Apple IIGS: 6502 communications applications (1 of 2)

Some assembly language programmers may want to convert 6502 communications software to use the IIGS logic boards to the full. To insure future compatibility when using the Apple IIGS serial ports through assembly language, you should use the built-in firmware calls. The firmware works very well, is very fast, and also provides you with a built-in interupt handler and input/output buffers. All of these features can be managed through ROM calls.

More advanced use (bit and register handling) would require familiarity with the "Z8030/Z8530 Serial Communication Chip Technical Manual" from Zilog. Information there reveals that communications on the 8530 is much more complicated than that on the 6551; a straight conversion may not be that simple.

Zilog Inc.
210 Hacienda ave.
Campbell CA. 95008

Here are some examples of how you might use the serial ports with the built-in firmware. NOTE: all these examples use the Pascal interface in the ROM.

To initialize your programs and the port you might use something like this:

```
InitVector   equ   $C20D        ; pointer to the init routine in ROM
ReadVector   equ   $C20E        ; Pointer to the read char routine
WriteVector  equ   $C20F        ; pointer to the Write routine
StatVector   equ   $C210
ExtendVect   equ   $C212        ; Pointer to the extended interface routine

InitPort     equ   $F8          ; set up some area's for indirect jumps
ReadChar     equ   $FA          ; to be used in the program to make the
WriteChar    equ   $FC          ; calls to ROM
StatusCall   equ   $FE          ;
ExtendCall   equ   $F6          ; New vector for extended interface

InitPort     lda   InitVector   ; First set up your indirect pointers
             sta   InitPort

             ldy   #$C2         ; make sure to set the high byte
             sty   InitPort+1
             lda   ReadVector
```

```
            sta   ReadChar
            sty   ReadChar+1
            lda   WriteVector
            sta   WriteChar
            sty   WriteChar+1
            lda   StatVector
            sta   StatCall
            sty   StatCall+1
            lda   ExtendVect
            sta   ExtendCall
            sty   ExtendCall+1

            ldx   #$C2         ; Now make the init call to the ROM
            ldy   #$20         ; Always set up the X and Y Regs first
            jsr   (InitPort)   ; and indirect jump to the init routine
            cpx   #0           ; test for an error
            beq   *+5          ; if its zero skip next jump
            jmp   Error        ; if non-zero an error occured call error rtn
            RTS
```

<None>

Keywords: <None>

==========

This information is from the Apple Technical Information Library.

19960215 11:05:19.00

Tech Info Library Article Number: 2226