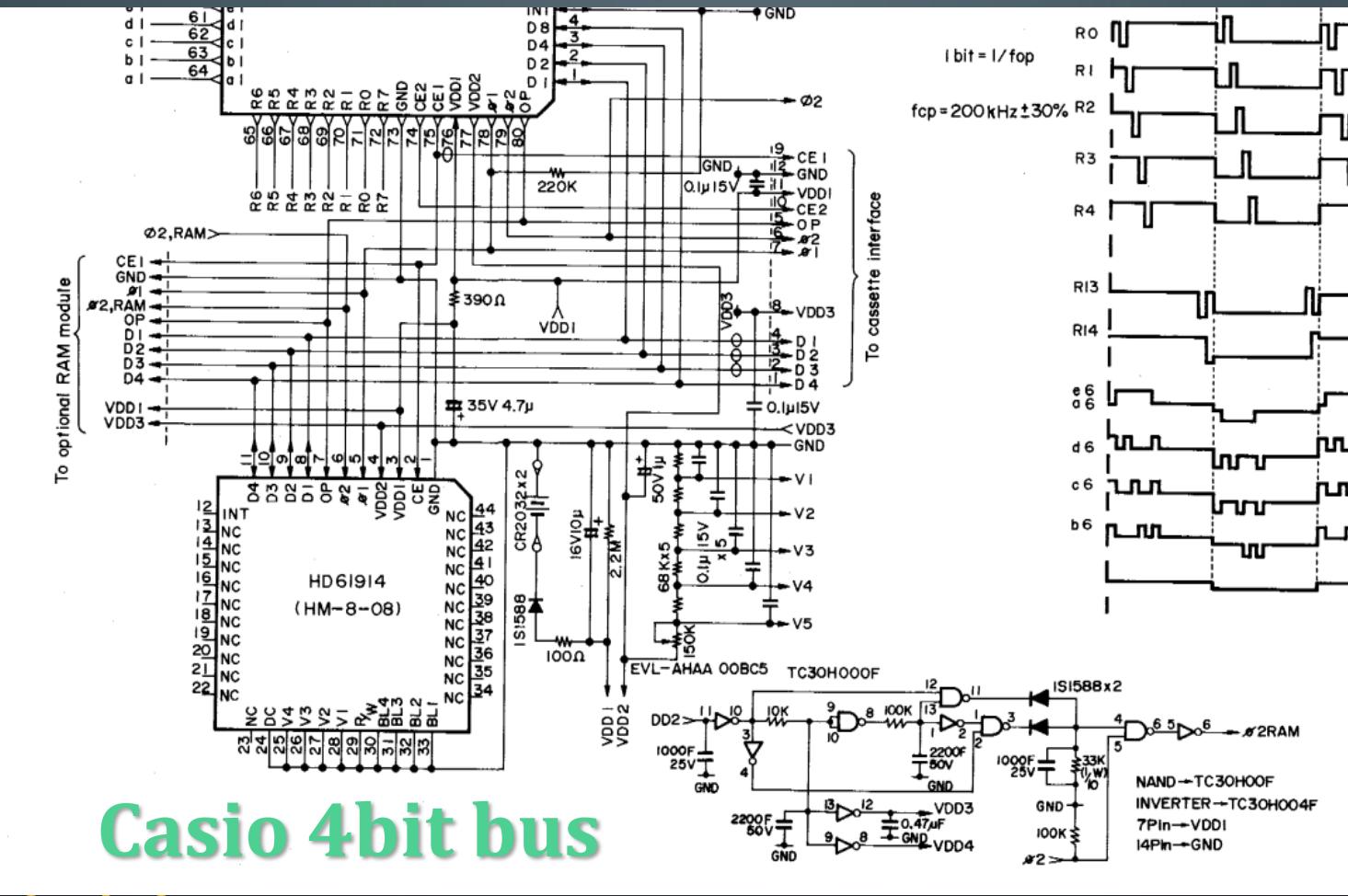


26-3650(A)(B)

