

HP Forums / HP Calculators (and very old HP Computers) / General Forum / NEW: HP 15C Collectors Edition

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NEW REPLY

NEW: HP 15C Collectors Edition

Threaded Mode | Linear Mode

11-01-2023, 01:24 PM

Post: #621

Eddie W. Shore

Senior Member

Posts: 1,554

Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

I would like to buy the cord need to flash the HP 15C CE.

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QUOTE

11-01-2023, 02:02 PM

Post: #622



Massimo Gnerucci

Senior Member

Posts: 2,641

Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

Eddie W. Shore Wrote:

(11-01-2023 01:24 PM)

I would like to buy the cord need to flash the HP 15C CE.

Who wouldn't?

Wait and see... 😊

Greetings,

Massimo

--+×÷↔ left is right and right is wrong

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QUOTE

11-01-2023, 04:17 PM

Post: #623

Lehdal

Junior Member

Posts: 2

Joined: Feb 2015

RE: NEW: HP 15C Collectors Edition

Divasson Wrote:

(10-23-2023 02:02 PM)

to put HP15c CE claims in perspective, there are 17 claims out of 1200 units shipped by The Calculator Store.

Today I add 1 (one) to that count; my HP15C CE arrived yesterday and most of the keys on the right hand side fail to work correctly. I have tried to exercise the keys but that doesn't make any difference. Sad, the calculator is a thing of beauty but essentially useless now.

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QUOTE

11-01-2023, 04:33 PM

Post: #624

Voldemar

Senior Member

Posts: 304

Joined: Mar 2014

RE: NEW: HP 15C Collectors Edition

Massimo Gnerucci Wrote:

(11-01-2023 02:02 PM)

Wait and see... 😊

How long to wait? 😊

FIND

QUOTE

11-01-2023, 04:47 PM

Post: #625

Dave Britten

Senior Member

Posts: 2,260

Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

It looks to be the same cable for flashing the 20b, 30b, 15C LE, etc., correct? I've still got mine around here somewhere, so I should be able to install firmware updates on mine should the need arise. I'm not super concerned about the 16C mode, neat as it is, because I can just pull out my original 16C if I need it. 😊 And also (heresy warning) I usually prefer to grab my Casio fx-991EX for doing binary and hex. The two-line display of all 32 bits at once, with spaces making groups of 4 bits each is a lot more convenient than moving the viewing window around on the 16C.

Mostly I'm just using 15.2 mode at the moment for more memory than one could possibly need in a 15C. Are there any known issues or reasons to stick with the default 99-register mode? (Which is still probably more memory than I need...)

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11-01-2023, 04:55 PM

Post: #626



lvt
Member

Posts: 111
Joined: Dec 2022

RE: NEW: HP 15C Collectors Edition

If you already have the 15C, would you still need the 16C?

HP-12C Gold / HP-12C Platinum

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11-01-2023, 04:58 PM

Post: #627



Massimo Gnerucci
Senior Member

Posts: 2,641
Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

Dave Britten Wrote:

(11-01-2023 04:47 PM)

It looks to be the same cable for flashing the 20b, 30b, 15C LE, etc., correct?

Nope, it's USB: different voltages and pins.

Greetings,
Massimo

-+×÷ ↔ *left is right and right is wrong*

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[QUOTE](#)

11-01-2023, 05:24 PM (This post was last modified: 11-01-2023 05:26 PM by Maximilian Hohmann.)

Post: #628

Maximilian Hohmann
Senior Member

Posts: 1,218
Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

Hello!

lvt Wrote:

(11-01-2023 04:55 PM)

If you already have the 15C, would you still need the 16C?

Define „need“ ;-) Almost nobody really needs a pocket calculator in the year 2023 if we are honest.

But the HP-16C is maybe one of the calculators that is really useful to some people designing digital hardware and/or doing low-level computer programming. Because it can perform some clever calculations with hexadecimal and binary numbers that most calculator apps on one's mobile phone can't do. And neither Excel or whatever one uses on the computer in the office. And the normal HP-15C can't do that either, only our new 15C CE in HP-16C mode. So if you have one of those you probably don't need an extra 16C!

Regards
Max

NB: The HP-16C is one of very few calculators that I don't have in my collection yet. Because I missed some opportunities 20 years ago (I was very arrogant then regarding calculators and wouldn't touch anything that did not glow in the dark) and now prices have risen to a level that far exceeds my allowance for unnecessary toys...

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[QUOTE](#)

11-02-2023, 01:42 AM

Post: #629



dmh
Senior Member

Posts: 316
Joined: Nov 2020

RE: NEW: HP 15C Collectors Edition

Has the new cable been documented anywhere? How to build from scratch or modify the LE cable?

