Apple® IIGS

RamRunTime
Reference Manual

**Dedicated to the memories of Joe Kohn 1947-2010
Ryan Suenega 1967-2011**

Credits
Thanks go to Jayson Smith for raising the problem in the first place.
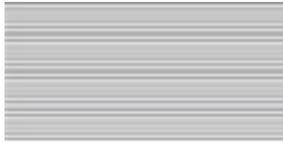
Welcome to RamRunTime

Background

Jayson Smith made a suggestion on the comp.sys.app2 newsgroup that he thought there was the need for a new card for the IIgs.

In his words:

"A card that installs into slot 7 on an IIgs, thus being the first slot being checked for a disk controller if boot is set to Scan. When the system is first turned on, it shows up as a bootable device. When booted, a 'fake' bootloader program is loaded and run. This program communicates with the card to do its thing. The card, meanwhile, is connecting to a WiFi or Ethernet network and using NTP to obtain the current time. Once this is done, the correct time, as well as an image of battery ram also stored on the card, are communicated to the program running on the GS. That program then sets the GS clock and restores the GS batram from the image received from the card. The point being, if you have a dead batram battery, rather than getting it replaced, just use this card. As a bonus, every time you turn your GS on, the clock gets set accurately. Once the restoration and clock setting is complete, the program in memory invalidates the reset vector and jumps to $FA62 to do a reset. This causes the batram settings to take effect, and also causes a reboot, at which point the card, having already done its thing, behaves differently."

I suggested that there was no need for these functions to be in a card, which would only take up a valuable slot, as it could all be done in an NDA!

I of course was only setting myself up for a challenge to solve.

Thus RamRunTime was born...

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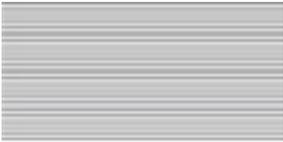
The RamRunTime Battery Saver

Requirements

To install RamRunTime, run the 'Installer' in the RamRunTime archive folder and click 'Install'. The IIgs will reboot when finished.

Optionally, you can Uninstall RamRunTime from the Installer.

The Installer will install the RamRunTime NDA, the RamRunBoot PIF file, and if not already installed, Tool56 and the TimeZone CDev.

If you want to use the Clock Set feature, you will need to have Marinetti 3.0.1 or later installed and running.

What is RamRunTime

RamRunTime is an NDA who's sole purpose to assist your IIgs as it boots. It will optionally restore the BRAM settings, set the clock to the current time, and automatically run a target application.

If the battery in your IIgs has failed, or is not present, the BRAM settings will be set to their defaults at boot, and the clock will show the wrong time. RamRunTime will solve both of these problems for you.

Legal

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Using RamRunTime

RamRunTime has three distinct functions which it can apply at boot time. You choose which of these functions you would like RamRunTime to do for you. You need to click 'Save Settings' button after changing any of the check boxes.

If the battery in your IIgs is working, then you may not need to restore the BRAM settings, and if you are not concerned about how accurate the clock in your IIgs is, then you will not need to set the clock at boot, but you may still wish to automatically start a target application at boot, without using the SetStart CDev.

Set Clock at Boot

You must have Marinetti installed, configured, and working, to use this function. You must also supply a valid address to a NIST time server in the LineEdit box.

NIST - This is the address of a time server that is used to set the system clock. Only change the default address if this server is no longer available. You can read more about NIST, and get a link to other time servers, on this web page:

http://www.nist.gov/pml/div688/grp40/its.cfm

Restore BRAM at Boot

If this box is checked, when RamRunTime is initialised at boot, it checks to see if the saved BRAM settings in its own Preference file match those of the system. If not, then the saved BRAM settings will be written back to the system, and a reboot will be forced. After this double boot, your IIgs will behave as if the settings had been preserved by a working battery.

Note: You will need to first save the settings into the RamRunTime Preference file for the double boot to restore the BRAM. Set up everything exactly as you would like it to be from the appropriate Control Panels, or from the CDA menu, then open the RamRunTime Desk Accessory, and click the 'Save BRAM' button. This will save the current BRAM configuration to the RamRunTime Preferences file.

Note: You might wish to set Marinetti to not Connect to the network when GS/OS boots, as otherwise you will have to press a key to dismiss the alert after the first boot.

