

2

Hello  
Bad command or file name

A>edit tst.txt

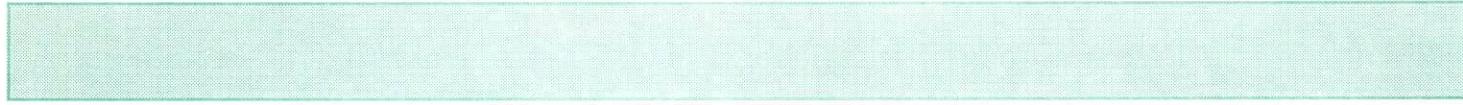
A>  
A>dir

COMMAND	COM	4959	11-28-83	12:00P
VEDIT	COM	16640		
INTPRT	TXT	128	1-01-80	12:05a
INTPPRT	TXT	128	9-13-84	3:40P
AUTOEXEC	BAT	128	3-07-85	6:25P
DEBUG	COM	6619	11-28-83	12:00P
DISKCOPY	COM	1946	11-28-83	12:00P
XASM05	COM	14336	1-01-80	8:03a
PROM	EXE	9136	1-01-80	2:56a
MAIN	PRN	58880	5-14-85	12:01P
SECTAUR	HEX	896	5-03-85	11:21a
SECTAUR	PRN	10368	5-03-85	11:22a
SANDA	BAK	2688	4-09-85	1:55P
MAIN	BAK	2176	5-13-85	3:43P
MODE	COM	1800	11-28-83	12:00P
GET	BAK	768	5-14-85	9:42a
MAIN	ASM	2176	5-14-85	10:33a
REVERSE	BAK	896	5-08-85	10:19a
SCREEN	BAK	1536	5-13-85	3:39P
MAIN	HEX	3712	5-14-85	9:14a
DRAW	BAK	1024	5-10-85	12:57P
NXTFRM	ASM	640	5-08-85	10:21a
SAVE	HEX	384	5-07-85	3:54P
SAVE	PRN	0	5-07-85	3:54P
NXTFRM	BAK	640	5-08-85	9:50a
CONTRL	ASM	10880	5-14-85	11:50a
CONTRL	PRN	18816	5-09-85	1:43P
GET	ASM	768	5-14-85	9:46a
SAVE	ASM	1152	5-14-85	11:58a
TST	PRN	6144	5-13-85	2:31P
SUB	BAK	2048	5-14-85	9:39a
REVERSE	ASM	896	5-08-85	10:23a
VECTOR	ASM	128	5-14-85	8:56a
ANIMATE	ASM	1536	5-14-85	11:57a
SCREEN	ASM	1536	5-14-85	10:29a
DRAW	ASM	1024	5-14-85	9:41a
SAVE	BAK	1408	5-14-85	10:27a
ANIMATE	BAK	2048	5-10-85	11:32P

ANIMATE BAK 2048 5-10-85 1:32P  
TST BAK 1536 5-13-85 2:29P  
TST ASM 1536 5-13-85 2:30P  
CONTRL BAK 10880 5-14-85 10:43a  
SUB ASM 2048 5-14-85 9:45a

42 File(s)

A>



12  
11  
10

9  
8

7  
6

5  
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3  
2

HIGHER sta SIP

tex  
phi  
tva  
pha  
lida SIP

```

        tay
        lda      stbl,y
        sta      FRAMES
        lda      stbl+1,y
        sta      FRAMES+1

```

三〇〇

play  
play  
play  
play  
play

stbl  
sound table - use following for notes  
or - or - or - eighth note

en	890	0	seventh note
q	890	1	quarter note
h	890	3	half
w	890	7	whole
rest	890	255	I use this for a rest
le	890	243	
lf	890	222	
lfs	890	216	
le	890	204	
los	890	192	

la	eqn	182
1as	eqn	172
1b	eqn	162
mc	eqn	153

MCS equ 144  
mid equ 136

mds	মৃত্যু	128
me	মৃত্যু	121
mf	মৃত্যু	115

ufs 696 108  
ms 696 102

Name	Age	Score
John	12	96
Mary	13	91
David	14	86

mb	১৭৮	৮১
nc	১৭৮	৭৬
lsc	১৭৮	৭৩

nos	equ	72
hd	equ	68
hds	equ	64

he	equ	61
hf	equ	57
hfs	equ	54
ha	equ	51
hes	equ	48
ha	equ	45
has	equ	43
hb	equ	40
uc	equ	38
ucs	equ	36
ud	equ	34
uds	equ	32
ue	equ	30
uf	equ	29
ufs	equ	27
ug	equ	25
us	equ	24
ua	equ	22
uas	equ	21
ub	equ	20
tc	equ	19
tcs	equ	18
td	equ	17
tds	equ	16
te	equ	15
tf	equ	14
tf5	equ	13
ta	equ	12
tes	equ	11
ta	equ	10
tas	equ	9
tb	equ	8
fdb	nosound	:0-
fdb	tune2	:1-TUNE2
fdb	tune3	:2-TUNE3
fdb	tune4	:3-TUNE4
fdb	bop	:4-critters land on cube
fdb	qbert	:5-qbert hop
fdb	slick	:6-slick and sam hop
fdb	coily	:7-coily hop
fdb	fall	:8-coily fall
fdb	nosound	:9-qbert fall(done in other routine)
fdb	greens	:10-green ball sound
fdb	ball	:11-critter hit qbert
fdb	ball	:12-qbert crunch (rat hit qb)
fdb	nosound	:13-qbert use(done in other routine)
fdb	round2	:14-round end
fdb	extra	:15-extra qbert
fdb	tunel	:16-start of same
fdb	setQub	:17-set cube (points for cubes)
fdb	setQub2	:18-set cube alternate
fdb	setQub	
fdb	setQub2	
fdb	setQub3	
fdb	setQub4	
fdb	setQub	:17-set cube (points for cubes)
fdb	setQub2	:18-set cube alternate
fdb	setQub	
fdb	setQub2	
fdb	setQub5	
fdb	setQub6	
fdb	setQub3	
fdb	setQub4	
fdb	setQub	
fdb	setQub2	
fdb	setQub3	
fdb	setQub4	
fdb	setQub	
fdb	setQub2	
fdb	setQub5	
fdb	setQub6	

fdb	setQub10
fdb	setQub4
fdb	setQub
fdb	setQub2
fdb	setQub
fdb	setQub2
fdb	setQub7
fdb	setQub10
fdb	setQub8
fdb	setQub9