PC-4 Tidbits

PC-4

HISTORY OF TANDY POCKET COMPUTERS



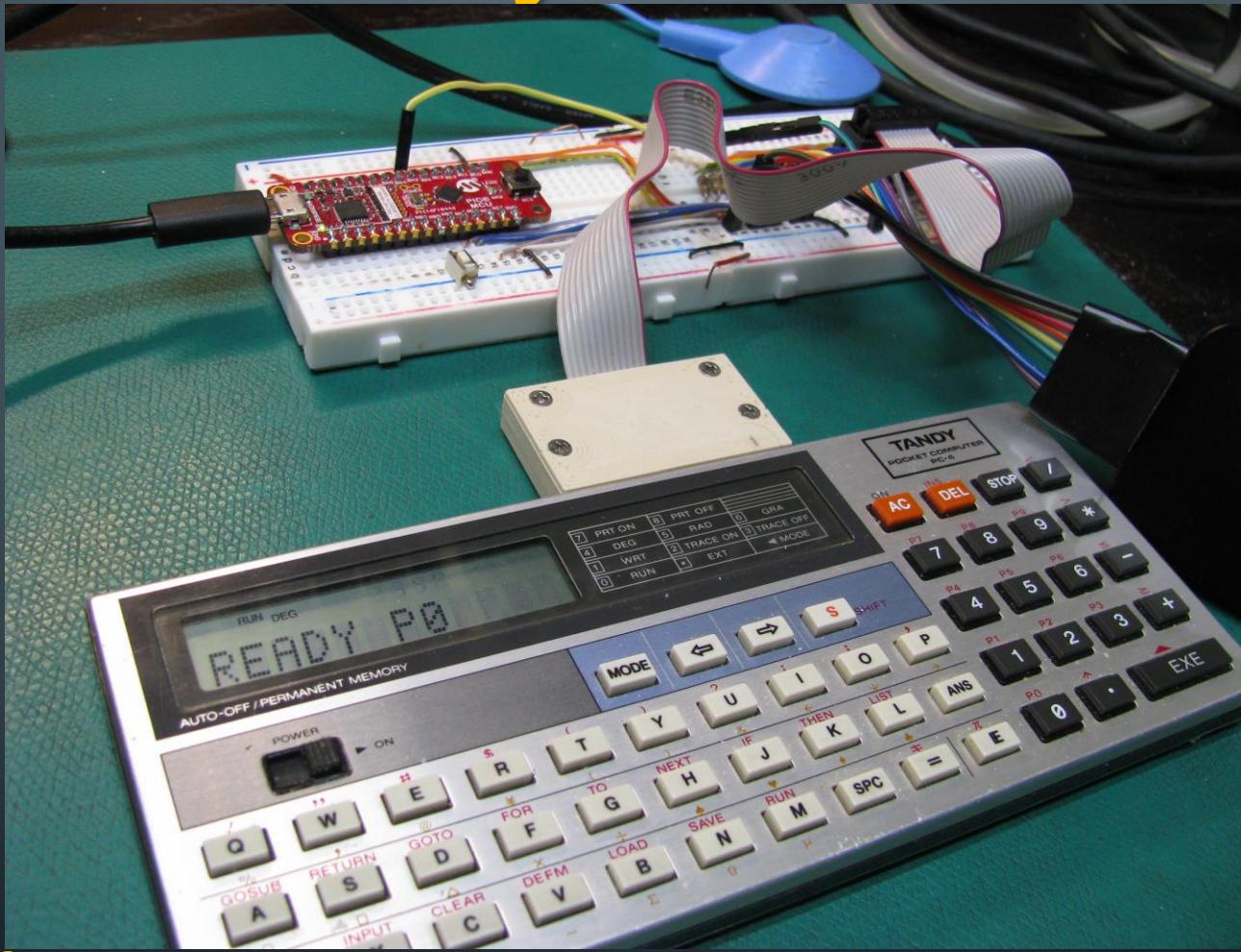
Casio 4bit bus

26-3650(A)(B)

PC-4 Tidbits

PC-4

HISTORY OF TANDY POCKET COMPUTERS



26-3650(A)(B)

PC-4 Tidbits

PC-4

HISTORY OF TANDY POCKET COMPUTERS

PC-4: Problems to look out for today

- LCD polarizers can darken
- RAM chips can fail, are unobtainium

26-3650(B)

PC-4

HISTORY OF TANDY POCKET COMPUTERS

1986
26-3670

PC-5 Pocket Scientific Computer



Low-Cost PC-4 Pocket Computer



PC-5 Pocket Scientific Computer

119.95

Folds Up to Only
 $\frac{3}{4}$ " x $\frac{5}{8}$ " x $\frac{5}{8}$ "
Low As
\$20 Per Month
on CitiLine*

- 75 Built-In Scientific Functions
- Programs in BASIC and Assembly Language

Pocket Calculator Computer PC-5. An ideal tool for engineers and students, the PC-5 combines the best features of a powerful scientific calculator and a pocket computer. Performs up to 75 built-in scientific calculations—or write your own programs in BASIC or assembly language. Retains programs and data even when power is off. A built-in Note and Address File keeps important telephone number or engineering data and formulas handy. Features an easy-to-read, 24-character LCD. Uses PC-4 Cassette Interface and Printer with PC-5 Cable (all sold separately). 4K RAM. Includes battery. 26-3670 (Avail. 11/30/85) 119.95

PC-5 Cable. For use with PC-4 Cassette Interface and PC-4 Printer. 26-3671 (Avail. 11/30/85) 14.95

Low-Cost PC-4 Pocket Computer

59.95

Was \$69.95 in Cat. RSC-14

- Measures $\frac{3}{4}$ " x $\frac{61}{8}$ " x $\frac{23}{4}$ "
- 544-Character Memory

