

What's New on the HHC 2025 USB Drive

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HHC 2025 — September 27-28, 2025 — Orlando, FL



A brief background

- ▶ I've been archiving HP calculator files since I started hpcalc.org in 1997
- ▶ Since 2020, I've been scanning all HP calculator-related books and manuals for literature.hpcalc.org
- ▶ I've produced the HHC USB drive since HHC 2017 (Richard produced drives for several years before then)

HHC 2025 USB Drive

- ▶ Collection of nearly everything I can find related to HP calculators, plus some other extras for other brands of calculators and other HP products
- ▶ Much of its contents is spread across the Internet – but some is not
- ▶ Do you know of something that should be archived in the future? Tell me!

HHC 2025 USB Drive

This USB drive is the official record of the HHC 2025^{[[online link](#)]} conference.

HHC

HHC Conference Materials

Contains materials from HHC conference floppies, CDs, DVDs, and USB drives from 1998 through 2025, plus many of the presentation files.

HP Conference Videos

Contains captures of the talks presented at the live-streamed HPCC 2020 conference and HPCC January 2021, October 2021, and January 2024 mini-conferences, and videos recorded by Eric Rechlin of the talks presented at the HHC 2011 through 2024 conferences, as well as the HPCC 2022 and Allschwil 2022 conferences, plus others' recordings of the Allschwil 2016 and 2018 and HPCC 2023 and 2024 conferences, along with a couple videos presented at earlier conferences, Gene Wright's training videos for financial calculators, and a few other videos.

Large Collections

hp41.org

All the file downloads from Warren Furlow's hp41.org^{[[online link](#)]} site, the Internet's largest collection of HP-41 resources, archived as of September 22, 2025. Based on the November 6, 2020 torrent copy of the DVD and manually updated with all updates made since then.

hpcalc.org

An offline mirror of Eric Rechlin's hpcalc.org^{[[online link](#)]} site, the Internet's largest collection of HP graphing calculator resources, with over 9000 items, archived as of September 21, 2025. Also includes historic older versions of all files ever on the site, plus allows direct browsing of the contents of all compressed archives.

PPC Archive 2.47 - April 2025

A full copy of Jake Schwartz's vast collection of over 88,000 pages of information, including materials from various HP calculator clubs that were active in the 1970s to the present, plus materials from EduCALC and HP, current through April 1, 2023. Updates are available for purchase from Jake^{[[online link](#)]}.

For the best experience, please go to the root of this drive and open "Open PPC Archive.pdf" in your favorite standalone PDF viewing software for interactive PDF-based navigation of the collection. It is highly recommended that you use a quality third-party PDF viewer to open these documents, such as Adobe Reader, Foxit Reader, Nitro PDF, PDF-XChange, or Sumatra PDF, because these PDFs have features that do not work properly within a web browser or with operating system built-in PDF viewers.

Section 1 Version 2.22

65 Notes / PC Calculator Journal / PPC Journal volumes 1-14 (1974-1987), plus Chicago-Area CHIP Group Newsletters (1991-2005), Philadelphia-Area PAHHC Group Newsletters (1992-2000), and Atlanta CHHU Group Newsletters (1986-1987).

Section 2 Version 3.18

PPC ROM Manual, Computer Journal of PPC, CHHU Chronicle, HPX Exchange, HP-65 Key Note, HP Key Notes, HP Digest, and HP Journal articles.

Section 3 Version 22.0

42 years of Datafile (1982-2024), the journal of the British Handheld and Portable Computer Club, plus an index and scannable HP-41 barcode files for all issues.