Ende

fcb	mc,h
fcb	hc,h
fcb	ls,h
fcb	hs,h
fcb	me,h
fcb	he,h
fcb	mb,h
fcb	lb,h

fcb	mc, h
fcb	hc, h
fcb	ls, h
fcb	hs, h
fcb	me, h
fcb	he, h
fcb	mb, h
fcb	lb, h

fcb	mc,h
fcb	hs,h
fcb	mc,h
fcb	hs,h
fcb	mc,h
fcb	hs,h
fcb	mc,h
fcb	hs,h
fcb	mc,h
fcb	hs,h

fcb he,h  
fcb ue,h  
fcb he,h  
fcb ue,h  
fcb he,h  
fcb ue,h  
fcb he,h  
fcb ue,h  
fcb he,h  
fcb ue,h

fcb mc, h  
fcb hs, h      ; h  
fcb m, h      ; h

fcb mc,h ;h  
fcb he,h ;h  
fcb mc,h ;h

fcb hs,h ; h  
fcb mc,h ; h  
fcb he,h ; h

fcb	hs, h	sh
fcb	uc, h	sh
fcb	0	

Figure 2

fcb	ma,h
fcb	ha,h
fcb	me,h
fcb	he,h
fcb	la,h
fcb	ha,h
fcb	hc,h

fcb uc,h  
fcb 1b,h  
fcb hb,h  
fcb me,h  
feb fresh  
fcb mb,h  
fcb hb,h  
fcb md,h  
fcb ud,h  
fcb hc,h  
fcb uc,h  
fcb mc,h  
fcb hc,h  
feb he,h  
fcb ue,h  
fcb le,h  
fcb he,h  
fcb has,h  
fcb les,h  
fcb mes,h  
fcb has,h  
fcb he,h  
fcb ue,h  
fcb le,h  
fcb me,h  
feb ma,h  
fcb ha,h  
fcb me,h  
fcb he,h  
fcb la,h  
fcb ha,h  
fcb hc,h  
fcb uc,h  
fcb 1b,h  
fcb hb,h  
fcb me,h  
fcb he,h  
feb mb,h  
fcb hb,h  
fcb hd,h  
fcb ud,h  
fcb hc,h  
fcb uc,h  
fcb ma,h  
fcb ha,h  
fcb hc,h  
fcb uc,h  
fcb he,h  
fcb ue,h  
feb ma,h  
fcb ha,h  
fcb ua,h  
feb o

tune3

fcb mfs,h  
fcb ms,w  
fcb mfs,h  
fcb mf,h  
fcb hd,h  
fcb hc,h  
fcb mb,h  
fcb hc,q  
fcb mb,q

2

fcb mas,h  
fcb ma,h  
fcb mas,h  
fcb ma,h  
fcb me,h  
fcb mf,h  
fcb ma,h  
fcb me,h  
fcb ma,h  
fcb me,h  
fcb mf,h  
fcb me,h  
fcb md,h  
fcb me,w  
fcb me,h  
fcb ms,h  
fcb mc,h  
fcb he,h  
fcb ha,h  
fcb he,h  
fcb hc,h  
fcb ue,h  
Fcb tc,h  
tune4 fcb O  
fcb hc,h  
fcb rest,¶  
fcb he,h  
fcb rest,¶  
fcb ha,h  
fcb rest,¶  
fcb uc,h  
fcb rest,¶  
fcb he,h  
fcb rest,¶  
fcb ha,h  
fcb rest,¶  
fcb uc,h  
fcb rest,¶  
fcb ud,h  
fcb hes,h  
fcb ud,h  
fcb hes,h  
fcb ud,h  
fcb hes,h  
fcb ud,h  
fcb hes,h  
fcb uc,h  
fcb hes,h  
fcb uc,h  
fcb hes,h  
fcb uc,h  
fcb hes,h  
fcb ud,h  
fcb hes,h  
fcb hf,h  
fcb ud,h  
fcb hes,h  
fcb ue,h

12  
11  
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fcb he,h  
fcb uc,h  
fcb he,h  
fcb ue,h  
fcb me,h  
fcb us,h  
fcb he,h  
fcb ue,h  
fcb uc,h  
fcb ue,h  
fcb tc,h  
fcb O

ball fcb u fren  
fcb rest,w  
fcb rest,w  
fcb rest,w  
fcb rest,w  
fcb O

abert fcb le,en  
fcb la,en  
fcb laven  
fcb hc,en  
fcb he,en  
fcb O

slick fcb 37,h  
fcb 38,q  
fcb 37,q  
fcb 36,q  
fcb 35,q  
fcb 34,q  
fcb 33,h  
fcb O

coily fcb mas,en  
fcb mas,en  
fcb mb,en  
fcb mb,en  
fcb hc,en  
fcb hc,en  
fcb hcs,en  
fcb hc,en  
fcb hd,en  
fcb hds,en  
fcb he,en  
fcb hf,en  
fcb hfs,en  
fcb O

fall fcb has,w  
fcb ha,w  
fcb has,w  
fcb he,w  
fcb hfs,w  
fcb hf,w  
fcb he,w  
fcb O