How was the firmware obtained to be patched? Can it be downloaded from the CE (I didn't think this was possible with the LE)?

I'd like to patch my 15C CE but don't really want to destroy my LE cable so creating a new one would be ideal I think.

Valentin Albillo Wrote:

(11-01-2023 01:49 AM)

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Hi, all,

As per the pic **José Divasson** (*The Calculator Store*) recently posted, namely ...

[Image: attachment.php?aid=12648]



... the embedded **HP-16C**'s catastrophic bug has been corrected for good by means of a patched firmware concocted by a well-know forum member (I wouldn't post his name without permission) so there you are, the **HP-15C CE** is now two calculators in one, both running much faster than the originals did.

And who wouldn't want a *free* (once you've paid for the *15C CE*, of course) **HP-16C** running unbelievably fast and (with the help of Jose's *16C* overlay,) virtually indistinguishable from the original, as seen in the picture above ?

If I were you I'd get one or several *ASAP* before the *second* batch is sold out and you're left biting your nails. Even as an investment to sell them out at much higher prices in the future it would make sense, this is no flimsy, buggy *LE*.

V.
P.S.: In order to get the bugless HP-16C the 15C CE must be flashed with the patched firmware, of course. I don't know if José or anyone else will either offer the service for a fee or else deliver already flashed 15C CE's to the new buyers, you'd have to find out for yourself.

[Calculator Clique](#) on YouTube



11-02-2023, 03:45 AM

Post: #630



lvt
Member

Posts: 111
Joined: Dec 2022

RE: NEW: HP 15C Collectors Edition

Maximilian Hohmann Wrote:

(11-01-2023 05:24 PM)

Hello!

lvt Wrote:

(11-01-2023 04:55 PM)

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Thanks for sharing your thoughts.

HP-12C Gold / HP-12C Platinum



11-02-2023, 04:15 AM

Post: #631

Eric Rechlin

Senior Member

Posts: 520

Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

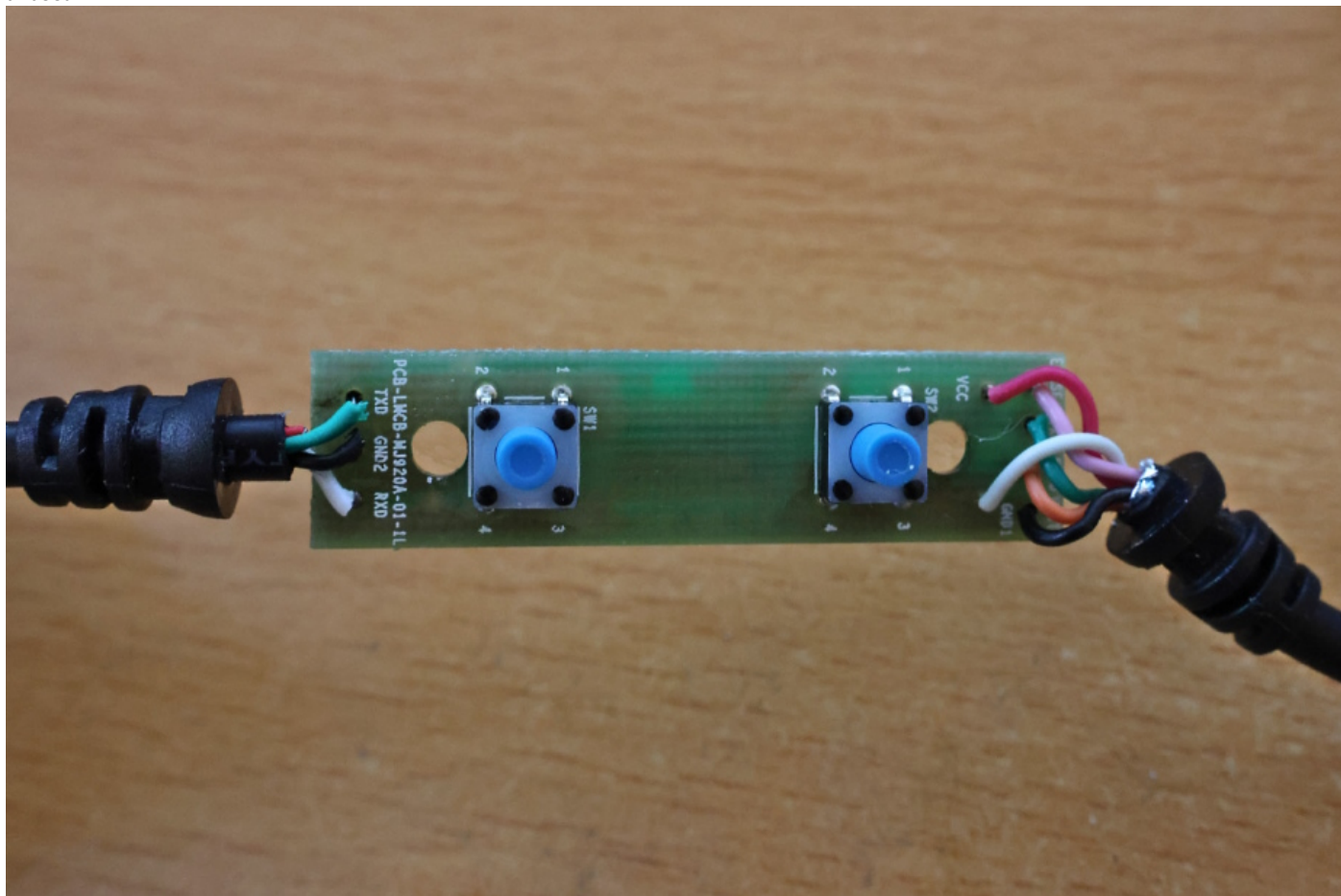
dmh Wrote:

(11-02-2023 01:42 AM)

Has the new cable been documented anywhere? How to build from scratch or modify the LE cable?

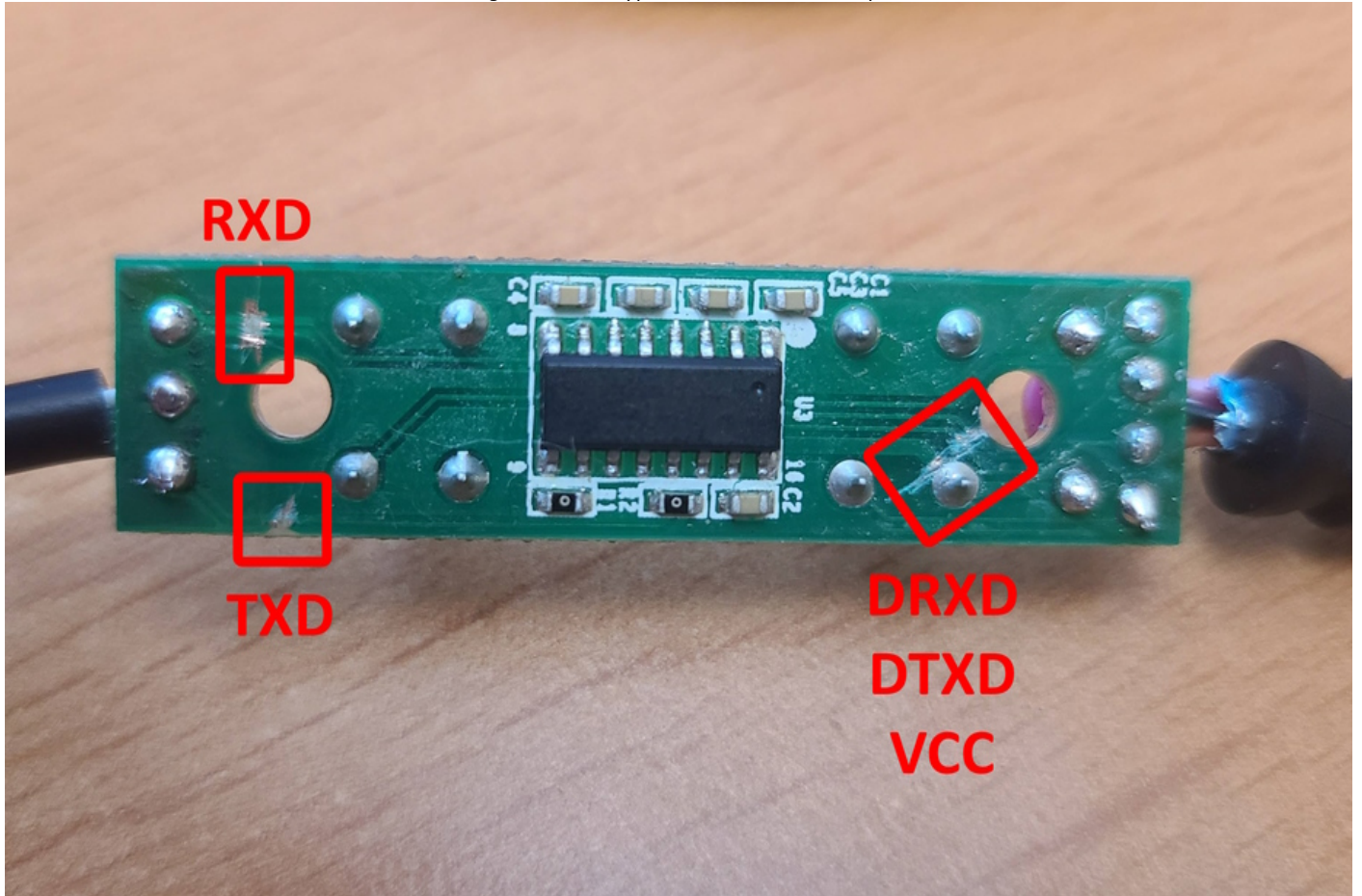
If you are willing to permanently sacrifice an LE (20b/30b) cable, here are the steps:

1. Open the section with buttons (two #0 Phillips screws), desolder the serial cable, slide off the strain relief to reuse, cut a USB cable, slide the strain relief on the USB cable, and solder the USB cable on. Green from USB goes to TXD, white to RXD, and black to GND2. Red is unused.

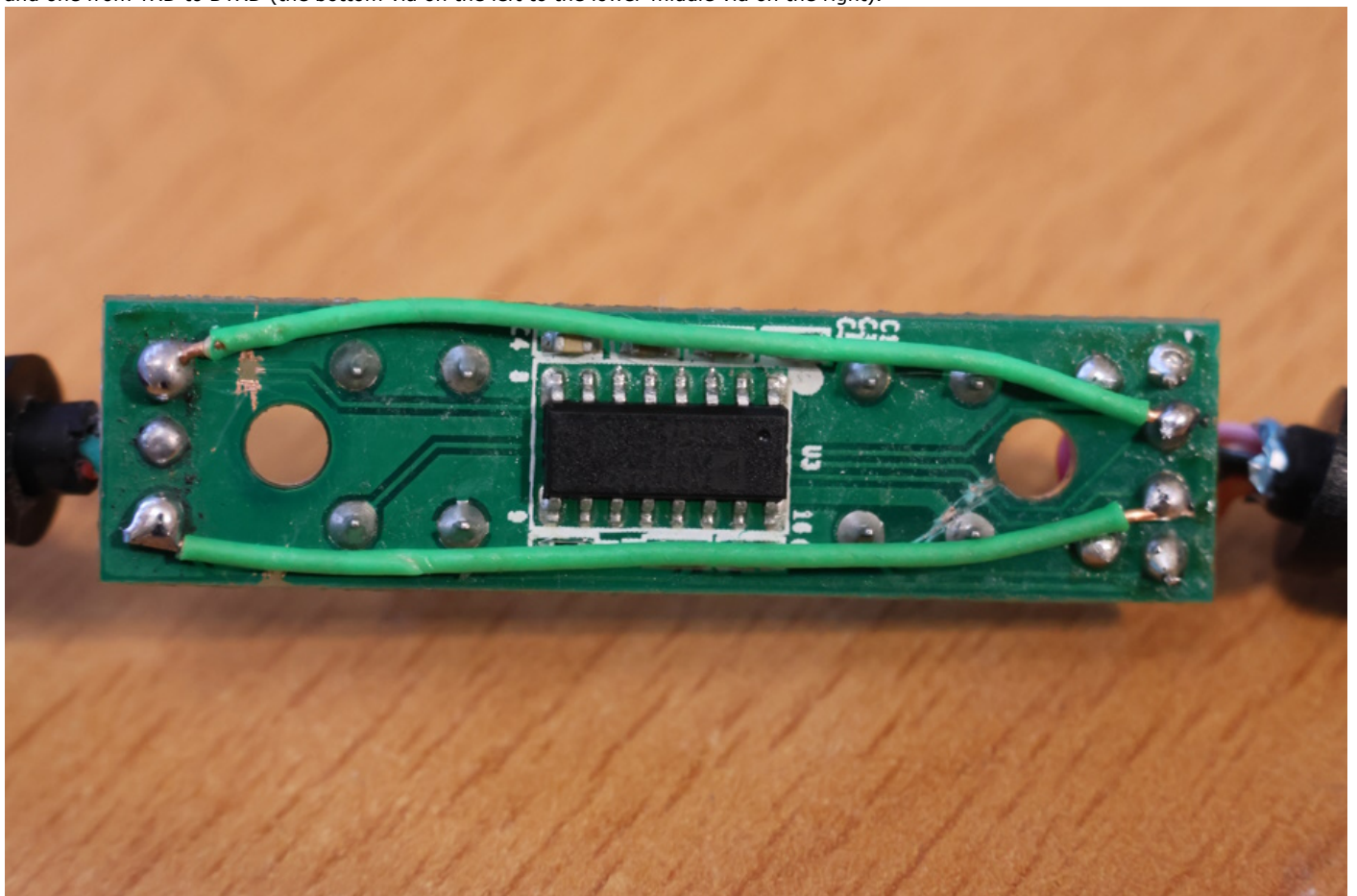


2. Cut the two traces from TXD and RXD to the chip using a razor blade or other sharp object, with two separate cuts (see the photo, above

