ROMX

Apple][,][+

API Reference

Contents

ROM X API Overview

This guide will allow the programmer to take advantage of the ROM X features to enhance or produce their own custom solutions. Unless otherwise noted, all of the addresses listed below can be accessed with either READ or WRITE operations, with the BIT instruction being the recommended method.

Activating the ROM X

At any time and from any bank, the following address sequence will instantly activate the Firmware Bank 0 image in the ROM X:

$CACA $CACA $CAFE (immediately switches to Bank 0)

Manually, from the monitor you can type CACA CACA CAFE and press enter to activate ROM bank 0.

The following ROM X functions are only available after activating Bank 0:

- Switch System ROM bank
- Switch Text ROM bank
- Read the Default System ROM bank
- Read the Default Text ROM bank

Switching System ROM bank

While in Bank 0, accessing any address in the range **$CFEx** will switch to the selected System ROM Bank x (where x is 1-9,A-F).

$CFE5   switches to Bank 5.

If you switch out of bank 0 you will need to use CACA CACA CAFE to return to bank 0 to switch again.

Manually, from the monitor, after activating ROM Bank 0, type CFE5 and press enter to activate ROM bank 5.

Switching Text ROM bank

If you have the optional ROM X Text ROM board installed, while in Bank 0, accessing any address in the range **$CFDx** will switch to the selected Text ROM Bank x (where x is 0-9,A-F). The font will immediately change. If the Text board is not installed, this will have no effect.

$CFD5   switches to Text ROM Bank 5 (Byte Font – see the ROM X User Guide for a list of fonts)

Manually, from the monitor, after activating ROM Bank 0, type CFD5 and press enter to activate Text ROM bank 5.

Reading the Default System ROM bank

While in Bank 0, reading this location will return the current default ROM bank. The value will be in the range of $E1-$EF.

$D034 (reads System default Bank)

Reading the Default Text ROM bank

While in Bank 0, reading this location will return the current default Text ROM bank. The value will be in the range of $D0 -$DF.

$D02E (reads Text default Bank)

The following code (from the TEXT ROM DEMO) program will illustrate the use of these commands:

```
0300 – 48              PHA
0301 – 2C CA CA        BIT $CACA    ;Select ROM X Bank 0
0304 – 2C CA CA        BIT $CACA
0307 – 2C FE CA        BIT $CAFE
030A – AD 34 D0        LDA $D034    ;Retrieve Default ROM bank
030D – 8D 1B 03        STA $031B    ;Modify return code
0310 – AD 2E D0        LDA $D02E    ;Retrieve Default Text ROM bank
0313 – 8D 31 03        STA $0331    ;Save for use by external program
0316 – 2C D0 CF        BIT $CFD0    ;Select Text Bank ($0317 modified extern)
0319 – 68              PLA
031A – 2C 00 CF        BIT $CF00    ;Restore original ROM bank
031D – 60              RTS
```

Linking to a second Bank on launch

When launching an image whose Description has an associated D command (Dual Image, or Double Bank), a second (and conceivably more) image bank(s) can be run before actually launching the selected Bank. If the Description contains the characters &D in positions 30-31 of the string, then the next character will be interpreted as a link to another bank that will be loaded when the original bank is selected.

Normally, when a Bank is selected using a bank key (1-9, A-F) or when the Menu exits after the X)it command or times out, the default Text ROM is enabled followed by a check for either an associated Text Bank and/or Dual bank. If neither is present, then the ROM X activates the selected image and Jumps to the RESET vector pointed to by $FFFC/D in that image.

If there is an associated Text Bank, it will first select that Bank overriding the default bank. Then it will continue launching the System Image using the RESET vector.

If there is a Dual bank, then code will be executed to select that bank and Jump to its entry code pointed to by the $FFFE/F vector in its image. The current bank (i.e. the one selected in the Menu) will be passed in location $02A6 (as $01-$0F) so that after the secondary code has executed it can resume selecting and launching the desired image.

Reading / Writing to the Description. Additional Info, and Delay Information

This section will be completed when the code is locked down and entry points to the Flash Erase and Write routines are documented