fcb hds,w  
fcb hd,w  
fcb hcs,w

fcb hc,w

12  
11  
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2

2

	fcb	0
bop	fcb	tas,en
	fcb	me,en
	fcb	mf,en
	fcb	mfs,en
	fcb	has,en
abt	fcb	0
extra	fcb	le,h
	fcb	me,h
	fcb	le,h
	fcb	me,h
	fcb	ue,h
	fcb	he,h
	fcb	ue,h
	fcb	he,h
	fcb	te,h
	fcb	tb,h
	fcb	te,h
	fcb	tb,h
	fcb	0
setQub	fcb	le,q
	fcb	lf,q
	fcb	lfs,q
	fcb	la,q
	fcb	les,h
	fcb	mss,h
	fcb	rest,q
	fcb	lf,h
	fcb	mf,h
	fcb	rest,w
	fcb	0
setQub2	fcb	uas,h
	fcb	has,h
	fcb	rest,q
	fcb	uas,h
	fcb	has,h
	fcb	rest,w
	fcb	0
setQub3	fcb	le,h
	fcb	me,h
	fcb	rest,q
	fcb	lf,h
	fcb	mf,h
	fcb	rest,w
	fcb	0
setQub4	fcb	hcs,h
	fcb	ucs,h
	fcb	rest,q
	fcb	mss,h
	fcb	hes,h
	fcb	rest,w
	fcb	0
setQub5	fcb	las,h
	fcb	mss,h
	fcb	rest,q
	fcb	lfs,h
	fcb	mfs,h

12  
11  
10  
9  
8  
7  
6  
5  
4  
3

2 fcb rest,w  
3 fcb O  
setQub6  
2 fcb lf,h  
2 fcb mf,h  
2 fcb rest,q  
2 fcb lfs,h  
2 fcb mfs,h  
2 fcb rest,w  
2 fcb O  
setQub  
fcb le,q  
fcb lf,q  
fcb lfs,q  
fcb lq,q  
fcb fcs,h  
fcb mes,h  
fcb rest,q  
fcb lf,h  
fcb mf,h  
fcb rest,w  
fcb O  
setQub2  
fcb uas,h  
fcb has,h  
fcb rest,q  
fcb ues,h  
fcb hes,h  
fcb rest,w  
fcb O  
setQub3 fcb le,h  
fcb me,h  
fcb rest,q  
fcb lf,h  
fcb mf,h  
fcb rest,w  
fcb O  
setQub4 fcb hcs,h  
fcb ucs,h  
fcb rest,q  
fcb mes,h  
fcb has,h  
fcb rest,w  
fcb O  
setQub5 fcb les,h  
fcb mes,h  
fcb rest,q  
fcb lfs,h  
fcb mfs,h  
fcb rest,w  
fcb O  
setQub6  
fcb lf,h  
fcb mf,h  
fcb rest,q  
fcb lfs,h  
fcb mfs,h  
fcb rest,w  
fcb O  
setQub10  
fcb mds,h  
fcb hds,h  
fcb rest,q

fcb mf,h  
fcb hf,h  
fcb rest,w  
fcb O

setQub7  
fcb las,h  
fcb mgs,h  
fcb rest,q  
fcb la,h  
fcb mg,h  
fcb rest,w  
fcb O

setQub8  
fcb la,h  
fcb ms,h  
fcb rest,q  
fcb las,h  
fcb mes,h  
fcb rest,w  
fcb O

setQub9  
fcb tas,h  
fcb uds,h  
fcb rest,q  
fcb ues,h  
fcb has,h  
fcb rest,w  
fcb O

round2  
fcb ha,h  
fcb ha,h  
fcb ha,h  
fcb ha,w  
:fcb ha,h  
fcb ha,h  
fcb hfs,h  
fcb ha,h  
fcb hb,h  
fcb ha,h  
fcb hb,h  
fcb ha,w  
fcb ha,h  
:fcb ha,h  
fcb ha,h  
fcb ha,h  
fcb uc,h  
fcb ha,h  
fcb uc,h  
fcb ue,w  
fcb ue,w  
:fcb ue,w  
:fcb ue,h  
fcb 38,q  
fcb 39,q  
fcb 40,q  
fcb 41,q  
fcb 42,q  
fcb 43,q  
fcb 44,q  
fcb 45,q  
fcb 46,q  
fcb 47,q

fcb 48,q  
fcb 49,q  
fcb 50,q  
fcb he,q  
fcb 50,q  
fcb 49,q  
fcb 48,q  
fcb 47,q  
fcb 46,q  
fcb 45,q  
fcb 44,q  
fcb 43,q  
fcb 42,q  
fcb 41,q  
fcb 40,q  
fcb 39,q  
fcb ue,q  
fcb 0

greens

fcb he,h :1  
fcb rest,h  
fcb hc,h  
fcb rest,h  
fcb he,h  
fcb rest,h  
fcb hd,h  
fcb rest,h  
fcb ha,h  
fcb rest,h  
fcb hf,h  
fcb rest,h  
fcb uf,h  
fcb rest,h  
fcb mas,h  
fcb rest,q  
fcb rest,en  
fcb he,h :2  
fcb rest,q  
fcb rest,en  
fcb hc,h  
fcb rest,q  
fcb rest,en  
fcb ha,h  
fcb rest,q  
fcb rest,en  
fcb hd,h  
fcb rest,q  
fcb rest,en  
fcb ha,h  
fcb rest,q  
fcb hf,h  
fcb rest,q  
fcb uf,h  
fcb rest,q  
fcb mas,h  
fcb rest,q  
fcb he,q :3  
fcb rest,q  
fcb hc,q  
fcb rest,q  
fcb he,q  
fcb rest,q  
fcb hd,q

