

@PortDev cdev/INIT, version 2.00 documentation (previously named @BBaudΩ)

by Mathew Alan Milroy
CIS : 76416,115 ; GENie : M.Milroy

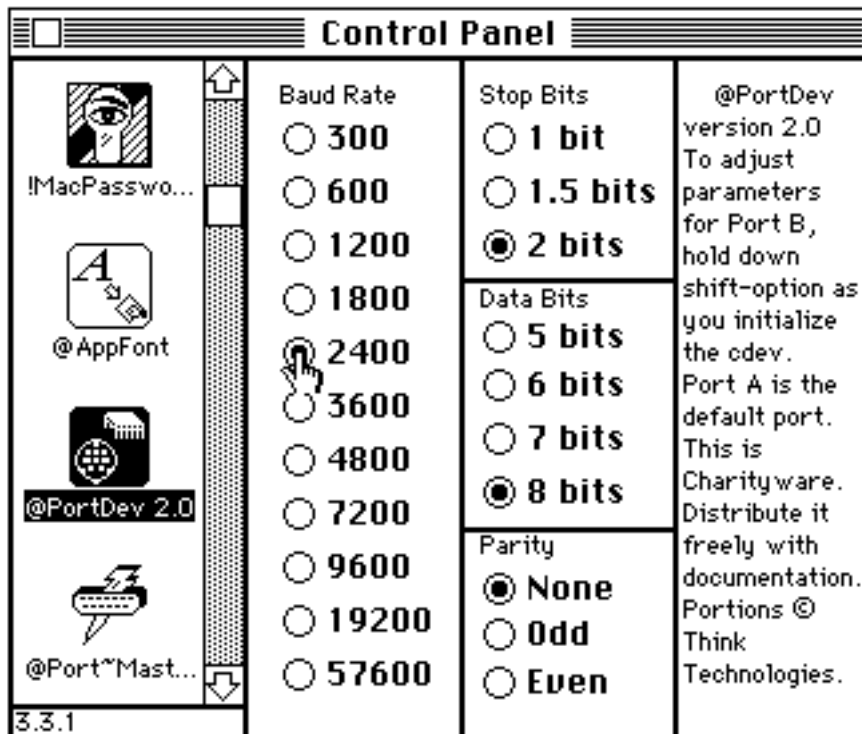
The purpose of this cdev/INIT is to adjust the parameter RAM settings for the modem port, (.portA), as well as the printer port, (.portB) in the CMOS clock chip and store them there until the user, (that's you), decides that they would like to alter them once again. It is meant to : 1) help with null modem cable file transfers between IBM PCs, and the more popular Macintosh™, (we want to transfer files as fast as we can from The Big Blue, right ?), and 2) help stabilize network communications, (for example it can be used in conjunction with the *Trustees of Dartmouth College's* Async AppleTalk desk accessory, version 2.1 or later).

For maximum ergonomony, the user is able to change these settings in two ways; a) via the cdev in the Control Panel desk accessory, (with System 6.02 and Finder 6.1 or higher), or, b) via the embedded INIT file described in depth below. **Please note** : This cdev/INIT is specifically designed to function with ADB, (Apple DeskTop Bus) Macs **only**; results on other machines could be unpredictable. The cdev will only appear in the Control Panel of the Macintosh™ SE, SE/30, IIfx, II and IIfx; (**Hacker's note** : if the 'mach' resource is tampered with, it will still not appear in the Control Panel window). It has been programmed this way for the user's safety, as some code in the software is not compatible with non-ADB machines.

The author assumes no responsibility for problems arising from the use of this software on any machine, as it is free. This software may be freely distributed, however it should always be accompanied by this documentation. It should not be sold, and the author would like to hear of anyone who tries to charge for it.

Configuration via the cdev

When you call up the cdev in the Control Panel, you will presented with a screen like this, (which shows the cdev's default setting of 2400 baud) :

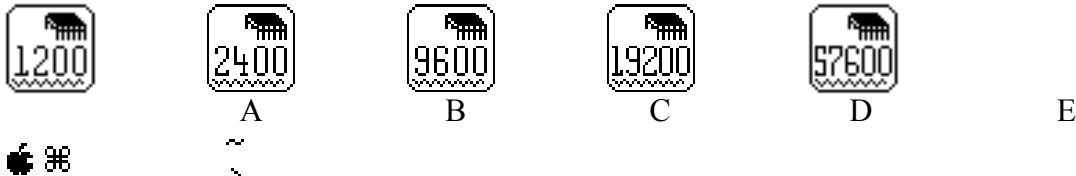


The active @PortDev cdev in the Control Panel window

Here you will find a series of twenty-one radio buttons each corresponding to the baud rate, stop bits, data bits and parity written beside it. To change any parameter and store that value in the CMOS clock chip, all you have to do is click on the radio button which corresponds to the parameter which you want to set. When you set the value via the cdev, that setting will remain active until; a) the value is changed once more by way of the cdev, or b) you restart the machine. You have the choice of only configuring the baud rate setting while the machine is restarting, for the modem port in the CMOS clock chip. This method of configuration is described below.