Launch App at Boot

You can optionally tell RamRunTime to launch a target application at boot. Click the 'Choose App' button, and select an application. You will see the name of the target application to the right of the button. With the check box ticked, that application will then launch at boot time after the double boot, and the clock has been set.

Save BRAM

Saves the current state of BRAM to the RamRunTime Preferences file. If the 'Restore BRAM at Boot' checkbox is ticked, and at boot the actual BRAM settings differ from those in the Preferences file, the system will double boot to restore your own preferences.

Note: You must click this button at least once after you first install RamRunTime. See above.

Set Time
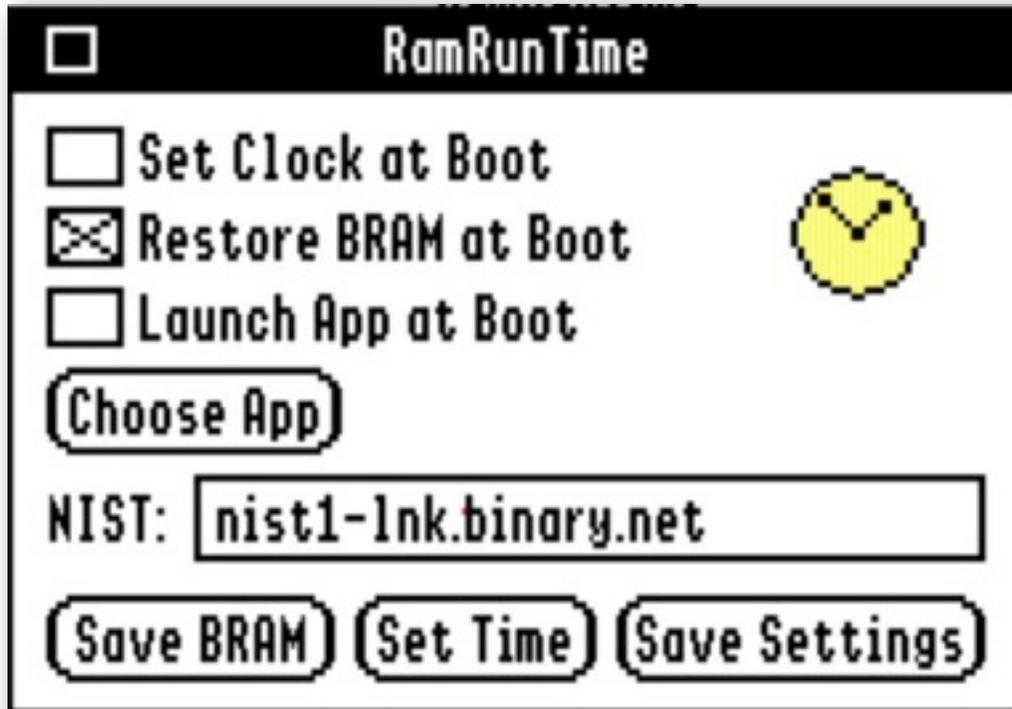
If you have Marinetti installed and running, click the 'Set Time' button to manually reset the system clock. You will see a yellow Time icon display while the process is running.

Note: To make sure the clock is set to your local time, you must first set your local TimeZone in the TimeZone Control Panel.

Tick the 'Set Clock at Boot' checkbox to set the clock automatically at boot.

Save Settings

Saves the checkbox, and other dialog settings to the Preference file. These settings will then be used at the next boot.

Note: When you close the NDA window, if you have changed any of the settings in the window, or the BRAM settings do not match those in the Preferences file, you will be warned, and have a chance to 'Ignore' or 'Save' the new settings. In this case, both the dialog settings, and the BRAM settings will be saved.
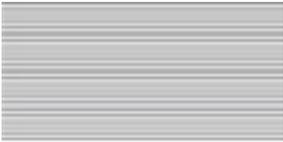
Extras

Problems

Hopefully you will have none, but if you do, and they cannot be answered by reading these notes, please contact me on:

spectrumdaddy@me.com

Other information

To obtain the latest version of the Marinetti TCP/IP stack:

http://www.apple2.org/marinetti/

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http://www.wannop.info/speccie/

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