2

```
fcb    rest,q
fcb    ha,q
fcb    rest,q
fcb    hf,q
fcb    rest,q
fcb    uf,q
fcb    rest,q
fcb    mas,q
fcb    rest,en
fcb    he,q      ;4
fcb    rest,en
fcb    hc,q
fcb    rest,en
fcb    hs,q
fcb    rest,en
fcb    hd,q
fcb    ha,q
fcb    hf,q
fcb    uf,q
fcb    mas,q
fcb    he,q      ;5
fcb    hc,q
fcb    hs,q
fcb    hd,q
fcb    ha,q
fcb    hf,q
fcb    uf,q
fcb    tf,q :end
fcb    he,q
fcb    te,q
fcb    hds,q
fcb    tds,q
fcb    hd,q
fcb    td,q
fcb    hcs,q
fcb    tcs,q
fcb    hc,q
fcb    tc,q
fcb    mas,q
fcb    uas,q
fcb    mss,q
fcb    uss,q
fcb    mf,q
fcb    uf,q
fcb    md,q
fcb    ud,q
fcb    lb,q
fcb    hb,q
fcb    ls,q
fcb    hs,q
fcb    mds,q
fcb    hds,q
resound
    fcb    0
sdo
    ldo sound - play one part of a song per inc attime
        lda    SIP
        bne    dosend
        ldy    #0
        lda    (FRAMES),Y
        bne    notends
tend of sound
    lda    #0
```

12  
11  
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5  
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```

sta      SIP
beq    dosend $unc

notends
jsr      note
ldy      #1
lda      (FRAMES),Y
and    ATTIME
bne    nothish
lda      #2
clc
adc      FRAMES
sta      FRAMES
bcc    nothish
inc      FRAMES+1

nothish
dosend
rts

fallsnd
lda      QY

note
ldy      #2

notex
sta      PTR      ;PUT note here to be dec'd for timing
sta      PTR+1    ;PUT note here for duration of routine
ldx      son
bne    doarest ;do rest if sounds turned off
cmp      #rest
beq    doarest ;do rest if pitch=rest ($ff)

;do a note
ldx      #0

snd
dec      PTR
bne    soon
sta      speaker
lda      PTR+1
sta      PTR

soon
dex
bne    snd
dey
bne    snd

nosnd
rts

dearest
;take a rest
ldx      #0

REst
dec      PTR
nop
dex
bne    REst
dey
bne    REst
rts

DOSDDY      ;DO SOUND DELAY
ldy      #0
lda      son
bne    noway
lda      (FRAMES),Y
REQ    NOLOOP
STA    TEMP1
INY

```

12  
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2

```

LDA      (FRAMES),Y      ;set duration
ASL      A
ASL      A
ASL      A
TAY
LDA      TEMP1
JSR      notex
LDA      #2
CLC
ADC      FRAMES
STA      FRAMES
BCC      WORK
INC      FRAMES+1
WORK    JMP      DOSDDY
NOLOOP
LDY      #1
JSR      ydelay ;at end of immediate sound
;end sound now
noway
STY      SIP
RTS
;
:cubfrm rmb   1
:0=stationary
:2=rotate right 1
:4=rotate right 2
:6=rotate right 3
:8=stationary
:10=rotate back 1
:12=rotate back 2
:14=rotate back 3
:16=stationary
:18=wire
:20=blank
:size   rmb   1
:subtmp rmb   2
:ycord  rmb   1
:xer   rmb   1
;#####
;PUTS UP 26 CUBES
;#####
PUT26
LDX      #0
LDA      #0
STA      cubfrm
DONXT  JSR      CUBPT2
CPX      #52
BNE      DONXT
RTS
;
:CLRSCN
LDY      #0
STY      CLRPT
LDX      #$20
STX      CLRPT+1
LDX      #$34
lda      #$80
CLRS   STA      (CLRPT),Y
INY
BNE      CLRS
INC      CLRPT+1
DEX
BPL      CLRS
;
```

12  
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```
        JSR      CLRMSK
        RTS

CLRSCN
; new mamsy pamsy clear screen routine for Louis
        LDY      #0
        STY      CLRPT
        LDX      #$40
        STX      CLRPT+1
        LDX      #$20
        lda      #$80
CLRS   STA      (CLRPT),Y
        INY
        BNE      CLRS
        INC      CLRPT+1
        DEX
        bne      CLRS
        jmp      CLRMSK

;*****PUTS UP 1 BLOCK
;*****cubfrm=frame
;***cube#*2
CUBPT2
        TXA
        LSR      A
        STA      TEMP1 ;cube #
        ASL
        ASL      A
        SEC
        SBC      TEMP1
        STA      TEMP2 ;index into BLKCO table
        lda      putbl2,x
        sta      xer
        INX
        lda      putbl2,x
        sta      ycord
        INX
        STX      SAVEX
;@@@    PUT UP A CUBE

mask (cubmpt)-top mask ptr
mask  equ     CBSTPT
mask2(cbstpt)-front mask ptr
mask2  equ     CUBPT
;mask3(cubpt)-side mask ptr
mask3  equ     CUBMPT
;ptr -pointer to screen ram where cube will be put
;ptr2=pointer to background where cube will be put
;
;cptr - top clr
;cptr+2 -front clr
;cptr+4 -side clr

        lda      #$13
        sta      size

        idx      cubfrm
        lda      aptr,x
        sta      mask
        lda      aptr+1,x
        sta      mask+1
```

```
lda    #2ptr,x  
sta    mask2  
lda    #2ptr+1,x  
sta    mask2+1  
  
lda    #3ptr,x  
sta    mask3  
lda    #3ptr+1,x  
sta    mask3+1  
  
ldx    TEMP2  
lda    BLKCO,x      ;in accum front color  
sta    cptr+2  
lda    BLKCO+1,x    ;top  
sta    cptr  
lda    BLKCO+2,x    ;side  
sta    cptr+4  
lda    #>c1ra  
sta    cptr+1  
sta    cptr+3  
sta    cptr+5
```

```
subi  
lda    ycord  
and    #$f8  
lsr    a  
lsr    a  
tay  
lda    adr,y  
clc  
adc    xer  
sta    ptr  
sta    ptr2  
lda    adr+1,y  
sta    ptr+1  
LDA    ycord  
and    #7  
asl    a  
asl    a  
adc    ptr+1  
sta    ptr+1  
clc  
adc    #$20  
sta    ptr2+1
```

```
ldy    #3  
ldx    cubfrm  
subee  
lda    (mask),y  
cpx    #18  
bcs    him  
and    (cptr),y  
sta    subtmp  
lda    (mask2),y  
and    (cptr+2),y  
sta    subtmp+1  
lda    (mask3),y  
and    (cptr+4),y  
ora    subtmp  
ora    subtmp+1  
sta    (ptr),y  
sta    (ptr2),y  
dey
```