and below the left hole). Then make a single long cut to the lower left of the right hole to cut all three traces there (DTXD, DRXD, and VCC). The VCC trace is thicker than the other two. Cutting these is to bypass the level shifter chip.



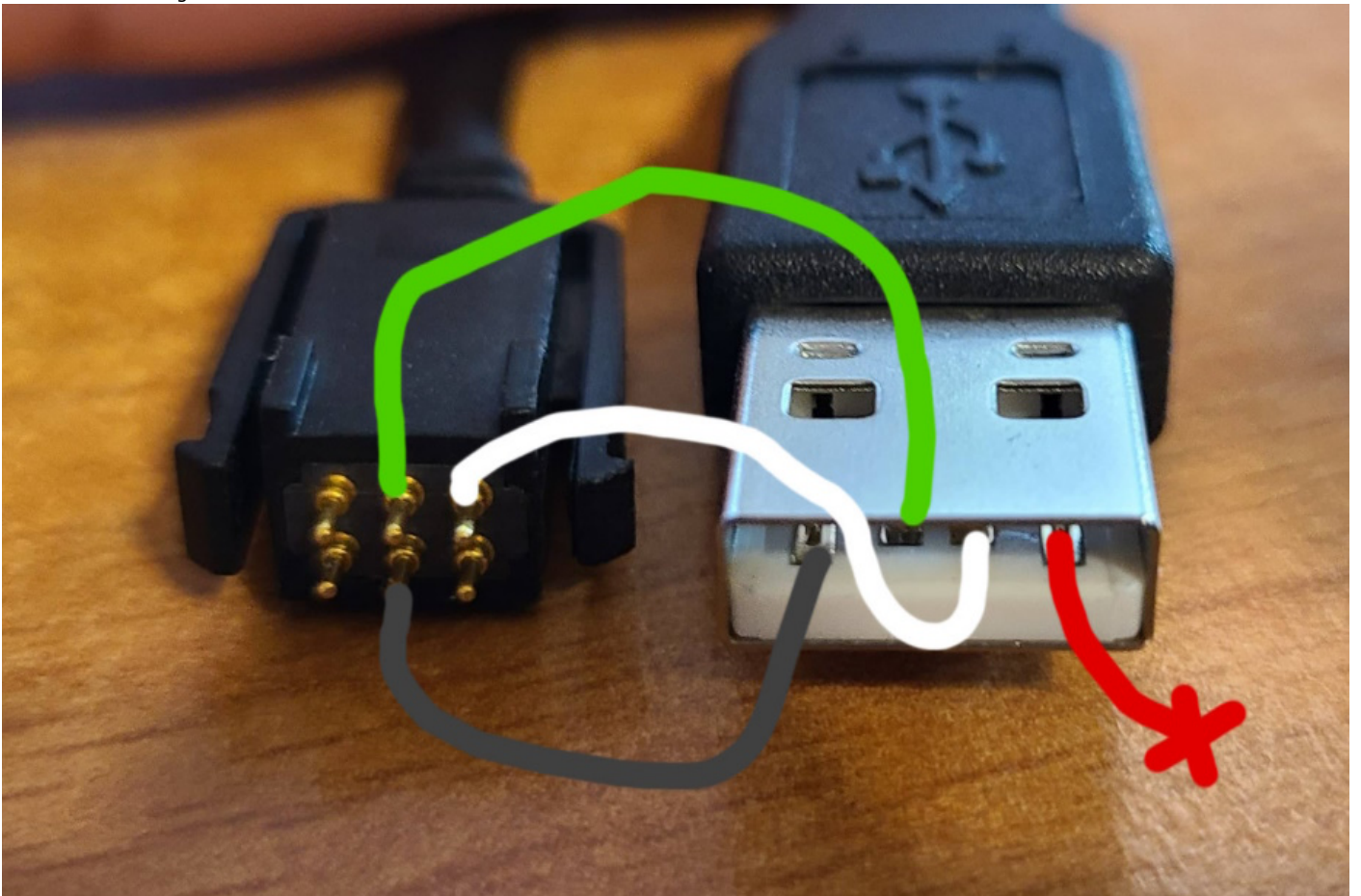
3. Now you need to solder two jumper wires. Solder one from RXD to DRXD (the top via on the left to the upper-middle via on the right) and one from TXD to DTXD (the bottom via on the left to the lower-middle via on the right).



