

HP's Calculator Manuals

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Legacy users of HP's Calculators usually remember the manuals that came with their machines in a positive way. Popular opinion seems to suggest that newer manuals are not as good as the older manuals, and certainly every manual user, old or new, seems to complain that there are never enough examples¹.

Most commonly the manual that describes the machine and how to use it is called the owner's manual. This is a generic term for a manual that comes with your car, refrigerator, or calculator. The owner's manual is assumed to contain the important information related to the product and how to use it.

HP didn't start out calling their calculator manuals, "Owner's Manuals", and they don't call them by that name today. The HP-35 (1972) came with an "*HP-35 operating manual*" (36 pp.) The lower case is HP's choice. The HP-65 (1974) came with an "*HP-65 Owner's Handbook*" (107 pp.) The HP-67 (1976) came with an "*HP-67 Owner's Handbook and Programming Guide*" (353 pp.). The HP-41C/41CV came with an "*Operating manual, A Guide for the Experienced User*" (71 pp.). The HP48G Series machines (1993) came with a "User's Guide" (592pp.). All of these manuals were printed, most spiral bound, and heavy.

After 16 years of calculator manuals the eleven Pioneer Series of machines (1988-1991) came with an "*Owner's Manual*" (larger size, ~250 pp.). More recent machines now come with a "*User's Guide*" or "*Quick Start Guide*." The name has changed from manual to handbook to guide.

Another often remembered "feature" of HP's manuals is the use of humor when illustrating examples. Especially memorable are the unusual names for people used in the example. One reason that users tend to remember these things is that they desperately need examples in manuals. The "*PPC ROM Manual*" demonstrated this need by example by providing extensive examples for every one of the 153 routines described in the 500 page tome.

Why is this completely obvious aspect of the user's need ignored by HP when it produces its manuals? After 33 years of writing about this issue, especially after producing the *PPC ROM Manual*, I believe that I know the answer. The resources required to include lots of examples for any publication is simply beyond the resources that are available. The *PPC ROM Manual* was able to provide the much needed examples because of the donated 100 man years – 876,528 man hours – that the User Community put into the project. Can you imagine HP, or any calculator manufacturer, spending these kinds of resources on any similar project? At a value of \$20/hr. for the time, that would be \$17.5 million dollars or \$35,000 dollars per document page to produce the content.

I mention these things because of the "chatter" often seen on the various HP web sites that users complain about HP's manuals. I don't disagree with many of these complaints because I have been writing about (and complaining about) HP's manuals for 33 years. I have probably met with (in person, fact to face) most of the manual writers at HP for most of their machines.

Back in the days when HP had all of their operations – engineering, marketing, and manufacturing – in one location in Corvallis I would visit the "factory" for three days meeting with many different teams dedicated with calculators. I especially remember one meeting with the documentation group (at a mutual request because of some of the things I had written²) that mentioned that they thought that their manuals were some of the best in the industry. After all, they had won awards for their manuals. Of course I was coming from a perspective of what is desired from the user's perspective and these experiences drove the

decision to include extensive examples (and a formal format of section headings, extensive index, etc.) in the *PPC ROM Manual*.

Manuals for computer related products have always, and will always, fall short from the user's perspective simply because of ignorance, resources, complexity, cost, and time. The needs of the user don't change, it is the manufacturer's continuous attempts to competitively meet those needs that changes.

"If resources were unlimited", is a prerequisite that every complainer should use when writing about manuals. From the user's perspective I personally would like to see a manual approach similar to the following.