bpl subee  
ldx #4

112  
lda cptr,x  
eor #2  
sta cptr,x  
lda mask,x  
clc  
adc #4  
sta mask,x  
bcc nur  
nur inc mask+1,x  
dex  
dex  
bpl 112  
inc ycord  
dec size  
bpl sub

ldx SAVEX  
RTS

CLRQ  
;000 erase ab  
lda QY  
sta YCORD  
ldx QFRAME  
lda QBTBL,x  
ldx QX  
jmp erasesp

PUTUM  
;x res = sprite #  
lda CH1Y,X  
sta YCORD

save this text for later so we can put it in the code  
LDA SAMMY,X  
CMP #4  
BEQ SCRUM

LDA CHARCK,X  
ASL A  
CLC  
ADC SAMERM,X  
TAY  
LDA CHARTB,Y  
bpl dosp

shopper, set mask according to color  
chrctr=8(white)/\$10(blue)/\$28(red)  
lda CHRCLR,x  
lsr a  
lsl a  
cmp #\$a  
bne notred  
lda #\$6

notred  
clc

2

```
    adc      SAMFRM,X
    tay
    lda      hOPMSK-2,Y
dosP
    pha
    LDA      CH1X,X
    stx      savexres
    tax
    pla
    jsr      dosprite
    ldx      savexres
    RTS
hOPMSK
    fcb      $06      ;white hopper rt
    fcb      $07      ;white hopper lf
    fcb      $08      ;blue hopper rt
    fcb      $09      ;blue hopper lf
    fcb      $04      ;red hopper rt
    fcb      $05      ;red hopper lf
ydelay
    txa
    pha
    ldx      #0
horsie
    dex
    bne      horsie
    dey
    bne      horsie
    pla
    tax
    rts
;000  fix addscore routine
ADSCOR
    LDX      PLYNUM
    BEQ      NOPROB
    LDX      #$1b      ;0000      distance between 2 scores
NOPROB
    AND      #$0F
    CLC
    ADC      SCORE+5,X
    STA      SCORE+5,X
SHUTSC
    LDX      #33      ;0000      end of score 2 in line 3
SCORLP
    DEX
    BMI      SCORDN
    CPX      #26      ;0000      start of score2 in line
    BNE      AGAIN
    LDX      #5
    AGAIN
    LDA      SCORE,X
    SEC
    SBC      #10
    BMI      SCORLP
    STA      SCORE,X
;add code so that roll-over of score causes no problems
    CPX      #0
    beq      AGAIN
    CPX      #27
    beq      AGAIN
    INC      SCORE-1,X
    BPL      AGAIN
SCORDN
    LDY      #3      ;0000      score in line
    LDX      PLYNUM
    BEQ      NOIC2D
    LDY      #30      ;0000      same for player 2
NOIC2D
    LDA      NUMQ,X
    12
    11
    10
    9
    8
    7
    6
    5
    4
    3
```

```
CMP    #6
BEQ    SCORUD
LDA    line3,Y
SEC
SEC    #NADD
CMP    SCORE-2,Y
BEQ    SCORUD
INC    bonusfls      ;set flag for bonus abort
;@@@  Fix score routine
SCORUD LDX    #5      ;this puts the score on the screen
SC1UD  LDA    SCORE,X
CLC
ADC    #NADD
STA    line3+2,X
DEX
BPL    SC1UD
LDA    NUMPLY
BEQ    NOSC2
LDX    #5
SCORE2 LDA    SCORE2,X
CLC
ADC    #NADD
STA    line3+$1d,X
DEX
BPL    SC2UD
NOSC2 LDA    bonusfls
BEQ    retu
;inc # aborts and play sound
LDA    #0
STA    bonusfls
LDX    PLYNUM
INC    NUMQ,X
LDA    #15
JSR    SINIT      ;EXTRA abort sound
JSR    DOSDDY
JSR    INIT9
retu   RTS
;
```

```
CLRMSK
;@@@  clear out masks
;@@@  copy back to fore buffer
;new memory ramsey clear mask routine for Louis
Lda    #0
sta    YCORD
```

```
Gclrs
Lda    YCORD
and    #$FB
lsr    a
lsr    a
tay
Lda    ADR,Y
sta    PTR
sta    PTR2
Lda    YCORD
and    #7
asl    a
asl    a
adc    ADR+1,Y
sta    PTR+1
adc    #$20
sta    PTR2+1
```

2

```
ldy #0
copylin
lda (ptr2),y
sta (ptr),y
inx
CPY #40
bcc copylin
inc ycord
lda ycord
cmp #192
bcc Cels
rts
LDY #0
STY CLRPT
sty ptr
ldx #$40
stx ptr+1
LDX #$20
STX CLRPT+1
CLRm
lda (ptr),y
STA (CLRPT),Y
INY
BNE CLRm
INC CLRPT+1
inc ptr+1
DEX
Bne CLRm
RTS
putsp
    put a sprite up (cuss bubble or trampoline)
puts up 6 byte (21 pixel) wide mask
; reg = x cord (0-139)
; ycord = y cord
; sprite= 0 trampoline
;           1 trampoline (mask 2 if it could fit)
;           2 cuss bubble
;           3 mask to blank trampoline
ldx sprite
asl a
tay
lda sptbl,y
sta ptr
lda sptbl+1,y
sta ptr+1
ldy #0
lda (ptr),y
sta size
inc ptr
bne setxer
inc ptr+1
setxer
ldx XDIV7,x
sta xer
ldy sprite
ldx sewidth,y
jmp putr
next
txa
```