Section 4 Version 2.22

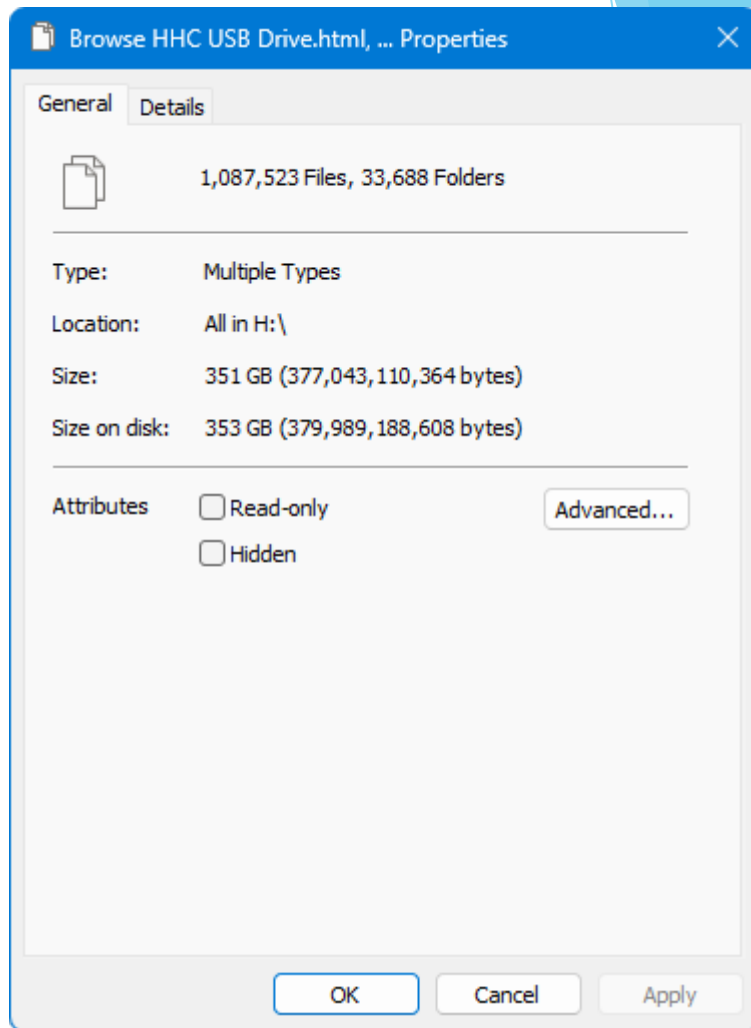
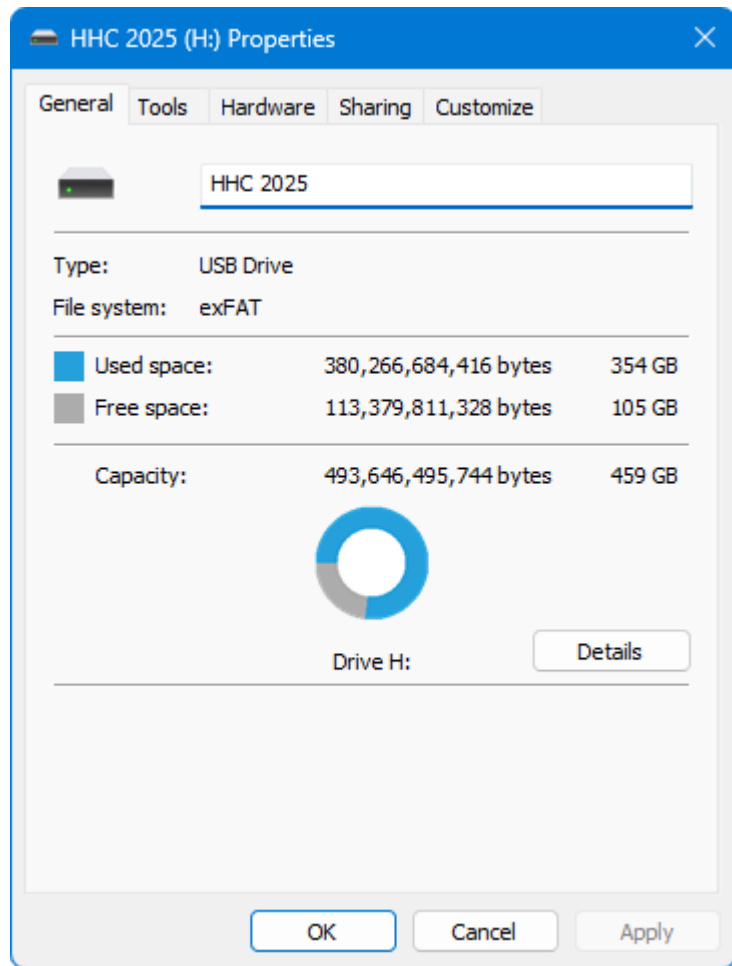
Australian newsletters, New Zealand newsletters, HHC conference proceedings (1979-2024), and the HP Solve Newsletter (2008-2014).