4. Reassemble (be careful with your wire routing so they don't get squished by the posts when screwing the box back together) and it's all done:



The effective wiring is as follows:



11-02-2023, 05:00 AM

Post: #632



dmh
Senior Member

Posts: 316
Joined: Nov 2020

RE: NEW: HP 15C Collectors Edition

Thanks for the detailed information and photos Eric !

A previous post mentioned a button was still used, which line has the button connected?

It appears the wiring is direct and not going through the chip at all now, is that correct?

So if you can roll your own pogo type connector could you could make a new cable the same way?

So, where do I get the firmware (original and patched) and what software is now required?

Thanks again.

Eric Rechlin Wrote:

(11-02-2023 04:15 AM)

dmh Wrote:

(11-02-2023 01:42 AM)

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[Calculator Clique](#) on YouTube



11-02-2023, 06:05 AM

Post: #633

Eric Rechlin
Senior Member

Posts: 520
Joined: Dec 2013

RE: NEW: HP 15C Collectors Edition

dmh Wrote:

(11-02-2023 05:00 AM)

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Thanks again.

The Reset button and Erase button are both still connected. You don't need Reset because you can just use the reset hole on the calculator instead, but the button is more convenient. It's connected in the same place as the old cable, which I believe is pin 2, which would be to the left of the black (ground) wire, lower left corner, in the last image above. I believe Erase is pin 6, which would be to the right of the black ground wire, lower right corner. It's also unchanged from the old cable.

Wiring is indeed direct, bypassing the chip. The chip was only used for the TTL to RS-232ish voltage level conversion. Since the new calculators speak USB directly there is no need for any level shifting.

As long as you have something to work for the pogo connector, which is the toughest part, you can make your own cable.

Software is just a newer version of the SAM-BA software used for programming the older calculators. I have been using version 2.14; I don't see that for download anywhere, but I do see [version 2.16 is still available](#), so maybe you could use that. It still claims to support the sam4l chips so I assume it will work.

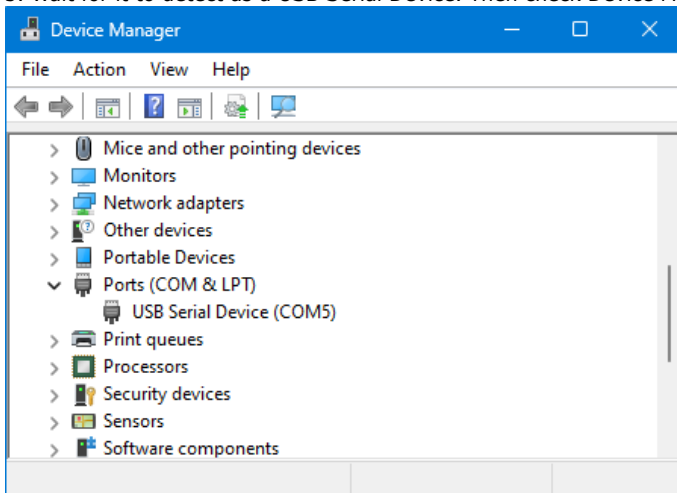
To flash the calculator, here are the directions I found worked best:

1. Install SAM-BA.
2. Remove the battery door from the calculator and plug in the 6-pin connector from the cable.

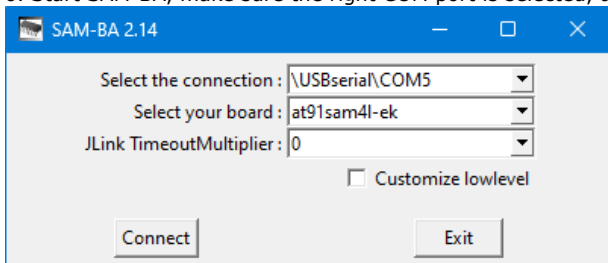
3. On the cable, hold down Erase, then press and release Reset, then release Erase. This just puts the calculator in USB linking mode. Unlike on the 20b/30b, this won't actually erase your firmware, so you can safely do this even if you fail to connect in the later steps.