12  
11  
10  
9  
8  
7  
6  
5  
4  
3

	sec	
	adc	ptr
	sta	ptr
	bcc	notuer
	inc	ptr+1
notuer	inc	ycord
ptr	lda	ycord
	and	#\$f8
	lsr	a
	lsl	a
	tay	
	lda	addr,y
	cld	
	adc	xer
	sta	ptr2
	lda	ycord
	and	#7
	asl	a
	asl	a
	adc	addr+1,y
	sta	ptr2+1
	txa	
	tay	
ptr2	lda	(ptr),y
	sta	(ptr2),y
	dey	
	bel	putr2
	dec	size
	bne	next
	rts	
swidth	fcb	8,8,5,8
setbl	fdb	trampo
	fdb	trampo2
	fdb	cuss
	fdb	bitrampo

### Adolescent subtypes

;the following code probably works but...  
 ....Robin will probably like the other masks cleared anyway !!!  
 jsr CLRMSK ;erase all sprites to make it look nice. (either do this  
 in his travels)

```

    dec QY      ;try to get rid of 1 line over abs fall
    lda QFRAME           ;probably dont need this unless abs masks are dif
    and #3
    tax

    lda frmtocani,x
    sta QANI
    lda #0      ;set up for trampoline
    sta QANI
    sta CH1X
    sta CH1Y      ;0=rb down 2=qbus
    sta CH2Y      ;frame # (0 or 1)
    sta CH3Y      ;0=? 1=? =>2 - abort scinup
    sta SAMANI

    CLC
    ADC #7
    STA CH2X
    ADC #21
    STA CH3X
    BNE PUTRAM ;UNC
  
```

MTRAMP

```

    jsr EQB

    ldx #3
    stx sprite
    ldx CH1X
    lda #trampoy
    sta ycord
    jsr putse ;erase trampoline
  
```

LDA CH3Y
 CMP #1
 BPL MTRIGH

DOALL3

```

    LDY #3
  
```

MALL3R

```

    LDX #2
  
```

MRIGH1

```

    TYA
    CLC
    ADC CH1X,X ;move trampo right
    STA CH1X,X
    DEX
    BPL MRIGH1
  
```

BMI PUTRAM ;UNC
 DEC CH3X
 DEC CH3X
 

GOINBA

```

    DEC CH3X
    BNE PUTRAM ;UNC
  
```

MTRIGH

```

    BNE NORAN
    LDA SAMANI
    BPL CHKL
    LDY #2
    INC SAMANI
    CMP #$87      ;@@@ jissle back and forth
    BNE MALL3R
  
```

LDA #0
 STA SAMANI
 BEQ MALL3R ;UNC
 

NORAN

```

    CMP #2
    BNE DOALL3
    BEQ PUTRAM ;UNC
  
```

CHKLF

```

    LDY #1
  
```

	INC	SAMANI
	CMP	#7
	BNE	MALL2L
	LDA	#\$80
	STA	SAMANI
MALL2L	LDX	#2
MLEFT1	1da	CH1X
	bne	no
	DEC	CH1X,X ;@@@ move trampo left
	DEX	
	BPL	MLEFT1
no	BEY	
	BPL	MALL2L
	LDA	ATTIME
	AND	#3
	BNE	NOCHG
	LDA	CH2Y ;animate trampo
	EOR	#1
	STA	CH2Y
	LDA	CH3Y
	CMP	#1
	BPL	CHKH
	LDA	QX ;is qb lined up with trampo?
	CLC	
	ADC	#3
	CMP	CH2X
	BCS	CHKH
	LDA	#1
	STA	CH3Y
CHKH	LDA	QY
	CMP	#\$a8 ;is qb at trampo Y POS
	BCC	NOHTRA
	LDA	#2
	STA	CH1Y
	STA	CH3Y
	LDA	#\$7E
	STA	RNDON
NOHTRA	LDX	CH2Y ;set frame # (0 or 1)
	stx	sprite
	1dx	CH1X
	CPX	#105
	BCC	PUTUPTR
	1dx	#3
	1da	CH3Y
	CMP	#2
	BCC	notoinup
	STX	sprite
notoinup	DEX	
setatr	1da	#105
	STA	CH1X,X
	Dex	
	BEL	setatr
	1dx	#105
PUTUPTR	1da	#trampoy
	STA	YCORD
	JSR	PUTSP
OSPIN	LDA	CH3Y

2

```
CMP    #2
BPL    GOINUP
INC    QY
LDA    #20
STA    RNDON
BNE    SPINUM ;UNC
REQ    JUSTCH
LDX    #4

;LDA    QY
;CMP    #ytop+65      ;@@@      y ab to make up motion slower
;Bcs
;Idx   #4      !!!! was 3

ldx    #0
sta    flas
LDA    QX      ;set delta x
sec
sbc    #xmidx ;@@@      ab middle x cord
bcs    notnes
eor    #$ff
clc
adc    #1
sta    flas

notnes
sta    ptr
lda    QY
sec
sbc    #ytop
cmp    #$ff
bne    nosoup
lda    #0

nosoup
sta    ptr+1
loop soup
cex    ptr      ;check if delta x in limits
bcc    shiftum
cpx    ptr+1
bcs    setnorm

shiftum
lsp    ptr
lsp    ptr+1
jmp    loop soup
flas   rmb   1

setnorm
lda    QY
sec
sbc    ptr+1
sta    QY
lda    ptr
Idx   flas
bne    takeit
eor    #$ff
clc
adc    #1

takeit
clc
adc    QX
sta    QX
jmp    SPINU1
JUSTCH INC    CH3Y
LDA    #0
STA    CH1Y
DEC    QY
```