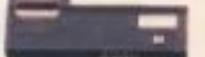
Pocket Computer Model PC-4. Lets you keep up to 10 short programs in memory or combine the programming area for longer programs. BASIC language includes 23 commands, 15 functions and 10-digit numeric accuracy. Use just two keystrokes to enter up to 16 common commands. Edit and Debug modes make the PC-4 easier to program than a programmable calculator. Typewriter-style keyboard includes 53 alphabetic keys and a 10-key numeric keypad. A big 12-character LCD scrolls to 62 characters. With batteries and manual. 26-3650 59.95

Peripherals to Complete Your PC-4

39.95



79.95



PC-4 Cassette Interface. Store and load programs on cassette tapes! Operates at 300 baud using an optional cassette recorder. Plugs into rear of PC-4. Weighs $8\frac{1}{2}$ oz, including batteries. Requires two "AA" alkaline batteries. 26-3651 39.95

PC-4 Printer. Prints at 20 characters per line (60 lpm) in an electro-thermal 5×7 dot matrix. Includes rechargeable batteries and U.L. listed AC adapter/charger that can power a complete PC-4 system. 26-3652 79.95

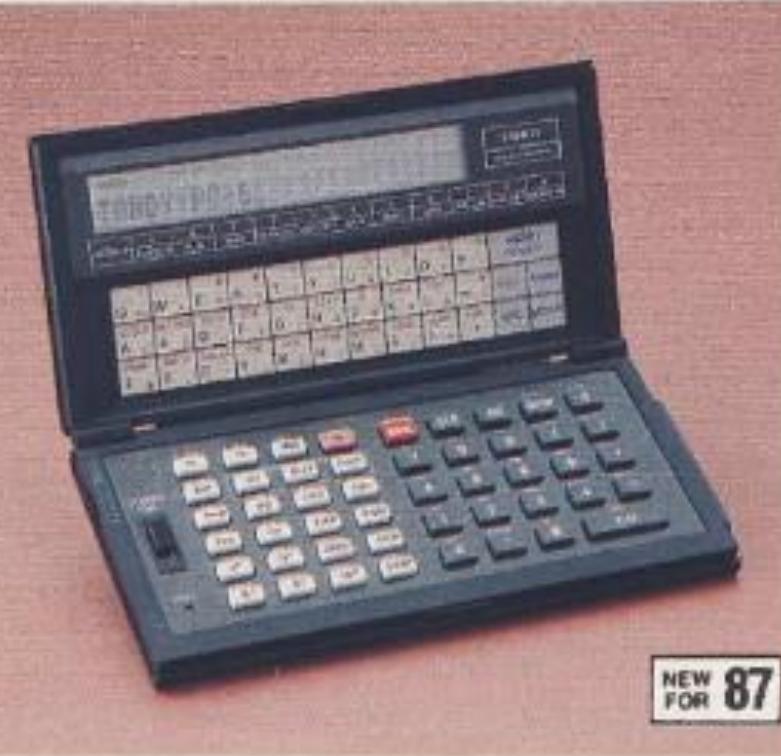
1K RAM Module. Triples memory of PC-4. 26-3653 19.95

Carrying Case. Protects PC-4, interface and printer. 26-3654 7.95

PC-4 Thermal Paper. Pkg. of 5. 65-711 9.95

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS



PC-6 Pocket Scientific Computer

119⁹⁵

Low As
\$20 Per Month*

- 65 Built-In Scientific Functions
- Programs in BASIC and Assembly Language

Pocket Scientific Computer PC-6. An ideal tool for engineers and students, the PC-6 combines the best features of a powerful scientific calculator and a pocket computer. Performs up to 65 scientific calculations—or write your own programs in BASIC or assembly language. Retains programs and data even when power is off. A built-in Note and Address File keeps important telephone numbers or engineering data and formulas handy. Features an easy-to-read, 24-character LCD. Uses PC-4 Cassette Interface and Printer with PC-5/6 Cable (all sold separately). 8K RAM. Folds up to only $3/4 \times 1\frac{13}{16} \times 5\frac{5}{8}$ ". Includes battery. 26-3672 119.95
8K RAM Module. 26-3674 19.95
PC-5/6 Cable. Use PC-5 or PC-6 with PC-4 Cassette Interface and PC-4 Printer.
26-3671 14.95

1987

26-3672

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS

TRS-80 PC-5/6 Specs

- Available 1986-1992
- CPU: Dual 4bit CPU @ 1MHz
- LCD: 24-character, not dot-addressable
- RAM (free): PC-5 4096 (3552), PC-6 8192 (7520)
- Size: 142x71x18mm (folded) , 142x142x9mm (open) , 165g
- PC-5, 26-3670 1986, Casio FX-780P
- PC-6, 26-3672 1987, Casio FX-790P