Overall structure of drive

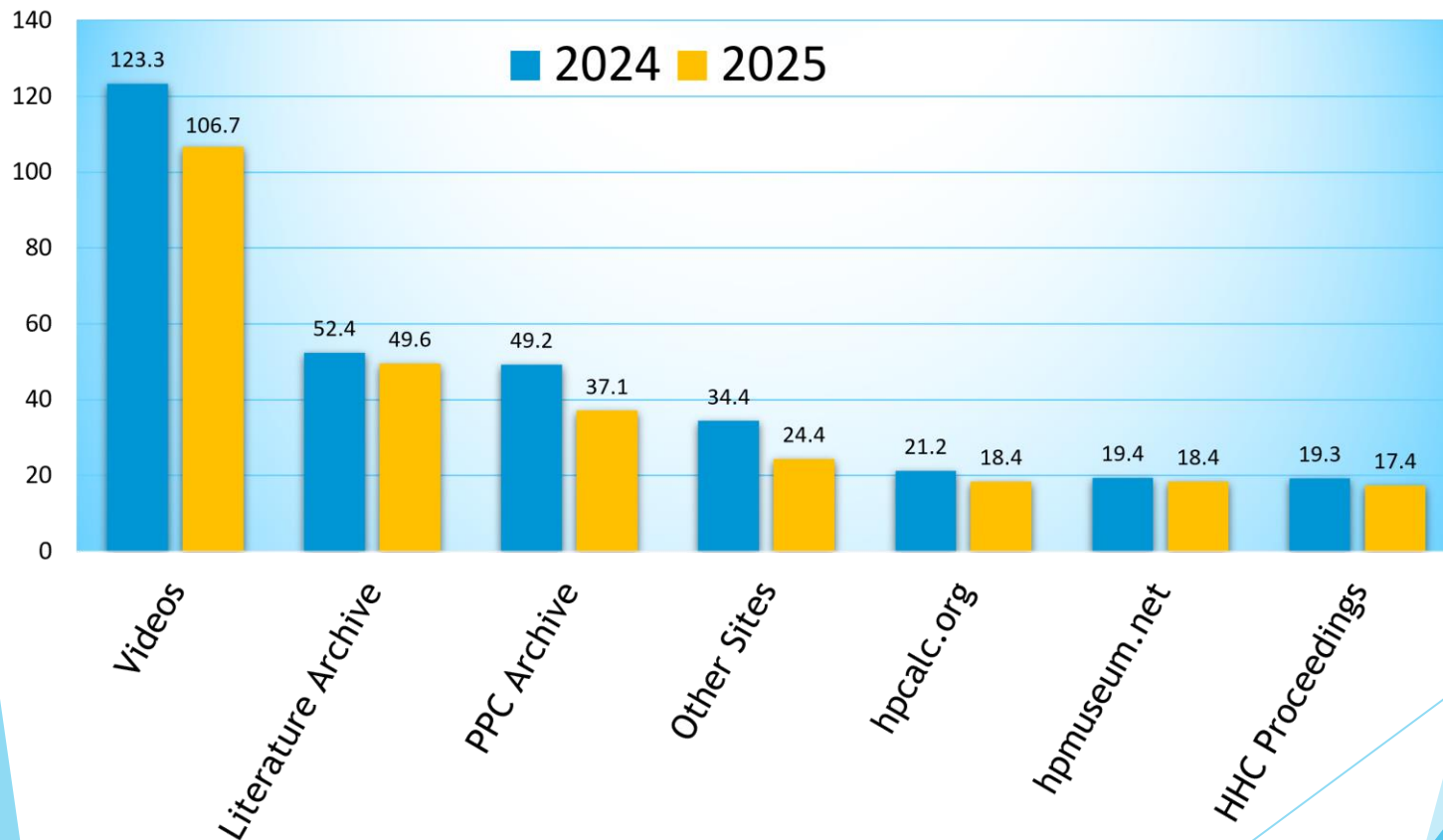
- ▶ Conference proceedings
 - ▶ Serves as the conference binder, with all proceedings since 2011
- ▶ Discussion forums
 - ▶ Over 700,000 messages archived
- ▶ Manuals and books
 - ▶ Almost 2600 PDFs in the Manuals section
- ▶ Emulators (Windows)
- ▶ Offline mirrors of web sites
 - ▶ 27 major sites preserved
- ▶ PPC Archive
- ▶ Periodicals
- ▶ Fonts
- ▶ Photos