12  
11  
10  
9  
8  
7  
6  
5  
4  
3

	BNE	SPINUM ;UNC
SPINU1	LDA	CH3Y
	ORA	#8
	STA	CH3Y
SPINUM	LDA	ATTIME
	AND	#3
	BNE	NONEWA
	LDA	CH3Y
	CMP	#15      set next ab animation for spin
	BNE	INCQAN
	LDA	QANI
INCQAN	BEQ	NONEWA
	INC	QANI
	LDA	QANI
	CMP	#4
	BNE	NONEWA
	LDA	#0
NONEWA	STA	QANI
	LDx	QANI
	lda	grhtbl,x
	pha	
	ldx	QX
	lda	QY
	sta	Ycord
	pla	
	jsr	desprite
	lda	CH3Y
	CMP	#2
GODOSD	Bcc	GODOSD
	LDA	QY
	CMP	#Ytop
	bcc	sttune
	bcc	isdn
isdn	jsr	fall1snd
sttune	JMP	VBLKDN
	JSR	EQB
	LDA	#0
	STA	QFRAME
	JSR	QBTPUT
	lda	#14
	jsr	SINIT ;ROUND END SOUND
	jsr	DOSDDY
	LDA	#1
	STA	RNDDN
	BPL	isdn
SETUPJ	LDA	LVLNUM
	ASL	A
	ASL	A
	ADC	RNDNUM
	TAY	
	LDA	SPEED,Y
	STA	DIFFIC
	ldx	Jmpnum,Y
	LDA	JMPSCN,X
	STA	JMPANI
	LDX	#0
	LDY	RNDNUM
	LDA	LVLNUM
	CMP	#2
	BMI	XISGO
	LDX	#2

```

        CMP    #2
        BEQ    XISGO
        CMP    #4
        BPL    XNOG
        CPY    #2
        BMI    XISGO
        LDX    #4
        BNE    XISGO ;JINC
; XNOG  BNE    XNOGO
        LDX    #4
        CPY    #2
        BMI    XISGO
        LDX    #6
        BNE    XISGO ;JINC
; XNOGO LDX    #6
        CMP    #6
        BNE    XISGO
        CPY    #2
        BPL    XISGO
        LDX    #4
XISGO   LDA    XTBL3,X
        STA    ANIXPT
        LDA    XTBL3+1,X
        STA    ANIXPT+1
        LDA    YTBL3,X
        STA    ANIYPT
        LDA    YTBL3+1,X
        STA    ANIYPT+1
txa
lsr
tax
LDA    JMEJCN,X
STA    JMPANI
RTS

```

## GETRAN

```

inc    zinso
bel    randzak
adc    RAND+1
sta    RAND+1

```

## randzak

```

LDA    RAND+1
STA    RAND+2
LDA    RAND
ROL    A
ROL    RAND+1
ADC    #195
EOR    RAND
adc    zinso
STA    RAND
LDA    RAND+2
EOR    RAND+1
STA    RAND+1

```

## hellorand

```

BNE    GOHOME
LDA    $C054

```

```

EOR    RAND
STA    RAND

```

## GOHOME

```

$1da  oldrandom
$eor  RAND
$and  #3
$bne  notsame

```

;inc RAND

notsame

;LDA RAND

;sta ol드random

Lda RAND

RTS

olдrandom fcb 1

;-----

;GETCNM GETS CUBE NUMBER OF A CHAR

-----

GETCNM

LDA BOUNCE,X

TAY

LDA ROWTBL,Y

STA TEMP

INY

LDA ROWTBL,Y

CLC

SBC TEMP

BEQ USETMP

TAY

LDA CH1X,X

SEC

SBC LSTBL,Y

CMP #5 \$000 fix for apple

CHKNXT

INC TEMP

SEC

SBC #28

CMP #5

BPL CHKNXT

USETMP RTS

;

ROTATE

JSR GETCNM

STX TEMP5

LDY TEMP

LDA LKROW,Y

TAX

LDA CUBLKX,X

AND BITROW,Y

STA CUBLKX,X

LDA LKCOLUMN,Y

TAX

LDA CUBLKY,X

AND BITYRW,Y

STA CUBLKY,X

LDA TEMP5

ASL A

STA TEMP1

ASL A

ABC TEMP1

TAY

LDA TEMP

TAX

ASL A

STA CUBF+4,Y

LDA #1

STA CUBECK,X

LDA TEMP2

BEQ NOOKAY

LDA #0

12

11

10

9

8

7

6

5

4

3

2

2

NOOKAY	BEQ	OKAY
OKAY	LDA	#3
	STA	CUBF+5, Y
	TAX	
	LDA	CBFTBL, X
	STA	CUBF+3, Y
	LDX	TEMPS
	RTS	

QBPUT

	LDA	QY
	sta	YCORD
	LDX	QFRAME
	LDA	QBTL, X
	ldx	QX

dosprite

	sta	SPRITE
	tay	
	lda	YCORD
	sta	INIVC
	clc	
	adc	MOSSET,Y
	cmp	#190
	bcc	OKYCORD
	lda	INIVC

OKYCORD

	sta	YCORD
	lda	SPRITE
	asl	A
	tay	
	cmp	#0
	bcs	SETSIZE
	lda	SPKFLE
	bne	SETSIZE
	lda	SPAKER

SETSIZE

	lda	MASKTBL,Y
	sta	PTR2
	lda	MASKTBL+1,Y
	sta	PTR2+1
	ldy	#0
	lda	(PTR2),Y
		SET MASK SIZE
	sta	SIZE
	inc	PTR2
	bne	OUT
	inc	PTR2+1