Configuration via the INIT

When the machine is restarting, you will see one of the following icons on your startup screen :



The icon you see at startup depends on which modifier key you hold down. You should hold down the modifier key until you see the icon appear, then you can release it. Modifier keys in this software extend beyond the traditional modifier keys, they are the tilde key (~), the tab key, the caps lock key, the shift key, the command key, (which is also now also officially called the apple key), the control key, (only for those who have the 'Saratoga' or Extended ADB Keyboard made by Apple™). For more detailed information on the modifier keys used in this software refer to appendix A. The default setting for the INIT, (that is if no modifier keys are held down), is 2400 baud, 8 data bits, no parity and 2 stop bits. If no modifier keys are held down, icon 'B' will be shown at startup. If you are fortunate enough to own a 'Saratoga' keyboard, then when you hold down the control key, the icon at startup will be 'A', and the corresponding PRAM value will be changed to 1200 baud. This software has not been tested on other extended keyboards, and its use with such keyboards is unfathomed. Would anyone care to send me feedback if you have a DataDesk™ or other extended keyboard ? If you have the 'Eastwood', or Regular Apple™ ADB Keyboard then to obtain icon 'A' with its respective 1200 baud setting at startup, you would hold the caps lock key down instead, (this does not apply for the Saratoga Extended ADB Keyboard, and holding the caps lock key down with the Saratoga Extended ADB Keyboard will yield the INIT's default value aforementioned). If you press the command, (or the apple), key on startup you will see icon 'C', which will change the baud setting to Apple's default factory setting of 9600 baud, (what a coincidence!). Icon 'D', (19200 baud), is evoked by pressing the tilde key, and icon 'E' with its respective baud setting of 57600 baud is summoned by holding the tab key down at startup. There is also a special icon seen when disabling the INIT by holding down the shift key at restart. **Note** : If you tamper with the 'mach' resource and use this cdev/INIT on a non-ADB machine, (shame on you!), the shift key (disable) icon will be visible when restarting, even if the shift key is not being held down. Hence, nothing in PRAM will be altered.

The three other icons that you will also notice are :



The cdev desktop icon

The Finder desktop icon

The shift key (disable) icon

And that's all folks. Well, at least for now ... I'm planning an RDEV extension to this that will do everything from dialing to driving file transfers and network support as well. Perhaps upon getting the licence, the HSI™ and the HSD™, Hayes Synchronous Interface and the

Hayes Synchronous Driver could be built into the RDEV for synchronous communication and packet switching ? I welcome bug reports, programming suggestions, programming assistance, (cooperative and/or accredited if desired), comments and correspondence on-line, at either my CompuServe® or GENie account. Depending on how sophisticated this software gets, and the involvement of other developers, a nominal shareware fee may be instituted on future versions. For the time being it is 'Charityware', (a term coined by Steve Christensen, author of SuperClock!), and if you like and use it, you can send a tax deductible donation to :

Accounting Department
Shriners Hospital for Crippled Children (Québec) Inc.
Joint Diseases Research Laboratory
1529 Cedar Avenue
Montréal, Québec
H3G 1A6

(514) 849-6208

For more information on null modem cable and wiring for file transfers refer to :

Heid, J., *Getting Started with Data Exchange*, MacWorld, September 1988, pp. 295 - 306.

(He suggests using an ImageWriter I cable in a null modem connection between other computers and the Macintosh™).

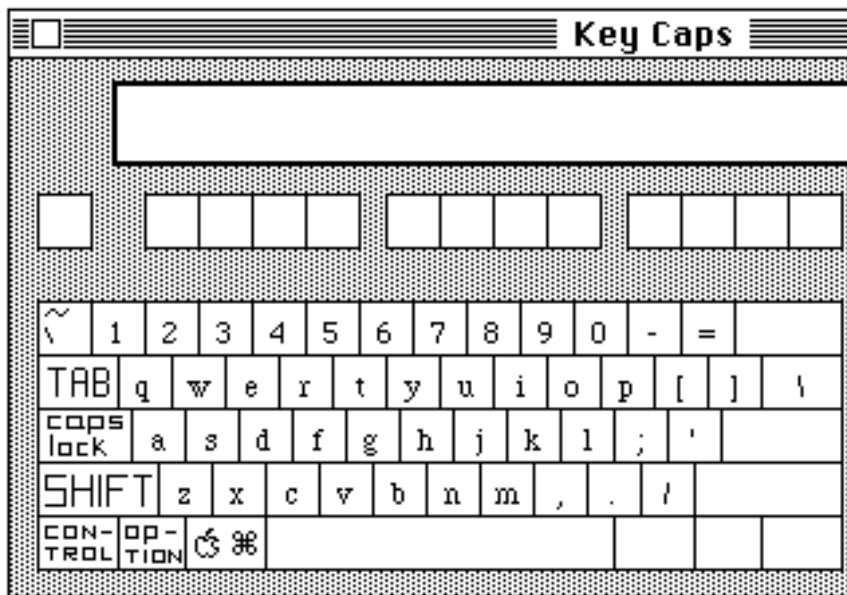
Bortman, H., *Connecting the DOS*, MacUser, September 1988, pp. 108 - 126.