A new drive again

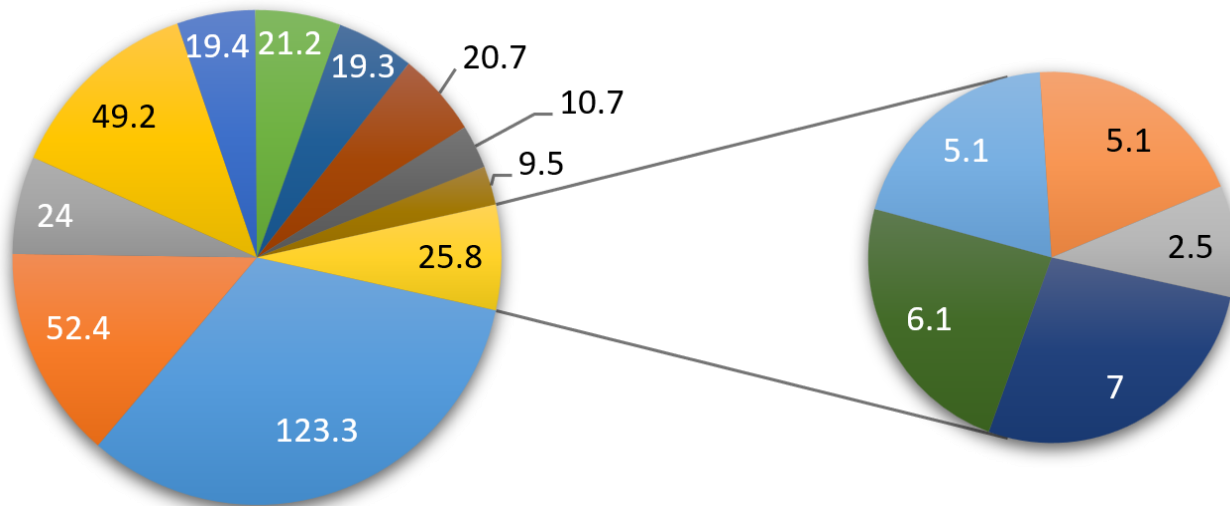
- ▶ Last year was the first with a 512 GB drive
- ▶ That drive has not dropped in price
- ▶ Now using the dual USB-A/USB-C version of last year's drive, which is \$2 cheaper!
- ▶ Not the fastest drive but fast enough and reasonably priced (about \$44)
- ▶ Added about 50 GB of data since last year
- ▶ Over 110 GB free, so we should be good for a couple more years



What's taking up all the extra space?



What's on the drive?



- | | | | |
|----------------|----------------------|--------------------|---------------------|
| ■ Videos | ■ Literature Archive | ■ hparchive.com | ■ PPC Archive |
| ■ hpmuseum.net | ■ hpcalc.org | ■ HHC Proceedings | ■ Other sites |
| ■ Other | ■ hp41.org | ■ Other books | ■ HP Memory Project |
| ■ J-F Garnier | ■ Forums | ■ Valentin Albillo | |

Few changes to most sections

- ▶ Emulators: Updated Emu28, Emu42, Emu48, Emu71, Free42, Plus42, Teenix, V41, WP 31S, WP 34S, C47
- ▶ hp41.org: Fewer than 20 updates
- ▶ series80.org: Added one document
- ▶ hpcalc.org: Over 250 updates
- ▶ hpmuseum.net: About 80 new scans, mostly added in the last couple weeks
- ▶ PPC Archive: Lots of new stuff, but Jake will tell you all about that

Few changes to most sections (II)

- ▶ HP Museum Forum has one more year of posts
 - ▶ Now has 198,458 messages from current forum
- ▶ Katie Wasserman added 3 scans to her manuals site
- ▶ “Great HP” by Giovanni Becattini updated
 - ▶ Now 1216 pages. Previous version retained due to its higher image quality, however
- ▶ HP Memory Project has a few more memories
- ▶ Vintage Calculators Web Museum added a few photos
- ▶ Valentin Albillo’s HP collection saw minor updates

Bright spot for the forum?

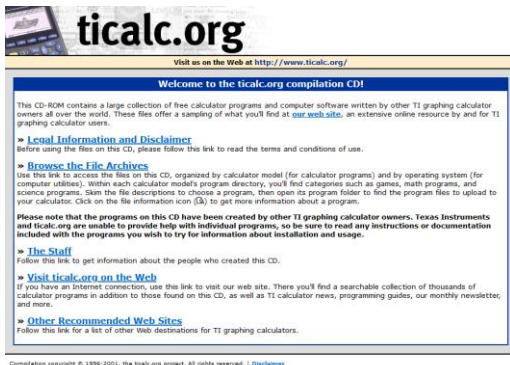
- ▶ 2025 is looking better than recent years, each month this year has generally had around the 2nd most number of posts since about 2018