OUT

	LDY	REMAIN,X
	bne	SOTMSK
	lda	SIZE
	asl	A
	asl	A
	asl	A
	sta	XER

ADDPTR

	lda	PTR2
	clc	
	adc	XER
	sta	PTR2
	bcc	NOPEEE
	inc	PTR2+1

12  
11  
10  
9  
8  
7  
6  
5  
4  
3

```
nopee
    dey
    dey
    bne    addptr

getmask
    LDA    XDIV7,X
    STA    xer
    fuse samani for size if scrolling happen
    lda    sprite ;dont do it for abort
    cmp    #4
    bcc    incptr2
    cmp    #$13
    beq    incptr2_inor_ratball
    cmp    #$a
    bcc    chksani
    cmp    #$e
    bcc    incptr2_inor_rat
chksani
    ldx    savexres
    lda    SAMMY,x
    cmp    #4
    bne    incptr2
    lda    SAMANI,x
    sta    size
incptr2
    lda    sprite
    cmp    #4
    bcs    noj
    lda    $c070  ;start joystick
    lda    joyud
    lda    #0
    sta    joyud
noj
    JMP    RUN

tjoy
;test Joystick analog counter inputs
    lda    $c065
    bmi    notud
    inc    joyud

notud
    lda    $c064
    bmi    notlr
    lda    joyud
    clc
    adc    #4
    sta    joyud

notlr
    rts
NXT
;check to test joystick if abort mask
    lda    sprite
    cmp    #4
    bcs    notest
    lda    size
    cmp    #$d
    bne    trY9
    jsr    tjoy

trY9
    lda    size
    cmp    #$8
    bne    notest
    jsr    tjoy

notest
```

LDA #8  
CLC  
ADC ptr2  
STA ptr2  
BCC NOPE  
INC ptr2+1

NOPE  
INC ycord  
lda ycord  
cmp #190  
bcc skycord4  
lda iniyc  
sta ycord

sky cord4

RUN  
LDA ycord  
AND #\$FB  
LSR A  
LSR A  
TAY  
LDA ADR,Y  
CLC  
ADC xor  
STA ptr  
LDA ADR+1,Y  
STA ptr+1  
LDA ycord  
AND #7  
ASL A  
ASL A  
ADC ptr+1  
STA ptr+1  
LDY #7

LOOP  
STY cptr  
TYA  
LSR A  
TAY  
STY cptr+2  
LDA (ptr),Y  
LDY cptr  
AND (ptr2),Y  
DEY  
ORA (ptr2),Y  
STY cptr  
LDY cptr+2  
STA (ptr),Y  
LDY cptr  
DEY  
BPL LOOP  
DEC size  
beq masdnn  
jmp NXT

masdnn  
lda sprite  
cmp #4 ; if its short then check sekfile  
bcs nooff  
lda sekfile  
beq nooff  
lda speaker  
dec sekfile

nooff  
rts

ssprite rmb 1  
sprkfls rmb 1

\*\*\*\*\*

EQB  
lde QY  
sta YCORD  
LDX QANI  
lde \$rhtbl,x  
ldx QX

erasesp  
@@@ erase a sprite  
ires x= old x cord  
ires a= old frame  
ycord= guess what this is  
sta sprite

tay ;add offset to ycord

lde ycord  
sta iniyc  
clc  
adc mofset,y ;add mask offset  
cmp #190  
bcc okycord3  
lde iniyc

okycord3  
sta ycord

lde sprite  
asl a  
tay  
lde masktbl,y  
sta ptr2  
lde masktbl+1,y  
sta ptr2+1  
ldy #0  
lde (ptr2),y  
sta size  
LDA XDIV7,X  
STA xer

ERA  
LDA ycord  
AND #\$FB  
LSR A  
LSR A

TAX  
LDA ADR,X

CLC  
ABC xer  
STA ptr  
STA ptr2  
LDA ADR+1,X

STA ptr+1  
LDA ycord  
AND #7

ASL A  
ASL A

ABC ptr+1  
STA ptr+1  
ABC #\$20  
STA ptr2+1

LDY #3

12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2

## LOOP2

```

LDA      (ptr2),Y
STA      (ptr),Y
DEY
BPL      LOOP2
INC      Ycord
lda      Ycord
cmp      #190
bcc      okycord2
lda      iniyc
sta      Ycord
okycord2
DEC      size
Bne      ERA
rts
;iniyc rmb   1

```

## SAID THIS

```

LDX      #2
TXA
LSR      A
STA      TEMP
TXA
CLC
ADC      TEMP
TAY
LDA      BLKCO,Y
CMP      BLKCO
BNE      NOMATC
LDA      BLKCO+1,Y
CMP      BLKCO+1
BNE      NOMATC
STX      TEMP1
LDX      TEMP
LDA      LKROW,X
TAY
LDA      CUBLKX,Y
ORA      BTOROW,X
STA      CURLKX,Y
LDA      LKCOLM,X
TAY
LDA      CUBLKY,Y
ORA      BTOCOL,X
STA      CUBLKY,Y
LDA      CUBECK,X
ORA      #$F2
STA      CUBECK,X

```

## NOMATC

```
BNE      COULD ;UNC
```

```
STX      TEMP1
```

```
LDY      TEMP
```

```
LDA      LKROW,Y
```

```
TAX
```

```
LDA      CUBLKX,X
```

```
AND      BITROW,Y
```

```
STA      CUBLKX,X
```

```
LDA      LKCOLM,Y
```

```
TAX
```

```
LDA      CUBLKY,X
```

```
AND      BITYRW,Y
```

```
STA      CUBLKY,X
```

```
LDA      CUBECK,Y
```

```
AND      #1
```

```
STA      CUBECK,Y
```

12

11

10

9

8

7

6

5

4

3

COULD LDX TEMP1

INX

INX

CPX #52

BNE THIS

RTS

moffset

fcb 0 ;abert

fcb 0

fcb 0

fcb 0 ;hoppers

fcb 3

fcb 3

fcb 3

fcb 3

fcb -13 ;rat

fcb -13

fcb -13

fcb -13 ;slick

fcb 1

fcb 1

fcb 4 ;turtle

fcb 4

fcb 6 ;green ball

fcb 4 ;ratball

AD

12

11

10

9

8

7

6

5

4

3

2