Long live the HP-12C!

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No, I never had an HP-12C twenty years ago. Then, a financial calculator wasn't my cup of tea, far from it! I guess my financial data at the time could be managed using just the fingers on one hand, and then there would still be some left unused. But nowadays, when HP isn't releasing classical models anymore and the trend seems to be ghastly colours, cheap plastic bodies not designed to last, rubber keys, and bug-ridden, user-beta-tested, algebraic logic models, it makes sense to turn one's nostalgic eyes toward the only real classical model still left in this now pitiable world of HP calculators. Enter the unsinkable HP-12C.

I know, I know, it's a financial model. So what? Do you really, really need those sines and cosines, not to mention hyperbolics or gamma functions? Maybe you do. As for me, I simply need the four arithmetic operations most of the time. And the occasional square root or elevation to a power, not to mention the truly rare time where a log or antilog is needed. And a healthy number of storage registers, say half a dozen or so, with storage arithmetic, of course. And the ability to select the display mode.

And a reasonable programming capability. Easy, fast, intuitive keystroke programming, no time nor desire to learn the vagaries of complicated '"object-oriented, symbolic-capable" languages, thank you, just keystroke programmability, the one that if you know how to do something manually, you simply switch to program mode and do exactly the same, no manuals needed, and lo and behold, you have your quickie, instant program, long before your neighbour has managed to get out his bulky chunk of bluish plastic from some huge, straining at the seams pocket and traversed a dozen menus in search of that elusive *whatchamacallit* function. And of course, first and foremost, I demand traditional, time-proven 4-level-stack-plus-LastX RPN!

The HP-12C has all that. And a slim, ultra-elegant horizontal design, with that added touch of golden distinction in its metallic front, to boot. And an extremely clear, segmented LCD display, which you can actually read in all kinds of illumination, unlike those dot-matrix, low-contrast displays of late. And it feels solid. And it fits in your shirt pocket perfectly, without making a spectacle of yourself. And its batteries seem eternal, so that you'll actually forget the year you replaced them last time.

So, for me the HP-12C is the ideal everyday-use calculator. You can carry one with you all the time, you'll always gather some admiring, inquisitive glances the moment you take it out of your pocket. As if by magic, you'll always have it at hand for a quick calculation, or even a quick feat of keystroke programming or to convert those pesky euros to decent money, for instance.

You may ask: why not use an HP-11C or HP-15C or whatever instead? I'll tell you in one word (no, it's not “tradition”): Money. Those wonderful machines, if in good condition, are very costly items, $150 at a minimum and upwards. Using them occasionally, in the controlled environment of your own home is okay. But using them frequently, casually, at your work for instance, means you risk damaging them accidentally, or worse, getting them stolen or lost. Accidents do happen. And distractions or theft do happen too. And if nothing else, they'll eventually wear out.

On the other hand, the HP-12C is fairly inexpensive in comparison,. you can get one new or in very good condition for very little money, there are dozens and dozens being offered on eBay each day. Or you can buy it second-hand easily. Or even new if you fancy! So you can perfectly well afford to own several. One for home, one for work, one for your teenager, to introduce him/her to the mysteries and marvels of classical HP quality. The HP-12C is the ideal, all-purpose, everyday calculator.

I don’t just preach this revelation of getting 12Cs by numbers. I bought four HP-12Cs, all of them very cheap, and will even buy more in the near future, to present to selected friends. I use it as any John Doe would use his 4-function $5 calculator. But feeling its keyboard is a pleasure said J.D. won't have, and the comfort of its RPN operation is probably also beyond him. The moral of this history? Go get one, two, or more! Use it everywhere, give them as generation-spanning presents to your grown-up children. Spread it. Enjoy it. It's no wonder it sold more than a million units.

And, to commemorate its 20th anniversary, let's also show what the HP-12 is capable of doing with its basic but surprisingly adequate keystroke programm-ability.

To prove the point, here is a brand new, unpublished program, written by myself. which will deliver the promised goods.

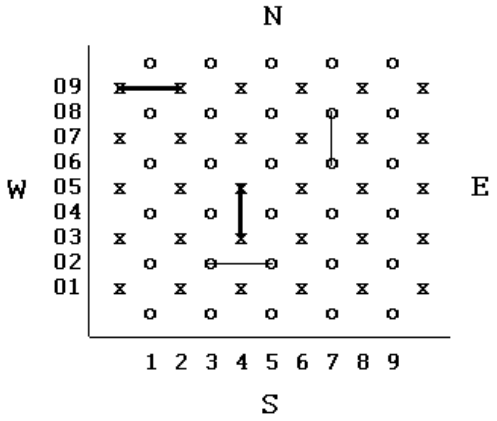
Exhibit A: Bridge-It

"All work and no play makes the HP-12C a dull calculator"

Not so! Surprise your sceptic friends by challenging them to a quick game of **Bridge-It** against your trusty old HP-12C.

They said it couldn't be done, at least not in this amount of memory, not to mention playing *nth-order boards*! But you can prove them wrong with this 'neato' program which allows your HP-12C to play **Bridge-It** against a human opponent on boards of any size, up to 99x99!