HP Museum Forum

198458 messages

Year	January	February	March	April	May	June	July	August	September	October	November	December	All
2013												1667	1667
2014	2138	1705	2016	2070	2543	2661	1111	1220	1448	1278	1152	1634	20976
2015	2196	2713	2807	1946	2472	1718	1611	1368	1735	1643	1637	1634	23480
2016	1677	1483	1592	1926	1313	1285	1170	1128	1538	1219	1436	1165	16932
2017	1428	1235	1942	1721	1326	1307	1247	1490	2370	1693	1854	2837	20450
2018	2416	1912	1822	1795	1829	1240	1528	1515	1948	1717	1310	1455	20487
2019	1690	1465	1257	1418	1299	1081	994	987	991	1331	1375	1385	15273
2020	1613	1119	1190	1215	1466	1275	957	921	1127	1358	1233	1053	14527
2021	1545	1141	1681	1673	1349	1178	810	996	979	1116	1103	1071	14642
2022	815	724	889	1058	1034	931	930	818	1081	990	1027	1020	11317
2023	905	789	1069	1054	1456	825	895	1409	986	1485	1536	1225	13634
2024	1016	931	952	1002	1103	1067	850	1174	1439	1968	1668	1437	14607
2025	1165	1207	1276	1459	1426	1522	1230	1181					10466

Newly archived sites (for Gene!)



- ▶ ticalc.org
 - ▶ Contents of their 2001 CD
 - ▶ Graphing calculator files



- ▶ TI-58C Site
 - ▶ Hosts Pierre Houbert's TI-58C emulator, with a large number of support files
 - ▶ Also documents his extensive calculator collection, with many HP models too