26-3670

26-3672

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS

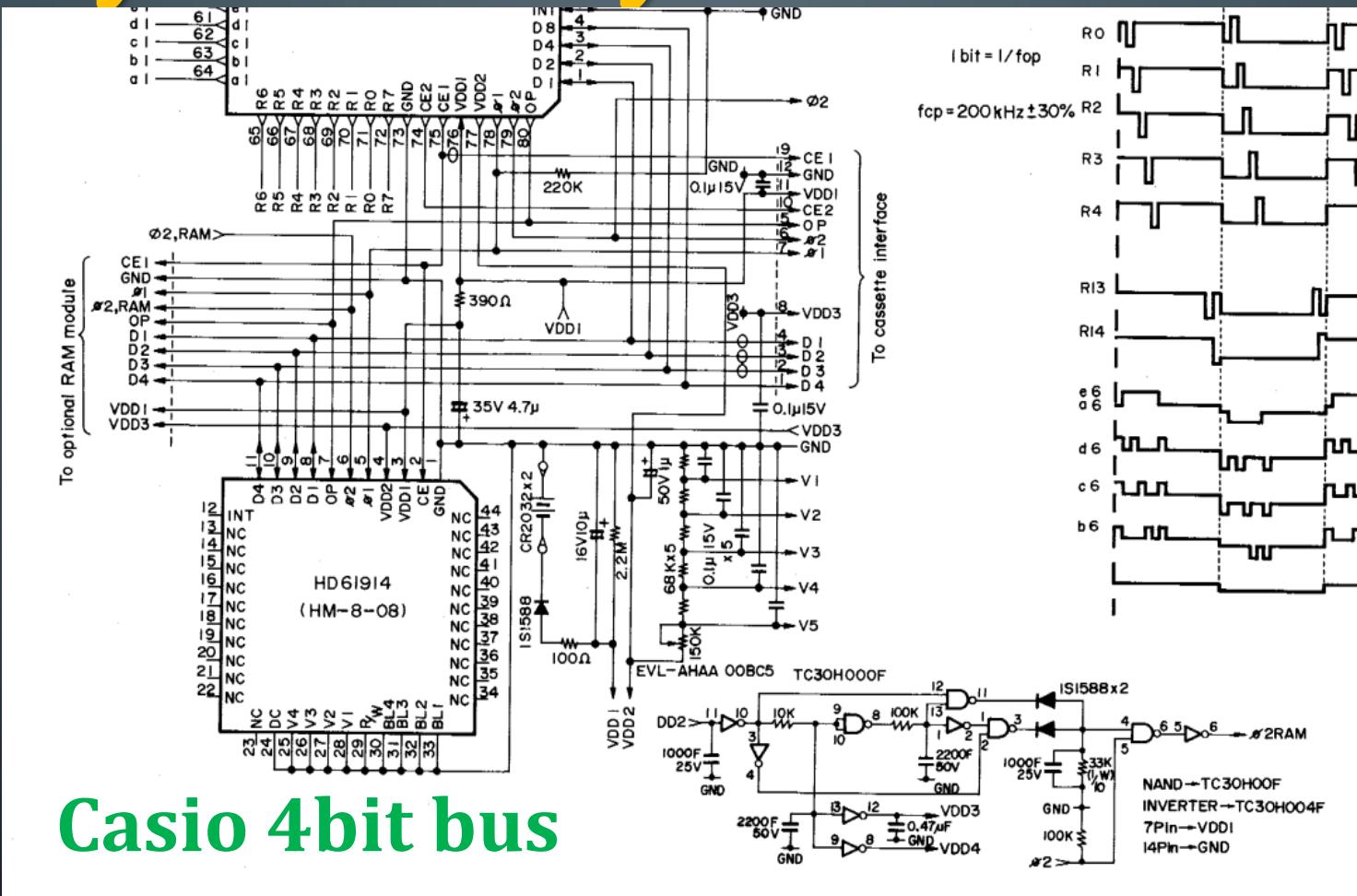
26-3670

26-3672

Casio 4bit bus

PC-5/6 Tidbits

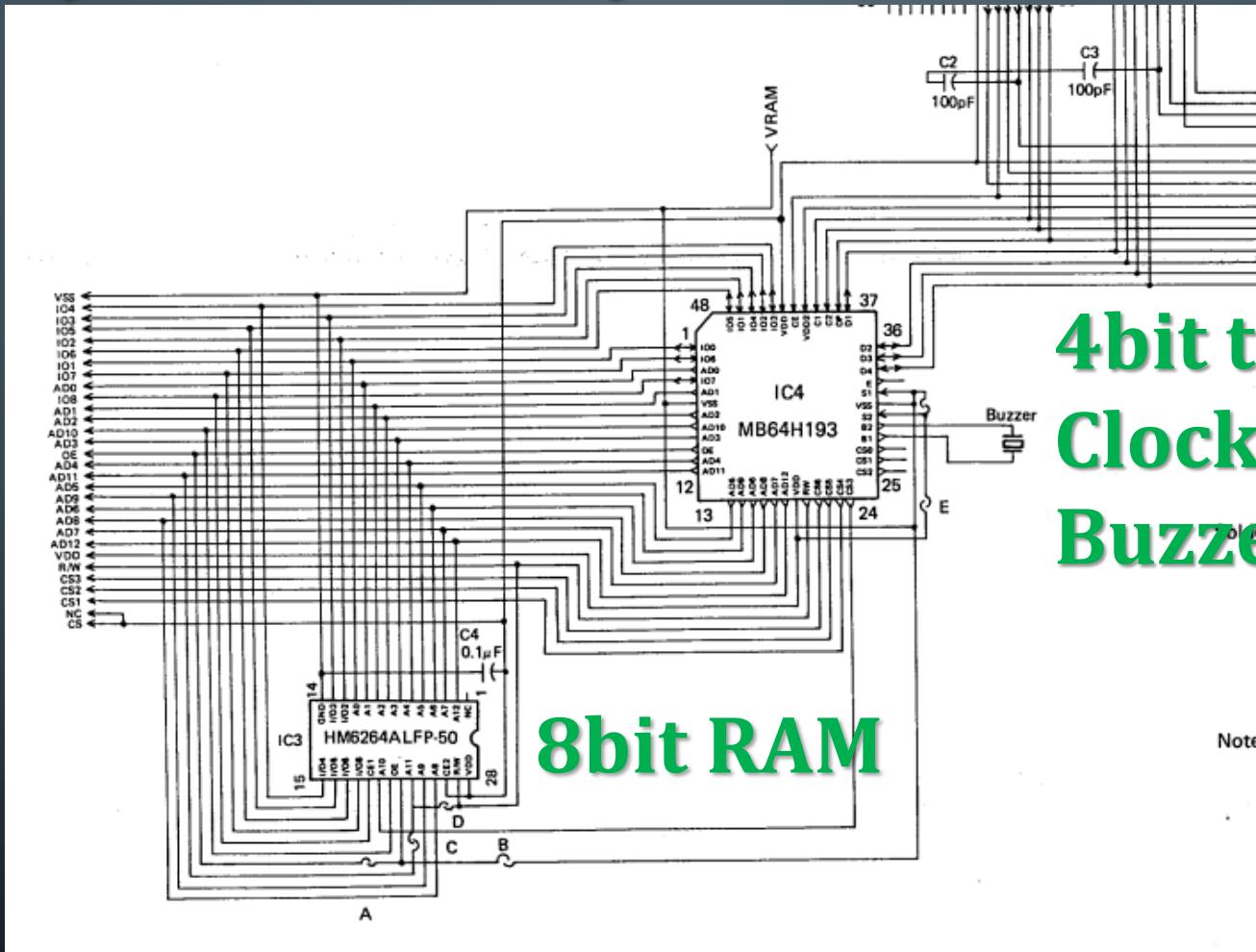
PC-5/6



HISTORY OF TANDY POCKET COMPUTERS

26-3670

26-3672

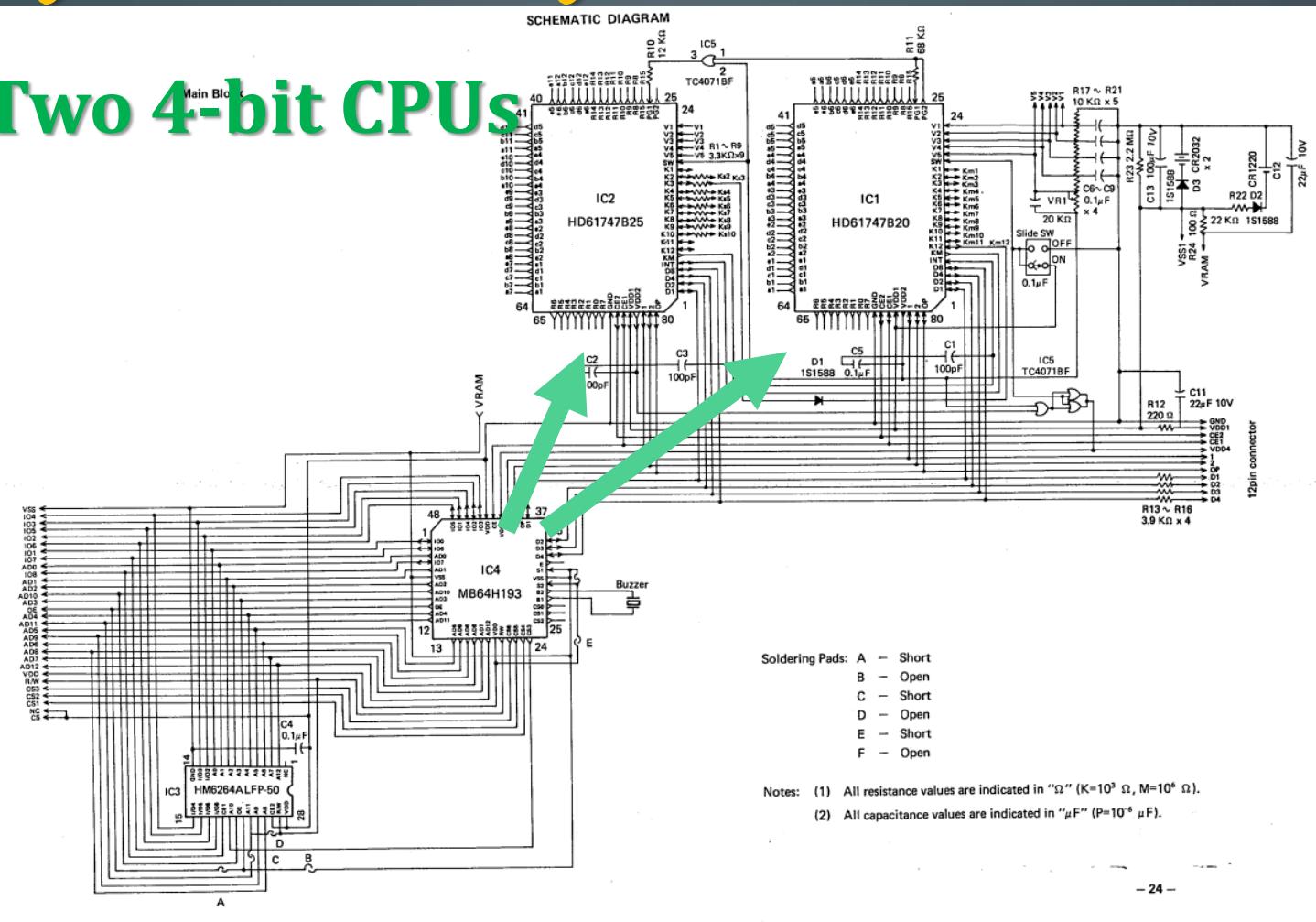


PC-5/6 Tidbits

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS

Two 4-bit CPUs



PC-5/6 Tidbits

26-3670

26-3672

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS

Main CPU	
HD61747B20	BASIC control, Key signal input/output (lower keyboard), 1st to 6th digits and 13th to 18th digits display control.
Sub CPU	
HD61747B25	Calculation, I/O control, key signal input/output (upper keyboard), 7th to 12th digits and 19th to 24th digits display control.
