

```
*****
*
*          TOUCHPAD.MAC
*      By Brian Hall 10/23/84
*
* A subroutine to return in A the
* alpha equivalent of a key touched on
* an Atari 12 key 'Video Touch Pad'
* plugged into controller jack 2.
*
* Will return (Keytab,0) if there is
* no controller connected or if no key
* has been pressed
*
* The routine is completely relocatable
* and currently is ORG'ed to sit on
* page 6 for making BASIC happy, or
* no_wheres_ville for use as a ML subr.
*
* I have made exclusive use of PORTA
* to avoid OS vXL conflicts. Use PORTB
* at your own risk!
*
* GLOBAL LABELS:
* Keytab
*   A 13 byte table containing the
*   ATASCII equivalents for the keys
* I_Rd_Pad
*   Initialize jack 2 for output and
*   otherwise prepare for the pad
* Rd_Pad
*   Entry point for ML use. Returns
*   value in A as detailed above
*
* Update history:
* 12/08/84 - Modified for greater XL
* series compat.
*****
```

LIST -M

= D300	PORTA	= 54016
= D302	PACTL	= 54018
= D40A	WSYNC	= \$d40a
= D20F	SKCTL	= \$d20F
= D208	ALLPOT	= \$d208
= D20B	POTGO	= \$d20b
= 0270	PADDL0	= \$0270
= 0271	PADDL1	= \$0271
= 0272	PADDL2	= \$0272
= 0273	PADDL3	= \$0273

```

= 0284    STRIG0 = $0284
= 0285    STRIG1 = $0285
= 0001    BASIC? = 1      ;0=no basic
    
```

```

0000          Start:
0000          PROC
          = 0001    IF BASIC?
0000          = 0600    ORG $600
0600    68          pla      ; make basic happy
0601    D8          cld
          ENDIF

          * Set for output
          I_Rd_Pad:
0602          lda :Ini?
0602    AD8006      bne Rd_Pad
0605    D012 ^0619
0607          Movei PACTL,$38 ; set DCR
060C          Movei PORTA,$f0 ; Jack 2 output
0611          Movei PACTL,$3C ; set as PORT A
0616    8D8006      sta :Ini?

          **
          ** Main Loop
          **
0619          Rd_Pad:
          * Is the controller hooked up?
0619    AD7202      lda PADDL2
061C    C9E4        cmp #228
061E    D007 ^0627  bne :Loop-2
0620    AD7302      lda PADDL3
0623    C9E4        cmp #228
0625    F044 ^066B  beq :Out-2
0627    A200        ldx #0
0629          :Loop
          * Select row
0629    BD7806      lda :Rowmsk,x
062C    8D00D3      sta PORTA

          * Wait for some inane reason
          * - incorrect values if you don't
062F    A514        lda 20
0631    C514        :wait1 cmp 20
0633    F0FC ^0631  beq :wait1
0635    A514        lda 20
0637    C514        :wait2 cmp 20
0639    F0FC ^0637  beq :wait2

          * Read column 1
063B    AD7302      lda PADDL3
063E    C90A        cmp #10
0640    9008 ^064A  bcc :l1
0642    A901        lda #1
0644    18          clc
    
```

```

0645 7D7C06          adc :Basadd,x
0648 9023 ^066D      bcc :Out
                    * Read column 2
064A AD7202          :11  lda PADDL2
064D C90A            cmp #10
064F 9008 ^0659      bcc :12
0651 A902            lda #2
0653 18              clc
0654 7D7C06          adc :Basadd,x
0657 9014 ^066D      bcc :out
                    * Read column 3
0659 AD8502          :12  lda STRIG1
065C D008 ^0666      bne :next
065E A903            lda #3
0660 18              clc
0661 7D7C06          adc :Basadd,x
0664 9007 ^066D      bcc :out
0666 E8              :next  inx
0667 E004            cpx #4
0669 D0BE ^0629      bne :Loop
066B A900            lda #0
066D AA              :out   tax
066E BD8106          lda Keytab,x
      = 0001          IF BASIC?
0671 85D4            sta $d4
      673            stz $d5
                        ENDIF
0677 60              rts
                    * Table of row masks
0678 EEDDBB77        :Rowmsk db $ee,$dd,$bb,$77

                    * Number to add based on row
067C 00030609        :Basadd db 0,3,6,9
0680 00              :Ini?  db 0
                        EPROC

                    * Alpha Equivalent for Touchpad keys
                    * Currently set up like a phone
0681 0031323334      Keytab db 0,'123456789*0#'

068E                                END Start

```

no ERRORS, 27 Labels, \$4520 free.