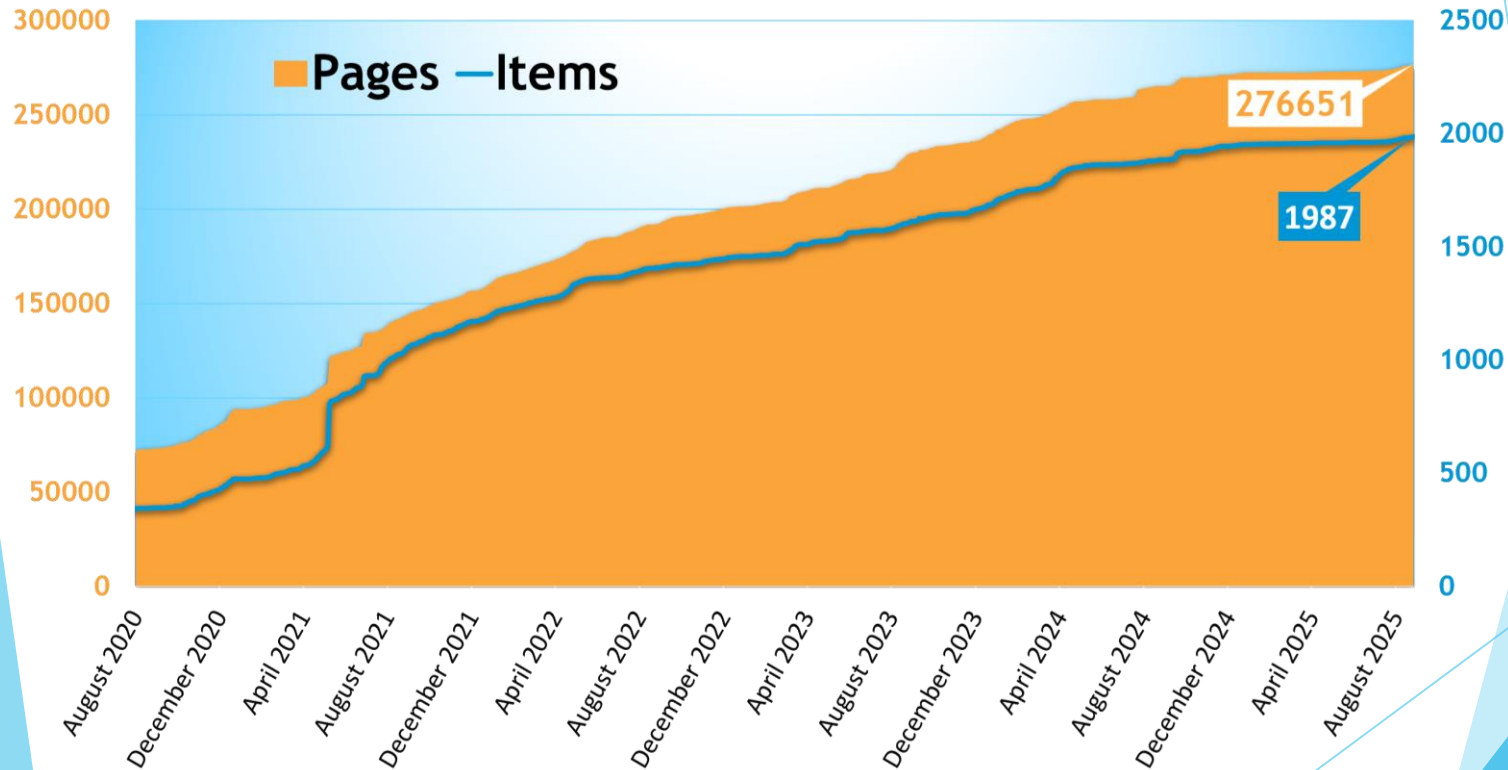
More videos

- ▶ Added the videos from the 2024 HHC, HPCC, and Stuttgart conferences
- ▶ Added one other video (HP-65 training) I found online