1. A **photograph** of the keyboard with each and every key identified with a description of what the notations and symbols mean.
2. A **key response description** of what happens when any key is pressed. Presenting this matrix of key responses will require that the user understand that keys change in their meanings depending on the mode or environment at the moment the key is pressed.
3. A **reference organization** that recognizes that the manual is used at least five times more frequently for reference than it is used for explanation (initial) reading.
4. **Each page is numbered²** sequentially. Bill Wickes addressed this issue using Section numbering and page numbering in his famous trilogy of HP48 books. If you can't look at the last page in the manual and know the total number of pages in the document you don't understand how important page numbering is.
5. **Examples** – practical, real world, and meaningful - are important and this is discussed above.
6. **Consistent Style**. Manuals should be written following a published style³ that dictated what must be covered in an Owner's manual, handbook, or guide.
7. A **two tier index⁴**. While examples are omitted because of necessity the lousy indexes in most calculator manuals are a classic example of ignorance. Using modern computers it is an easy task to produce a document with an index index of 3 or higher (Number of index entries divided by the number of text pages). Every technical document that is to be used as a reference has at least three words, terms, or important ideas per page. The document must be proofed. Simply write down these index items with the page number as the proofing is being done. Word has an index capability.

HP calculator teams have reinvented themselves three times and while a history lesson is interesting, how should the manual issue be viewed using today's business outsourced model? Many of you reading this have watched HP up close and personal during their active participation at HHC's since 2002 when Fred Valdez broke the mold for HP User Community relationships. The record setting attendance at HHC 2007 witnessed the changes that are taking place – slowly but consistently. A new calculator GM, Wing, first met at HHC 2007 with the support of the post Carly president, Hurd, demonstrated that HP is changing in ways that brings a smile to the face of the legacy user. Product indicators of this very positive change are the HP50g and the HP35s. Regarding the latter, the HP35s manual is now available to be down loaded at:

http://h10010.www1.hp.com/wwpc/pscmisc/vac/us/product_pdfs/user_guide.pdf

Printed manuals is still an HP challenge and there have been several solutions proposed to solve this “problem.” After a long period of working with at least one third party they could not agree to go forward. Business volume is the primary issue. I am so tempted to get into the HP printed manual business. Still, having a manual in a useful downloadable form as illustrated at the link above is most helpful. If you must have a printed copy you may print it yourself, or have it done at a copy store, and bind it using the method described in my HHC 2004 paper “Personal Low Cost Binding system.” Manuals will become ever smaller with the primary User’s guide to available on CE and/or downloaded from HP’s web site.

Manuals will always be a topic of discussion by users, young and old, ignorant and thoughtful, newbie and experienced. What is most important, however, is to understand the issues involved, sharing your desires with HP, and being prepared to reach ever deeper into your wallet for good quality manuals, handbooks, or guides.

Footnotes:

- 1. Technology changes the way we use information. Manuals are provided on CD’s. Examples, as mentioned here, are usually associated with a manual; printed, downloaded, or provided by HP on a CD. What is an example? It is a step by step procedure, process, or algorithm that shows you how to solve a problem or use a process. Today HP is using video technology in the form of training Guides for their machines. The Training Guides may be found on their web site and they are being produced by experienced users of their machines.*
- 2. One of the comments I had written regarding poor HP documentation was the fact that at least the pages should be numbered on documents over four pages in length. I was severely taken to task for saying that HP didn’t number their pages. I then mentioned a 72 page document that wasn’t page numbered. They appeared to be shocked when I pulled a copy from my briefcase*
- 3. When I asked if an HP Style Manual existed most of the people in the room were hesitant to talk about it. They implied that they did, but when I asked if I could get a copy I was stone walled. Privately a writer later explained that each writer used his or her own references, and that they did not have an official HP Style Manual. This older HP confidant writer explained that there was an official HP Style manual, but it hadn’t been updated in many years – at that time – and the younger writers didn’t know about it. This was during the CVD days and much has changed. Perhaps there is an HP Style Manual being used at HP today. If there is one it is not obvious. My photocopy really looks old.*
- 4. In the famous calculation philosophy of Prof. William Kahn there are avoidable errors and unavoidable errors. Perhaps the lack of examples could be justified to be in the latter category, but having a poor index is most certainly in the former category. An index value of three or higher is most desirable.*