Bridge-It is a challenging board game between you and your HP-12C, which is played as follows:



You'll play on this board, formed by alternating 'o' and 'x' pegs in rows and columns, and we'll call the number of 'o'-pegs in each row (which must equal the number of 'x' pegs on each column) the 'order of the board'. In the depicted example above, the playing board is of order 5.

Both you and the HP-12C will take turns to play, and in each turn you will have to connect ('bridge') two adjacent 'o' pegs, either horizontally or vertically, anywhere on the board. Your HP-12C will do likewise in its turn, connecting two horizontally or vertically adjacent 'x' pegs, also anywhere on the board.

The goal of this game is this: the machine will try to form a *continuous* path between the East and West sides of the board, by bridging its 'x' pegs here and there until a connected path is achieved. You'll try to do exactly the same, but your path must connect the North and South sides of the board, by making a continuous path formed by bridging your 'o' pegs.

The player who first builds such a continuous path wins the game. Of course, it goes without saying that no bridge can cross another, so you and the machine should try to block the opponent while making progress at the same time.

This program will allow your HP-12C to play boards of any order up to 99! You'll first select the order of the board you want to play, then your HP-12C will make the first move, and you'll then take alternate turns until a winning path is established. The following coordinate convention is used:

- your HP-12C will indicate its move this way: (**bold** bridges above):

  1.09 => 1 is the column, 09 is the row, so this means the machine has built an horizontal bridge between its two 'x' pegs located in row 09, at both sides of column 1.

- you will indicate your moves the same way, but without the dot in between, like this (regular bridges in the diagram above):

  707 => the first 7 is the column, the second 7 is the row, so this means you built a vertical bridge between your two 'o' pegs located in column 7, at both vertical sides of row 7. As you can see, the other move from you, as depicted in the above diagram, would be entered as **404**.

Program listing:

```
01  f CL FIN    25  g FRAC      49  RCL 0
02   f 2        26  g X=0       50    +
03  ENTER       27  g GTO 64    51    1
04    +         28  RCL 0       52    +
05   PMT        29  RCL 1       53   R/S
06  g INTG      30    +         54  g GTO 14
07    1         31  RCL PMT     55    4
08    -         32    -         56  STO - 1
09   EEX        33  g X=0       57    1
10    2         34  g GTO 57    58  STO + 1
11   FV         35    2         59  STO - 0
12    /         36    -         60  g GTO 44
13  g GTO 51    37  g X=0       61    2
14  RCL FV      38  g GTO 55    62  STO - 1
15    /         39  RCL PMT     63  g GTO 59
16  ENTER       40    +         64  RCL 0
17  g INTG      41  g LST X     65  RCL 1
18  STO 0       42  g X<=Y      66    +
19    -         43  g GTO 61    67  RCL PMT
20  RCL FV      44  RCL 1       68    1
21    *         45    1         69    +
22  STO 1       46    +         70  g X<=Y
23    2         47  RCL FV      71  g GTO 44
24    /         48    /         72  g GTO 61
```

Usage instructions:

1) Reset the program pointer to the beginning of the program

f PRGM

2) Enter the order of the board you want to play (2 to 99):

(order) R/S

Your HP-12C will think about it and will make its first move:

(column) . (row)

3) Enter your move (no dot between column and row):

(column)(row) R/S

Your HP-12C will think and display its new answer.

4) Repeat step (3) above until either you or the machine succeed in building a continuous path joining your respective borders.

5) Once a player has won, to play another game repeat from step (1) above.

Notes:

No special display is shown when either player wins. You'll simply see it happen on your physical board.

Now for an example:

Sample game:

You want to play in a 4th-order board:

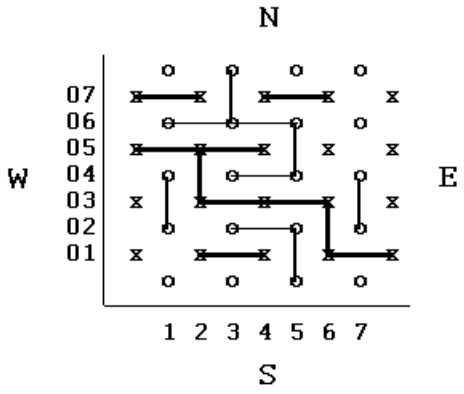
f PRGM, 4, R/S => 1.07

- your HP-12C put an horizontal bridge in column 1, row 7

307, R/S => 3.05

- you blocked its path building a vertical bridge in column 3, row 7
- your HP-12C built another horizontal bridge in column 3, row 5

406, R/S => 5.07
505, R/S => 5.03
404, R/S => 3.03
501, R/S => 6.02
402, R/S => 3.01
206, R/S => 1.05
703, R/S => 7.01
103, R/S => 2.04



and your HP-12C wins, as it has succeeded in building a continuous path between W and E! You can see the diagram of the completed game above, with the winning path below (HP's moves in **bold**). A 7-th order board, anyone?

Final Remarks

I said in my commemorative article on the HP-11C that it's a real pity that we won't ever be able to see such wonderful machines being marketed again. But fortunately there's a most worthwhile exception, the most successful Voyager calculator ever, the HP-12C. Get yourself a dozen while you can, and ... **Long live the 12C!**