Gate Array	
MB64H193	Interface between CPU and RAM, buzzer control.
RAM	
HM6264ALFP-50	Stores data and program. RAM has 8K bytes (64K bits) capacity and contains a self-control circuit.

26-3670

26-3672

PC-5/6 Tidbits

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS

PC-5/6: Problems to look out for today

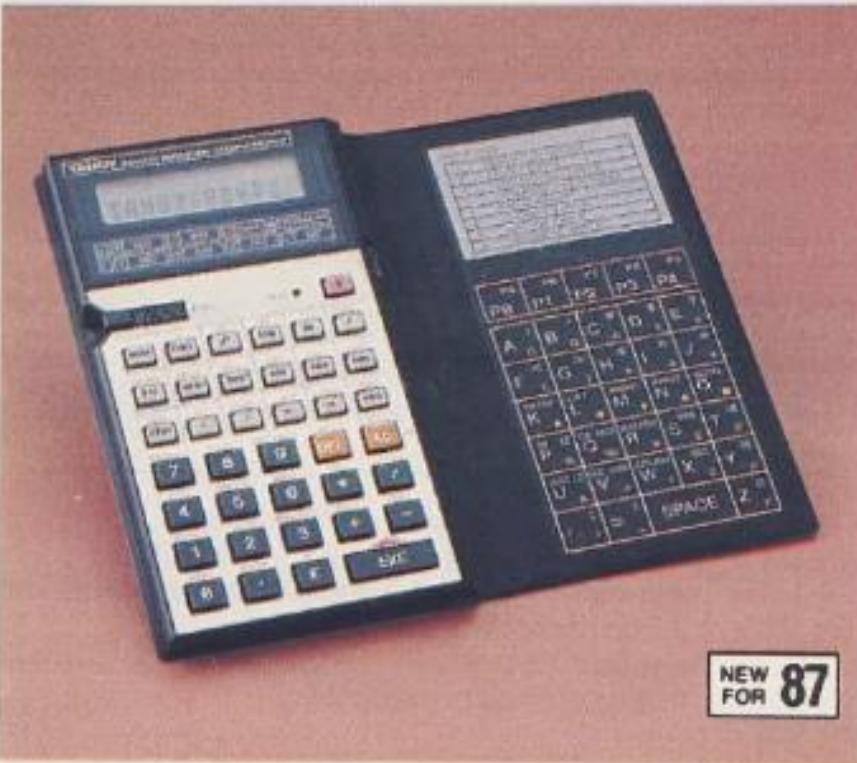
- PC-5 rare, PC-6 like bellybuttons
- Hinges always split but still work
- Latch often breaks, 3d printed fix
- PC-6 8K RAM expansion, RP-8 rare

26-3670

26-3672

PC-5/6

HISTORY OF TANDY POCKET COMPUTERS



PC-7 Pocket Scientific Computer

69⁹⁵

- With 72 Scientific and 17 Statistical Calculations
- Features 2K RAM
- Programs in BASIC

Pocket Scientific Computer PC-7. Keep track of important data and calculations wherever you go with our new PC-7 Pocket Computer. This incredible, compact unit performs up to 72 scientific calculations and 17 statistical calculations. This makes it perfect for engineers, students and professionals who need exact mathematical data rapidly. Mathematical functions include trigonometric, logarithmic/exponential, absolute value, permutations, standard deviation, linear regression and many others. The PC-7 features 2K random access memory and 35 commands in BASIC including: CLEAR, END, INPUT, DATA, READ AND STAT. You can even write your own programs in BASIC! Keyboard composed of 72 keys. Measures $13/32 \times 5\frac{1}{2} \times 7\frac{3}{32}$ ".