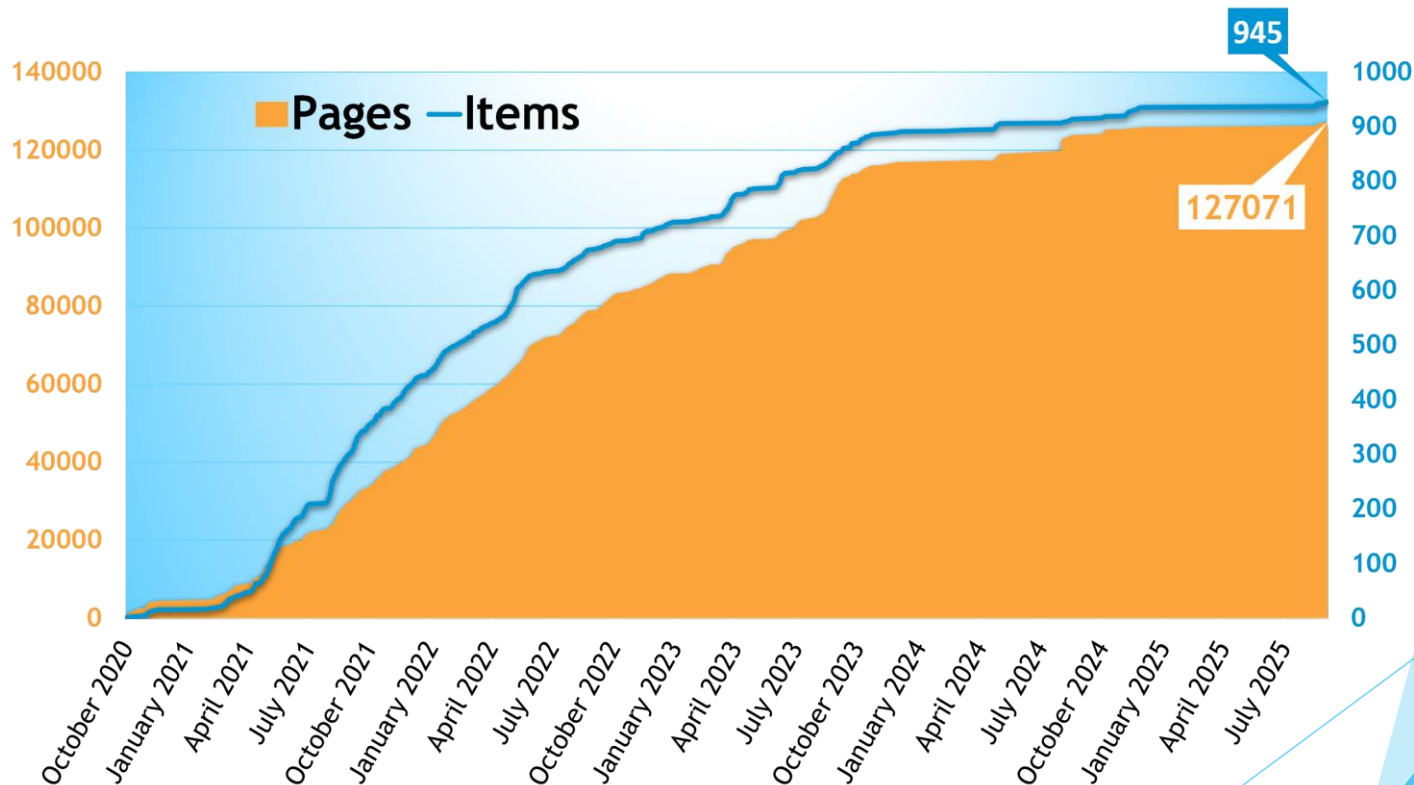
Literature Archive additions

- ▶ Comprehensive collection of HP calculator documentation
- ▶ 10,500 more pages in 97 more books than last year
- ▶ PDFs sourced from HP:
 - ▶ 545 items totaling 87,802 pages
- ▶ PDFs sourced from the user community:
 - ▶ 1442 items totaling 188,849 pages
 - ▶ 945 of these, with 127,071 pages, were scanned by me
- ▶ Total is 1987 items with 276,651 pages (52.4 GB)
- ▶ Also available online:
<https://literature.hpcalc.org>

Literature archive size over time



Number of items I scanned over time



What do I still need?

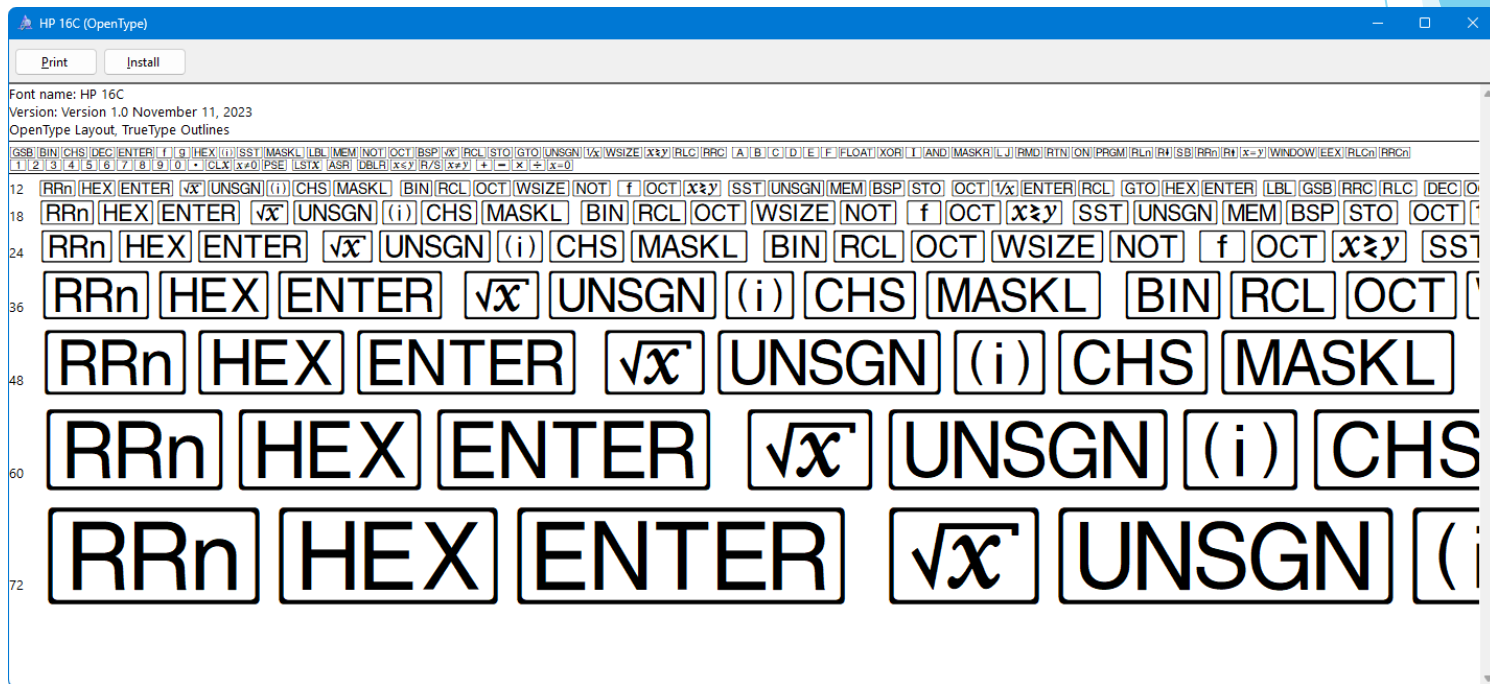
- ▶ Top priorities of books/manuals I need to scan:
 - ▶ HP-41 Users' Library Solutions: Applied statistics I
 - ▶ Computer Science On Your HP-41 Using the Advantage ROM
 - ▶ HP-75 NOMAS Volume 1: Source Code
- ▶ Also looking for more “internal” documentation:
 - ▶ Most service manuals I scanned are photocopies, not originals
 - ▶ More NOMAS listings, like HP-75 I/O ROM, 82104A Card Reader ROM, 82180A Extended Functions ROM, and 82905B Printer ROM

