

## Intro

I've been using TOPS quite heavily for some time, and have been quite satisfied with it. The advent of System 4.1, however, caused me to change some of my habits. I had been using a Tempo boot macro to automatically invoke the TOPS DA, supply a network name, and publish my hard disk on the network. Unfortunately, the ravenous system heap requirements of System 4.1 caused me to stop using Tempo, and I soon got rather bored with doing all this manually.

My solution was *TOPS boot*, a small startup application that does all this for me without chewing up a lot of my system heap.

This document describes release 1.2 of *TOPS boot*, and the *Check Mail* desk accessory.

*Check Mail* provides the basic minimum that an electronic mail system on a network of Macintoshes must have — notification of incoming mail. It doesn't do anything else, like reading, sending or replying to mail — it merely acts as a watchdog on a MailBox folder.

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## Changes since release 1.0

The method of posting events to control the Tops desk accessory is now more flexible, and allows interspersed keystrokes and mouse clicks.

The *Check Mail* desk accessory is also supported: if installed, *Tops boot 1.1* (and later) will automatically invoke it. It will also check to see if there are any files in the designated mailbox folder, and issue a "You have mail..." warning if any are found.

Release 1.2 removes the 20 event limitation of 1.1, and corrects limitations in the event posting mechanism which severely limited its usefulness for "non-standard" volume publishing requirements. The previous event posting mechanism has been replaced by a general journalling device mechanism.

## Requirements

This won't run on the old 64K ROMs. Check Mail also requires a HFS startup volume, i.e. the MailBox folder has to be a real folder - not a faked-out one in the Finder as found on MFS volumes.

Check Mail consumes around 2500 bytes of system heap space.

## Installation

Change 'STR' resource 128 with ResEdit to your desired network name. Place *TOPS boot* in the system folder, and make it the startup application. If you need more than one startup application, Darin Adler's *Sequencer* program can be used.

If you have special volume publishing requirements, like password protecting your volume, or selecting one of many volumes, see **How it works** for information on how to edit the 'EVNT' resource in order to accomplish this.

The *Check Mail* desk accessory should be installed with Font/DA Mover. It uses owned resources, so you have to be **very** careful if you want to install it with ResEdit.

## Removal

Before removing *Check Mail* with Font/DA Mover, shut it down first.

## Checking for mail

One (free) way of providing electronic mail on TOPS networks (or MacServe for that matter) is for each machine on the network to have a "MailBox" folder on their published volume. Sending email is then a matter of using the Finder or the Tops desk accessory to copy a file over to this folder (this was a suggestion I found on the TOPS Talk bulletin board at (415) 549 5955, by the way). The only problem is that you won't get notified that the mail file has arrived...

The *Check Mail* desk accessory checks this folder once a minute for incoming mail. If it detects any (the modification time has changed, and the number of files in the folder hasn't decreased), it informs you with a small dialog box at the bottom of the screen. The dialog box will pop up for 10 seconds every minute until acknowledged by clicking on the OK button or hitting the Return key. This scheme means that any work the Macintosh is doing (e.g., lengthy compiles) won't stop if incoming mail turns up and you're not sitting in front of the machine.

There's one way of fooling this check - if you drag two or more files out of the folder (or delete them) and a new email message arrives, all in the same one minute time slot, then the arrival won't be noticed.

Also, there's a way of suppressing mail notification while in certain applications (see **How it works** for the gory details). This is useful with compilers and terminal emulators.

*Check Mail* will keep on checking until explicitly stopped — it won't go away when you leave the current application. You can stop it by selecting it from the Apple menu, and choosing the "Stop checking" option from the resulting dialog box. You might want to do this if you're running lengthy Tempo macros, for instance.

*TOPS boot* will start the desk accessory running after performing certain sanity checks. It's the recommended way of starting off *Check Mail*.

## How it works

*TOPS boot* retrieves the network name, and passes it to the TOPS desk accessory by posting events in the event queue. A series of mouse down events is then generated to cause the first item in the volume list at the left to be published. The desk accessory is then closed by a click in its close box. A command-Q seems to work here as well.

If you want to alter this behavior in any way, it's possible with ResEdit. Extract the 'TMPL' resource in *TOPS boot*, and install it in ResEdit. Then open 'EVNT' resource 128 in *TOPS boot*.. You'll find three global coordinates : one for clicking on the volume name, one for clicking on the Publish button, and one for clicking on the close box.

These coordinates were calculated by screen dumping the dialog box (Command-Shift-3), and then using FullPaint's "Mouse Spot" indicator. There are also various desk accessories that can help with this task (for example, *BCS\*Clicker*).

