

1x1 Scrolling message inside IRQ interrupts

This routine shows you how to create a 1x1 smooth scrolling message inside an IRQ raster interrupt routine. Looking below you will see that this scroller uses 2 interrupts. As we cut the raster positions into two parts. Most of the upper raster remains as normal, while the bottom raster has a smooth scroll effect.

Note: Source is programmed in ACME cross-assembler and it has been tested beforehand too.

```
;1x1 scrolling message inside IRQ by Richard Bayliss

smooth = $02      ;Control for smooth scroll
screenloc = $0798 ;This is the line for where the scroll is placed

                !to "irqscroll.prg",cbm
                * = $4000
                sei
                jsr $ff81
                lda #<message
                ldy #>message
                sta read+1
                sty read+2
                lda #<interrupt1
                ldx #>interrupt1
                ldy #$1b
                sta $314
                stx $315
                sty $d011
                lda #$7f
                sta $dc0d
                lda #$01
                sta $d01a
                cli
hold            jmp hold
interrupt1     inc $d019
                lda #$00
                sta $d012
                lda smooth ;Scroll section
                sta $d016
                lda #<interrupt2
                ldx #>interrupt2
                sta $314
                stx $315
                jmp $ea7e
interrupt2     inc $d019
                lda #$e0
                sta $d012
                lda #$08 ;No scroll section here
                sta $d016
                lda #<interrupt1
```

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                ldx #>interrupt1
                sta $314
                stx $315
                jsr scroll
scroll          jmp $ea7e
                lda smooth
                sec
                sbc #$01 ;Speed of scroll can be edited to how you want it,
but don't go too mad :)
                and #$07 ;We need this to make the variable smooth into
something smooth :)
                sta smooth
                bcs endscroll
wrapmessage    ldx #$00
                lda screenloc+1,x
                sta screenloc,x
                inx
                cpx #$28
                bne wrapmessage
read           lda screenloc+$27
                cmp #$00 ;Is byte 0 (@) read?
                bne nowrap ;If not, goto label nowrap
                lda #<message
                ldy #>message
                sta read+1
                sty read+2
                jmp read
nowrap         sta screenloc+$27
                inc read+1
                lda read+1
                cmp #$00
                bne endscroll
                inc read+2
endscroll      rts

message        !scr "hello folks. this is a 1x1 char message scroller"
                !scr " inside an IRQ interrupt, coded by richard bayliss"
                !scr " of the new dimension, in acme cross assembler ... "
                !scr "we do hope you like it ;o)) ... hopefully you should"
                !scr "find the source code useful for future demos and stu"
                !scr "ff if you want to learn to do scroll texts ...      "
                !scr "wrap time!                                     "
                !byte 0

```

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