4. Plug the USB connector from the cable to your PC.

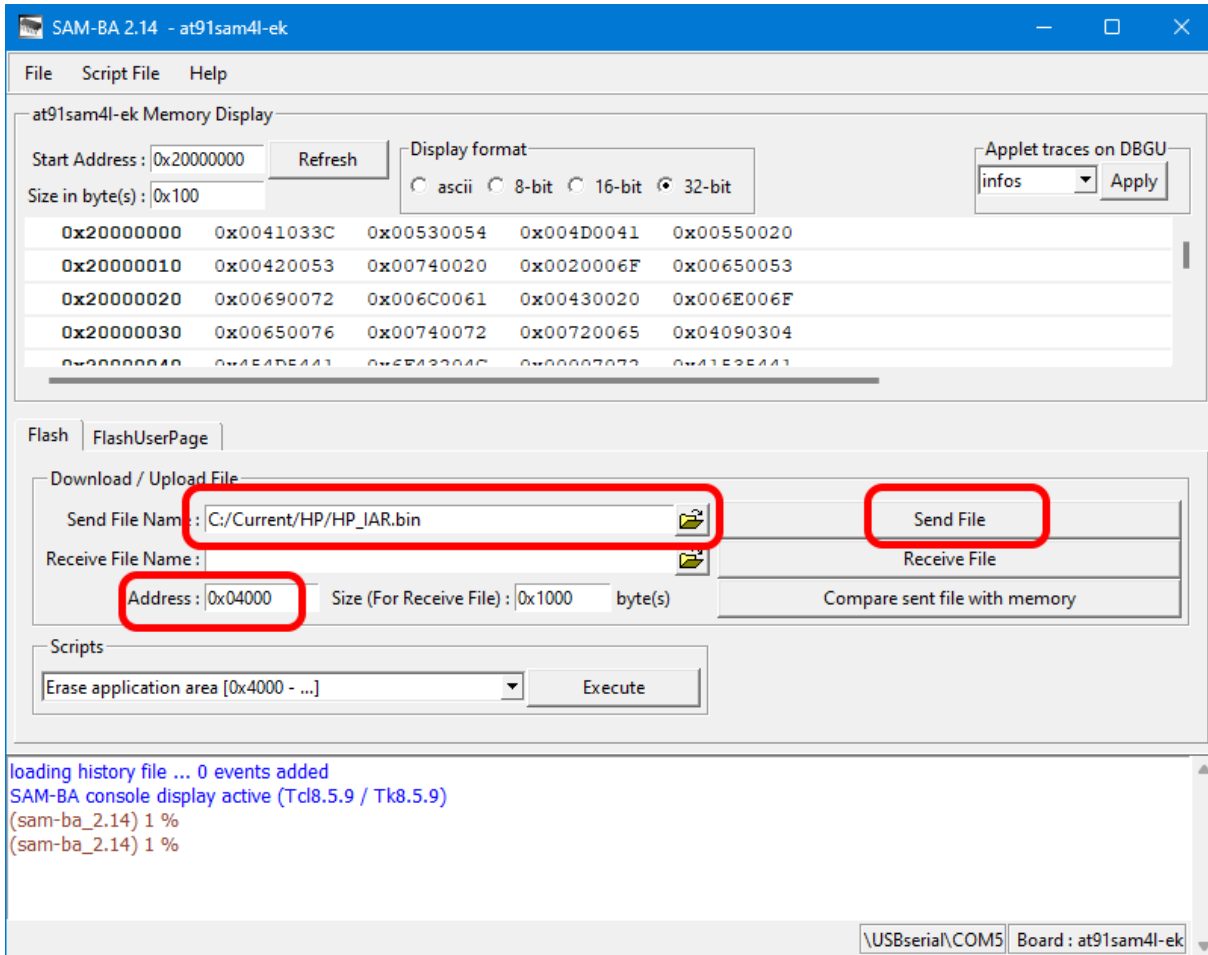
5. Wait for it to detect as a USB Serial Device. Then check Device Manager for the COM number; usually I saw COM4 or COM5.



6. Start SAM-BA, make sure the right COM port is selected, and select at91sam4l-ek as the board type:



7. Click Connect. A new window will appear, where you must enter 0x04000 as the address, pick the ROM file to upload, and then click Send File:



8. After the file is done transferring (less than 10 seconds), press the Reset button on the cable (or use the reset hole on the calculator) and then turn the calculator on.

If you have a problem anywhere prior to the point where you click "Send File", pressing the Reset button will let you get back to the "Pr Error" display without losing the firmware. If a failure occurs after clicking "Send File", then your calculator may not operate until you can successfully load a new firmware.

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QUOTE

11-02-2023, 10:48 AM

Post: #634

ebs

Junior Member

Posts: 27

Joined: Oct 2023

RE: NEW: HP 15C Collectors Edition

Thanks Eric, that was very clarifying.