(He gives a myriad of possible solutions to the BluToMac connection, some of which can benefit by this cdev/INIT).

Lu, C., *Appendix: Technical Topics*, The Apple Macintosh Book, May 1988, pp. 354 - 358.

(He illustrates pin differences between the IBM PC, PC/XT, IBM PC/AT, PS/2 and the Macintosh™).

Appendix A



Section of the Saratoga Extended ADB Keyboard made by Apple™

Modifier keys and their functions

Tilde :

INIT : When restarting the computer and holding down this key, the baud rate is set to 19200 baud. All other values remain constant.

Tab :

INIT : When restarting the computer and holding down this key, the baud rate is set to 57600 baud. All other values remain constant.

Caps Lock :

INIT : When restarting the computer and holding down this key, the baud rate is set to 1200 baud, (this applies only if the keyboard is the Eastwood or Regular Apple™ ADB Keyboard). All other values remain constant.

Shift :

cdev : When held down simultaneously with the **option key**, it toggles to port B, (the printer port), to allow you to adjust those parameters.

INIT : When restarting the computer and holding down this key, the INIT portion of this software is disabled. All values previously stored in the PRAM clock chip will remain intact.

Control :

INIT : When restarting the computer and holding down this key, the baud rate is set to 1200 baud, (this applies only if the keyboard is the Saratoga Extended ADB Keyboard made by Apple™). All other values remain constant.

Option :

cdev : When held down simultaneously with the **shift key**, it toggles to port B, (the printer port), to allow you to adjust those parameters.

INIT : When restarting the computer and holding down this key, nothing happens.

Command :

INIT : When restarting the computer and holding down this key, the baud rate is set to 9600 baud. All other values remain constant. To reset the modem port configuration in the PRAM CMOS clock chip to Apple™'s factory default configuration of 9600 baud, 8 data bits, no parity and 2 stop bits, just hold the command key down when restarting the computer.

Things to remember :

Holding down both the **Shift and Option** keys when initializing the cdev, (which is to say when you 'click on it'), toggles the port settings to be adjusted, to the printer port settings, or port B's settings.

When the cdev is initialized, (and after the optional sound plays), and/or when you alter one, or more of the parameters in either port, the cursor changes from an arrow to a 'hand' cursor. This indicates that your changes have been saved in the CMOS clock chip, which is maintained by the Macintosh's internal battery.

Use of 'snd ' Resources in @PortDev 2.0

In this incarnation of @PortDev 2.0, you will notice that you are able to use and change 'snd ' resources. The use and altering of them is simple. All one has to do to customize the cdev with one's desired sounds, is to use **ResEdit**, and copy the sounds of your choice into the resource fork of the cdev, then highlight the old 'snd ' resources, and either delete them by choosing **Clear** from ResEdit's **Edit Menu**, or copy them by choosing **Copy** from the same menu, and then store the sounds for later use, or use in another environment. To perform the latter operation, one should go back to the root level of the directory and create a new **ResEdit** file called something like "temp snds" by choosing **New** from ResEdit's **File Menu**, and then choosing **Paste**. When you close the file "temp snds", then select the save option, by clicking on the save button, when the modal dialog box appears.

Once your new 'snd ' resources have been installed in the cdev, and the old one's removed, then you should renumber the 'snd ' resources in the following way. Highlight the first new 'snd ' resource and choose **Get Info** from ResEdit's **File Menu**. The highlighted number you then see will be the number that you should alter. Simply type in -4033 for the 'snd ' resource that you want as the entry, or initDev sound, and -4034 for the exit, or closeDev sound. Once this is done you can close the cdev and save the changes. When you close the file "@PortDev", then select the save option, by clicking on the save button, when the modal dialog box appears. You may also find that due to precious disk space, or the processing speed of the M68000, that you don't want any 'snd ' resources. In this case, just highlight the 'snd ' resources, and delete them by choosing **Clear** from ResEdit's **Edit Menu**. The cdev is programmed to function in the absence of such resources anyway.

Finally, with respect to the handling of 'snd ' resources, this cdev can handle and play both types of sounds, a) those not using the sounds with 'snth' resources, and b) those using the sounds with 'snth' resources. Hence, they should produce sounds of the quality expected when running on the higher end 'modular' MacIntoshes™.