26-3673 69.95

1987

26-3673

PC-7

HISTORY OF TANDY POCKET COMPUTERS

1987

26-3673

PC-7

HISTORY OF TANDY POCKET COMPUTERS

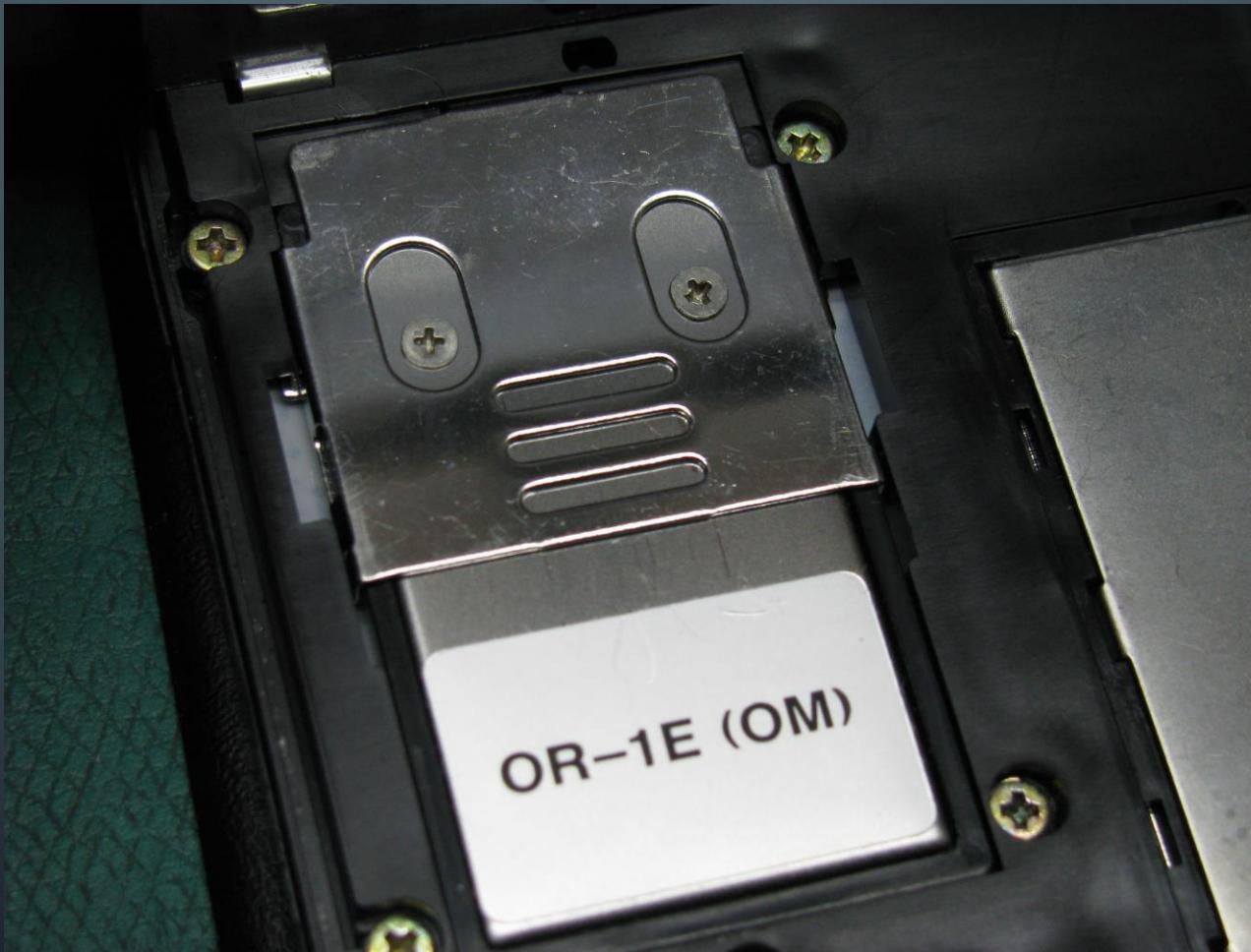
TRS-80 PC-7 Specs

- Available 1987-1989
- A.K.A. Casio FX-5200P from 1985
- CPU: 4bit CPU @ 200kHz
- LCD: 12-character, not dot-addressable
- RAM (free): 2048 (1568),
- Size: 139.5x87x13mm (folded) ,
139.5x180.5x10.4mm (open) , 146g