Fig. 1 shows the format of the 'EVNT' template. It allows you to specify mouse down and key down events, and their associated modifiers (e.g. a mouse down with the command key depressed). There are also special choices for return and tab keys, since they can't be typed into the "Key" box very easily.

Fig. 2 shows some useful coordinates if you wish to change the default behavior. An alternative to mouse clicks on volume names is "typing" the volume names (or more realistically, just sufficient characters to distinguish the volumes). Before the TOPS dialog will accept this, a click on the Macintosh icon at coordinates (66, 66) is required, followed by another (i.e. double-click) or a Return, or a click on the Open button.

The *Check Mail* desk accessory can also be customized to a certain extent: the name of the mailbox folder is stored in 'STR ' resource -16000, and 'STR#' resource -16000 holds a list of applications where incoming mail notifications are suppressed (as distributed, this list names LightspeedC™ only). Note that these are the resource IDs in the desk accessory suitcase file. Once installed in a system, they'll probably be different. Changes should be made to the original suitcase file, and the DA re-installed into the system.

<b>Click</b>	<input type="radio"/> 0	<input checked="" type="radio"/> 1	← Mouse down
<b>Character</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Use "Key" field
<b>Return</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Return key
<b>Tab</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Tab key
<b>Option key</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Option key modifier
<b>Caps Lock</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Alpha lock modifier
<b>Shift key</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Shift key modifier
<b>Cmd key</b>	<input checked="" type="radio"/> 0	<input type="radio"/> 1	← Command key modifier
<b>Key</b>	<input type="text"/>		← Character for key down
<b>Vert. Click</b>	<input type="text" value="169"/>		← Global coordinates, if "Click" specified
<b>Horiz Click</b>	<input type="text" value="226"/>		

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Fig. 1 Layout of the 'EVNT' Template

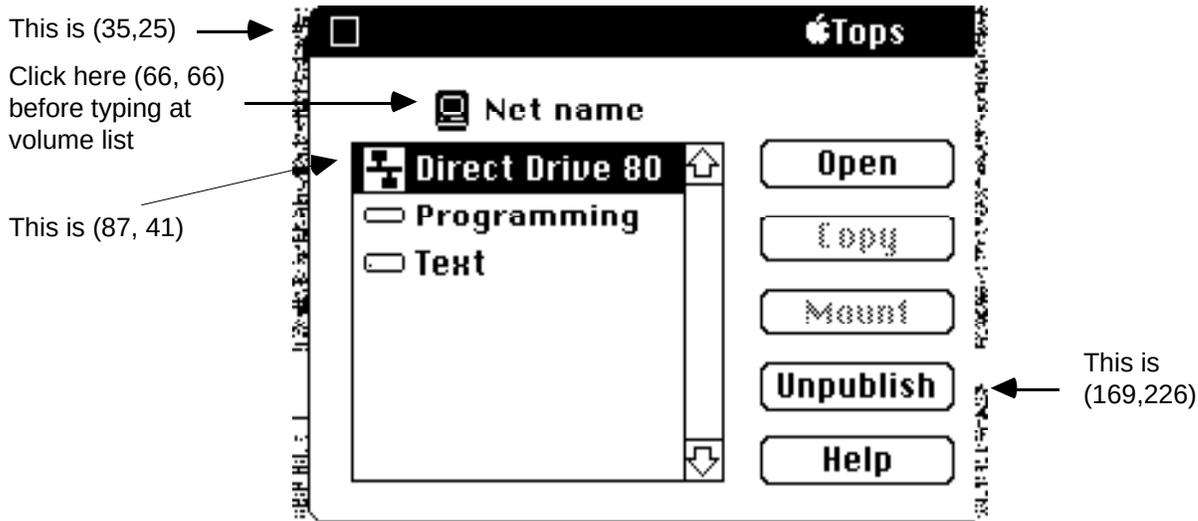


Fig 2. Useful coordinates (vertical, horizontal) in the TOPS dialog.

## **Problems**

Most problems result in reasonably self-explanatory alerts. Probably the nastiest is the alert issued by *TOPS boot* stating that there's insufficient room in the system heap for the *Check Mail* desk accessory. There are various ways of getting around this, depending on the system version you're running. Probably the most general is to bump up the size of the system heap by using Fedit to modify the boot blocks.

Another thing to watch out for is *Check Mail*'s habit of checking the startup volume. This makes sense if it's a hard disk - but not if it's a floppy that you want to unmount.

The mail alert mechanism is somewhat obnoxious. I'm waiting to see if Apple releases the rumored Notification Manager before changing this.

## **Outro**

These are public domain utilities. Leave your checkbook where it is!

The source code is available on request. The simplest way is to send a disk and a self-addressed envelope to the address below.

Bug reports, comments and suggestions for enhancements are welcome. *TOPS boot* and *Check Mail* were perpetrated by:

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