So in theory it's possible to connect the calculator to the PC without even the pogo connector, just holding the wires like some of us did with HP20b/HP30b BUT in that regard the USB protocol is paradoxically less forgiving to bad contacts due to the hot-plug negotiation, so having new produced pogo connectors available would be very handy.

FIND

QUOTE

11-02-2023, 01:36 PM (This post was last modified: 11-02-2023 01:58 PM by ctrclckws.)

Post: #635

ctrclckws

Member

Posts: 108

Joined: Sep 2018

RE: NEW: HP 15C Collectors Edition

Indeed, the explanation was wonderful. However it just convinced me to wait for a standard cable to be produced.

Also, what if you would like an LE/20b/30b cable to update your WP-34S? I saw some recent tweaks in various posts. I asked a forum member for support a while back to do the conversion of my HP-30b, since commercial cables are not available.

FIND

QUOTE

11-02-2023, 10:52 PM

Post: #636



dmh 
Senior Member

Posts: 316
Joined: Nov 2020

RE: NEW: HP 15C Collectors Edition

Thanks again Eric.

So the software looks like it can download the current image, is that correct?

Then I just need to find the patch details.

Does anyone know the pogo pin pitch? I've found 2mm and 2.54mm versions.

Eric Rechlin Wrote:

(11-02-2023 06:05 AM)

dmh Wrote:

(11-02-2023 05:00 AM)

Thanks for the detailed information and photos Eric !

A previous post mentioned a button was still used, which line has the button connected?

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As long as you have something to work for the pogo connector, which is the toughest part, you can make your own cable.

[Calculator Clique](#) on YouTube



11-03-2023, 08:50 AM (This post was last modified: 11-03-2023 08:51 AM by linq2008.)

Post: #637

linq2008 
Junior Member

Posts: 22
Joined: Oct 2022

RE: NEW: HP 15C Collectors Edition

The pitch is 2mm.



11-03-2023, 02:47 PM

Post: #638

ebs 
Junior Member

Posts: 27
Joined: Oct 2023

RE: NEW: HP 15C Collectors Edition

dmh Wrote:

(11-02-2023 10:52 PM)

So the software looks like it can download the current image, is that correct?

Then I just need to find the patch details.

According to The Calculator Store blog, the patch is just a change of a couple of bytes in the HP16C rom (but doesn't say which bytes), so it's possible to do it with a hex editor. No need to redistribute the entire firmware that would require HP/Moravia approval.



11-03-2023, 04:08 PM (This post was last modified: 11-03-2023 04:09 PM by Divasson.)

Post: #639

RE: NEW: HP 15C Collectors Edition

ebs Wrote:

(11-03-2023 02:47 PM)

dmh Wrote:

(11-02-2023 10:52 PM)

So the software looks like it can download the current image, is that correct?

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Actually 3 bytes. I'd leave the author to comment/explain - his baby, not mine.

Aside from that: with this big memory, it is a pity to lose all programs every time you move back and forth from HP16c to HP15c, so working this weekend on backing up the user memory space to a file and restoring it later. (better solution: buy another !!)



FIND



QUOTE

11-03-2023, 05:53 PM

Post: #640



Valentin Albillo 
Senior Member

Posts: 1,072
Joined: Feb 2015

RE: NEW: HP 15C Collectors Edition

Hi, all,

Divasson Wrote:

(11-03-2023 04:08 PM)

[...] with this big memory, **it is a pity to lose all programs every time you move back and forth** from HP16c to HP15c, so working this weekend on backing up the user memory space to a file and restoring it later. (**better solution: buy another !!**)

For those interested in using both the **HP-15C** and the **HP-16C** it's indeed the **best** solution *by far*: you buy a second unit and then you keep one of them *permanently* in **HP-15C/192** mode and the other one *permanently* in **HP-16C** mode, both always ready to use at a moment's notice without losing all your programs and data and without wasting time performing tedious backup procedures before the switcheroo.

Matter of fact, to put my money where my mouth is, I'm getting my second unit precisely for that very purpose (and also to play it safe in case something would happen to my first one, perish the thought ! 😊). Hopefully it will arrive tomorrow from *The Calculator Store*.

Besides, come to think of it, people here often express their desire for the release of an **HP-16C "Collector's Edition"**, incredibly fast and with vastly increased memory, which would allow e.g. programming the six trig functions, *exp*, *log*, y^x , all of them executing almost instantly and with plenty of program memory to spare.

Well, with the overlay in place **this is it !**

Best regards.

V.

All My Articles & other Materials here: [Valentin Albillo's HP Collection](#)



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