26-3673

PC-7

HISTORY OF TANDY POCKET COMPUTERS



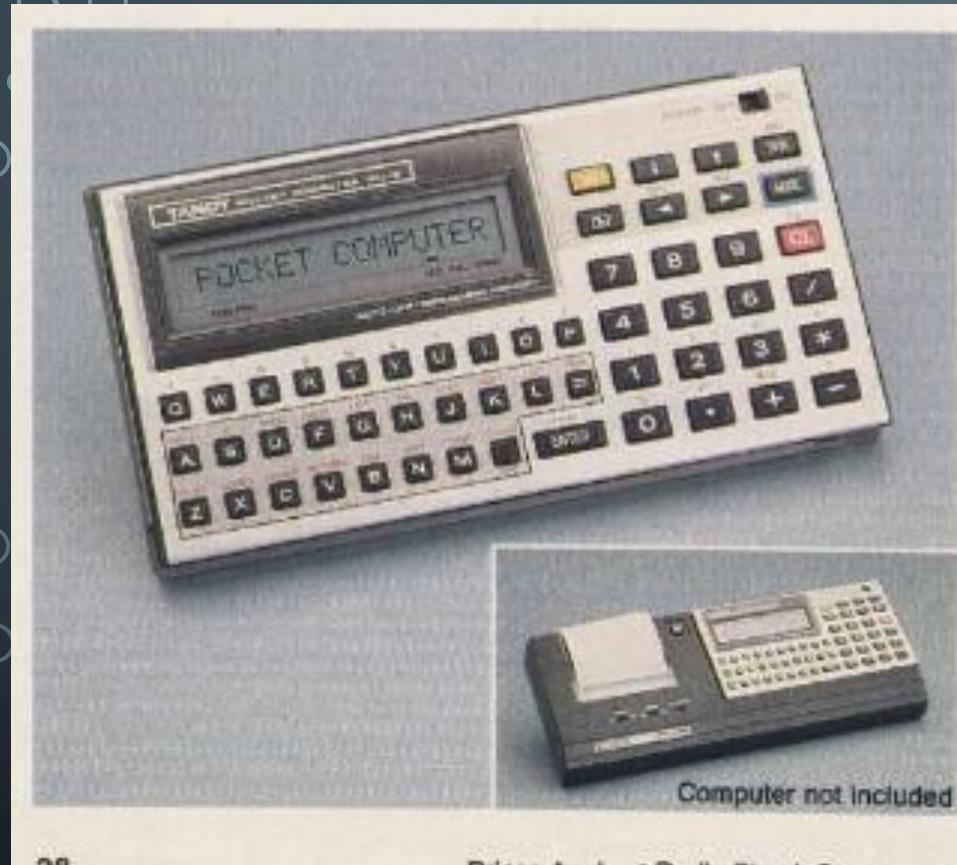
PC-7 Tidbits

1987

26-3673

PC-7

HISTORY OF TANDY POCKET COMPUTERS



Low-Cost PC-8 Pocket Computer

NEW
FOR
88

5995

- Measures $3/8 \times 5\frac{5}{16} \times 2\frac{3}{4}$ "
- 2K Memory

Pocket Computer Model PC-8. Ideal for business people. Do compound interest, installment loans and more. Lets you store frequently used programs in memory. BASIC language includes 24 commands, 27 functions and 10-digit numeric accuracy. Typewriter-style keyboard includes 53 alphabetic keys and a 10-key numeric datapad. A big 16-character LCD scrolls to 80 characters. With batteries and manual.

26-3655 59.95

Printer/Cassette Interface. Store and load programs on cassette tapes using an optional cassette recorder. Prints at 24 characters per line (48 lpm) in an electro-thermal 5×7 dot matrix. Includes rechargeable batteries and U.L. listed AC adapter/charger, paper, cable and manual. 26-3591 .. 119.95

Thermal Printer Paper. 26-3592 Pkg. of 5/2.49

Travel Case. 26-3608 19.95

1988

26-3655

PC-8

HISTORY OF TANDY POCKET COMPUTERS

TRS-80 PC-8 Specs

- Available 1988-1988
- A.K.A. Sharp PC-1246 from 1984
- CPU: 4bit CPU @ 1MHz
- LCD: 16-character, not dot-addressable
- RAM (free): PC-5 2048 (1278),
- Size: 135x70x9.5mm, 95g

26-3655

PC-8

HISTORY OF TANDY POCKET COMPUTERS

Questions?

HISTORY OF TANDY POCKET COMPUTERS

Links

- PC-1500 BOB: <https://github.com/kaibader/Sharp-PC-Breakout-Boards>
- lh5801 Disassembly: https://github.com/Jeff-Birt/lh5801_Dis
- Casio PICRAM: https://github.com/Jeff-Birt/Casio_PICRAM
- VSCode TASM Extension: https://github.com/Jeff-Birt/TASM_vsCode_Extension