Obtaining extra HHC 2025 USB drives

- ▶ One is included in your conference packet
- ▶ Additional drives may be purchased from my web site:
<https://commerce.hpcalc.org>
- ▶ Price: US\$80 (includes \$25 donation to HHC, to subsidize your drives, which were not covered by your conference registration fee)
- ▶ Fine print: Most virus scanners will flag “ALREADY.COM” on this drive as a Trojan. This is understandable because of its functionality, but still a false alarm. Worse virus scanners will have other false alarms – ignore them, and even better, stop using them.

And now for something completely different

- About 2 years ago I made this:



Will a finished manual be an incentive?

48 Section 4: Arithmetic and Bit Manipulation Functions

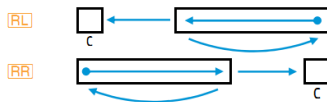
Keystrokes	Display	(STATUS: 2-08-0000)
[F] [SR] [F] [SR] [F] [SR]	00001111 b	Each shift performs an integer divide by 2 and sets flag 4 because a 1 is shifted into the carry bit.
[F] SHOW [DEC] (hold)	15 d	
(release)	00001111 b	
10000000	10000000 b	
[F] SHOW [DEC]	-128 d	
[9] [ASR] [9] [ASR]	11100000 b	
[9] [ASR]	11110000 b	Sign bit is regenerated and carry flag is cleared with each shift.
[F] SHOW [DEC]	-16 d	
(release)	11110000 b	

Rotating Bits

There are three general types of rotate functions on the HP 16c, encompassing eight different functions.

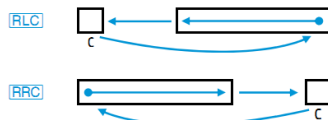
- Rotate left and right (**[RL]**, **[RR]**).
- Rotate left and right "through the carry bit" (**[RLC]**, **[RRC]**).
- Rotate n places (**[RLn]**, **[RRn]**, **[RLCn]**, **[RRCn]**).

Rotation. Pressing **[F] [RL]** (rotate left) or **[F] [RR]** (rotate right) causes the contents of the X-register to rotate (or "circularly shift") one bit to the left or right. Bits shifted out of the word re-enter it at the other end. The carry flag is set if a 1 bit is rotated around the end, and is cleared if a zero is rotated around the end.



Section 4: Arithmetic and Bit Manipulation Functions 49

Rotation Through the Carry Bit. The **[RLC]** and **[RRC]** (rotate left through carry and rotate right through carry) functions respectively load the leftmost or rightmost bit of a word into the carry bit, and move the carry bit into the other end of the word.



Rotating More Than One Bit at a Time. Given a bit pattern in the Y-register and n in the X-register, pressing **[F] [RLn]**, **[F] [RRn]**, **[9] [RLCn]**, or **[9] [RRCn]** will rotate the pattern $|n|$ bits. The stack drops, placing the result in the X-register.

The status of the carry flag (flag 4) is the same as if **[RL]**, **[RR]**, **[RLC]**, or **[RRC]** were performed $|n|$ times. For instance, executing **[RRn]** with $n = 3$ will set the carry flag only if the third bit from the right (bit 2) is 1.

Example: Develop a keystroke sequence that will serve to rotate left as one word a 16-bit word divided into two separate 8-bit words held in two separate registers. For instance, with a word size of eight bits, rotate the word 00011100 11100111.

Keystrokes	Display	(STATUS: 2-08-1000)
11100	00011100 b	High order portion of 16-bit word.
[F] [SL]	00111000 b	Moves most significant bit into carry bit.
[9] [LSTX]	00011100 b	Recovers high-order portion.
11100111	11100111 b	Low-order portion of 16-bit word.
[9] [RLC]	11001110 b	Carry bit (most significant bit of high-order portion) moves into least significant bit position of low-order portion.

