Horizontal Scrolling

```
;++++++++++++++++++++++++++
;++++++++++++++++++++++++++
;++                      ++
;++  HORIZONTAL SCROLL   ++
;++                      ++
;++     FOR CBM 64       ++
;++                      ++
;++++++++++++++++++++++++++
;++++++++++++++++++++++++++
;
SCRPTR=$FB              ;Ø PAGE
COLPTR=$FD              ;COPY POINTERS
;
MEMPTR=$FD              ;Ø PAGE PTR TO MEMORY
SCRLRG=$D016            ;HORIZ SCROLL REGISTER
SCRNLO=$ØØ              ;SCREEN START LOBYTE
SCRNHI=$Ø4              ;SCREEN START HIBYTE
COLRLO=$ØØ              ;COLOUR START LOBYTE
COLRHI=$D8              ;COLOUR START HIBYTE
BLOCKS=$Ø3              ;3*256 BYTE BLOCKS
EXTRA  =$E8             ;EXTRA BYTES TO 1ØØØ
NMCOLS=$28              ;NO OF COLUMNS
NMROWS=$19              ;NO OF ROWS
;
*=$C2ØØ
;
MEMLO  *=*+1            ;START OF MEMORY
MEMHI  *=*+1            ;TO BE SCROLLED
COFFLO *=*+1            ;OFFSET TO COLOUR MAP
COFFHI *=*+1
NMSCRN *=*+1            ;NUMBER OF SCREENS
DELAY  *=*+1            ;DELAY LOOP VALUE
;
;++++ SET 38 COLUMN MODE ++++
;
       LDA SCRLRG
       AND #$F7
       STA SCRLRG
;
;++++ SET 1ST SCROLL POSITION ++++
;
       LDX NMSCRN
NEXSCR
       LDY #NMCOLS
START
       TXA
       PHA              ;PUSH X,Y REGS
       TYA              ;ONTO STACK
       PHA
;
       LDA SCRLRG
       AND #$F8
       CLC
       ADC #$Ø7
       STA SCRLRG
;
;++++ COPY SCRN & COLR ONE LEFT ++++
;
       LDA #SCRNLO
       STA SCRPTR       ;SET UP Ø PAGE
       LDA #SCRNHI
       STA SCRPTR+1     ;POINTERS FOR
       LDA #COLRLO
       STA COLPTR       ;COPY
       LDA #COLRHI
       STA COLPTR+1
;
       LDX #BLOCKS
AGAIN
       LDY #$Ø1
NEXT
       LDA (SCRPTR),Y
       DEY
       STA (SCRPTR),Y
       INY
       LDA (COLPTR),Y
       DEY
       STA (COLPTR),Y
       INY
       INY
       BNE NEXT
;
;++ COPY OVER PAGE BOUNDARY ++
       INC SCRPTR+1     ;INC HIBYTES
       INC COLPTR+1     ;OF Ø PAGE PTRS
       LDA (SCRPTR),Y
       DEC SCRPTR+1
       DEY
       STA (SCRPTR),Y;COPY OVER PAGE
       INY
       LDA (COLPTR),Y
       DEC COLPTR+1
       DEY
       STA (COLPTR),Y
       INC SCRPTR+1     ;INC Ø PAGE PTRS
       INC COLPTR+1     ;AGAIN
       DEX
       BNE AGAIN
;
;++ DO EXTRA BYTES ++
       LDY #$Ø1
ANTHER
       LDA (SCRPTR),Y
       DEY
       STA (SCRPTR),Y
       INY
       LDA (COLPTR),Y
       DEY
       STA (COLPTR),Y
       INY
       CPY #EXTRA
       BCC ANTHER       ;IF Y<EXTRA REPEAT
;
;++++ INSERT RIGHT COLUMN OF SCREEN ++++
;
       LDA MEMLO
       STA MEMPTR
       LDA MEMHI        ;SET UP Ø PAGE
       STA MEMPTR+1     ;PTRS TO MEMORY
       LDA #NMCOLS-1
       STA SCRPTR       ;SET UP Ø PAGE
       LDA #SCRNHI      ;PTRS TO SCREEN
       STA SCRPTR+1
       JSR COPY4Ø       ;COPY COLUMN
;
;++++ INSERT RIGHT COLUMN OF COLOUR ++++
;
       LDA MEMLO
       CLC
       ADC COFFLO       ;ADD OFFSET TO
       STA MEMPTR       ;COLOUR MAP
       LDA MEMHI        ;AND SET Ø PAGE
       ADC COFFHI       ;PTRS
       STA MEMPTR+1
       LDA #NMCOLS-1    ;SET UP Ø PAGE
       STA SCRPTR       ;PTRS TO COLOUR
       LDA #COLRHI      ;RAM
       STA SCRPTR+1
       JSR COPY4Ø       ;DO COPY
;
;++++ SCROLL POSITIONS 6 TO Ø ++++
;
       LDX #$Ø6
MORE1
       LDA SCRLRG
       AND #$F8
       STA SCRLRG
       TXA
       CLC
       ADC SCRLRG
       STA SCRLRG
;
       LDY DELAY        ;COUNT DOWN
MORE2
       DEY              ;DELAY VALUE
       BNE MORE2
       DEX
       BPL MORE1
;
;++++ INCREMENT MEMORY POINTER ++++
;
       LDA MEMLO
       CLC
       ADC #$Ø1
       STA MEMLO
       LDA MEMHI
       ADC #$ØØ
       STA MEMHI
;
;++++ CHECK FOR END OF MEMORY AREA ++++
;
       PLA
       TAY              ;GET X,Y REGS BACK
       PLA
       TAX              ;OFF STACK
       DEY
       BEQ NOJMP
       JMP START
NOJMP
       LDA MEMLO
       CLC
       ADC #$C8         ;ADD 1ØØØ-4Ø
       STA MEMLO        ;TO MEMORY POINTER
       LDA MEMHI
       ADC #$Ø3
       STA MEMHI
       DEX
       BEQ RETRN
       JMP NEXSCR
RETRN
       RTS
;
;++++ COPY EVERY 4ØTH BYTE S/R ++++
;
COPY40
       LDX #NMROWS
       LDY #$ØØ
REPEAT
       LDA (MEMPTR),Y
       STA (SCRPTR),Y
       DEX
       BEQ FINISH       ;EVERY ROW DONE?
;
       LDA SCRPTR
       CLC
       ADC #NMCOLS      ;INC PTRS BY 4Ø
       STA SCRPTR
       LDA SCRPTR+1
       ADC #$ØØ
       STA SCRPTR+1
;
       LDA MEMPTR
       CLC
       ADC #NMCOLS
       STA MEMPTR
       LDA MEMPTR+1
       ADC #$ØØ
       STA MEMPTR+1
       JMP REPEAT
FINISH
       RTS
```