

# Battle Animation Commands

\$00-\$1F	Show frame number [\$00-\$1F]
\$20-\$7F	-
\$80 xx	\$C878 Command \$80 Subcommands
	\$00 \$D9BE quadra slam/quadra slice
	\$01 \$D9A9
	\$02 \$D981
	\$03 \$D995
	\$04 \$D96E Randomize vector angle and
position (init fire dance sprites)	
	\$05 \$D938 bum rush
	\$06 \$D907 init tornado (w wind/spiraler)
	\$07 \$D8F2 move tornado to thread position
(w wind/spiraler)	
	\$08 \$D8EB move thread to vector position (w
wind/spiraler)	
	\$09 \$D879 update character/monster sprite
tile priority for tornado (w wind/spiraler)	
	\$0A \$D82B white/effect magic intro
	\$0B \$D7E3 Update Esper Pre-Animation Balls
Position	
	\$0C \$D753
	\$0D \$D7C4
	\$0E \$D79D
	\$0F \$D779
	\$10 \$D73E move to target position
	\$11 \$D727 Randomize vector angle
	\$12 \$D734
	\$13 \$D6E5 toggle imp graphics for target
(imp)	
	\$14 \$D6BD make target vanish (vanish)
	\$15 \$D698 move circle to thread position
	\$16 \$D68E
	\$17 \$CBC1 update sprite layer priority
based on target	
	\$18 \$D677 Load Sketched Monster Palette
	\$19 \$D62E sketch
	\$1A xx \$CB74
	\$1B \$CB5D transform into magicite
	\$1C \$CB6A decrement screen brightness
	\$1D \$CB61 transform into magicite
	\$1E \$D56B
	\$1F \$D5FC
	\$20 \$D59F
	\$21 \$D54E Update Rotating Sprite Layer
Priority	
	\$22 \$D4F2 pearl wind
	\$23 \$D4BE pearl wind

	\$24	\$D49B Clear BG3 HDMA scroll data
	\$25	\$D4AD Clear BG1 HDMA scroll data
	\$26 xx	\$D493 Enable/Disable Character Color
Palette Updates (x: 1 = disable, 0 = enable)		
	\$27 xx	\$D48B Hide/Show Characters for Esper
Attack (x: 1 = hide, 0 = show)		
	\$28 --oo----	\$D45C Affects all characters o: sprite priority
	\$29 xx	\$D454 Hide/Show Cursor sprites (esper
attack)		
	\$2A xx	\$D44C load animation palette xx, sprite
	\$2B xx	\$D43C load animation palette xx, bg1
(inferno)		
	\$2C xx	\$D444 load animation palette xx, bg3
(justice, earth aura)		
	\$2D xxxx yyyy zzzz	\$D423 Jump based on battle type xxxx: jump location if normal
attack		
		yyyy: jump location if back
attack or (side attack and attacker is character 3 or 4)		
		zzzz: jump location if pincer
attack or (side attack and attacker is character 1 or 2 or monster)		
	\$2E xx yy	\$D3E4 Move sprite to (\$xx, \$yy)
	\$2F	\$D3AF
	\$30 xx	\$D38E load animation palette xx for
character 1		
	\$31 xx	\$D365 move in wide vertical sine wave
with speed xx (hope song, sea song)		
	\$32 xxxx yyyy	\$D33E Jump to xxxx if facing left, yyyy
if facing right		
	\$33 xx	\$D2D2 update rainbow gradient lines
	\$34	\$D28D copy monster palettes to
character palettes (hope song)		
	\$35	\$D27A use character palettes for
monster sprite data (hope song)		
	\$36	\$D267 restore palettes for monster
sprite data (hope song)		
	\$37	\$D256 clear fixed color value hdma data
(\$2132)		
	\$38	\$D24D enable high priority bg3
(justice)		
	\$39 xx	\$D1E6 update blue gradient lines (S.
Cross, Carbunkl, Odin/Raiden)		
	\$3A xx	\$D1DE
	\$3B	\$D1B0 Set target's color palette to
animation palette		
	\$3C	\$D18A Set target's color palette to
normal		
	\$3D	\$D12E quadra slam/quadra slice

(\$212C)	\$3E xx	\$D126 Set main screen designation
	\$3F	\$D0E0 sonic dive
	\$40 -----mmm	\$D0D3 Set screen mode (\$2105) m: screen mode
	\$41 cx cy dx dx	\$D06D Shrink/Grow BG1 by (cx,cy)
(positive is smaller) and move (dx,dy)		
(\$211A)	\$42 -----vh	\$D064 Set MODE7 Settings register
		v: vertical flip h: horizontal flip
	\$43	\$D00B moon song/charm
	\$44	\$CFCC fire beam/bolt beam/ice beam
Hardware Register (\$2123)	\$45 xx	\$CFC0 Set BG1/BG2 Mask Settings
	\$46	\$CFB9
	\$47	\$CFAA
	\$48	\$CF8D clear
(megazerker)	\$49	\$CF7F ink hit/virite
	\$4A	\$CF6A
	\$4B	\$D2CC update red/yellow gradient lines
	\$4C	\$CF45 move triangle to thread position
target	\$4D	\$CF1C set vector from triangle to
	\$4E	\$CF15
	\$4F	\$CEF0
	\$50	\$CE9A
	\$51	\$CE62 rippler
	\$52	\$CE29 stone
	\$53	\$CDDF r.polarity
	\$54	\$CDC4 r.polarity
	\$55	\$CD72 quasar
	\$56	\$CD28 goner
	\$57 xx	\$CD1F set bg3/bg4 window mask settings
	\$58 xx	\$CD17 change circle shape to xx
(xx -> \$2124)	\$59	\$CD12 goner/flare star
	\$5A	\$CD0D mind blast
	\$5B	\$CD08 mind blast
	\$5C	\$CD03 mind blast
Gradient (used by Overcast)	\$5D	\$CCDF
	\$5E	\$CC98 overcast
	\$5F xx	\$CC93 Increase/Decrease Blue Backdrop
	\$60 aabbccdd	\$CC3F Toggle attacker status (aa =
status 1, etc.) (morph/revert)		
	\$61 xx yy zz	\$CC1A
	\$62	\$CBF5 evil toot/fader
	\$63 xx	\$D361 move in narrow vertical sine wave
		with speed xx (evil toot)

	\$64	\$CBE5 purifier/inviz edge
	\$65	\$CBE0
	\$66	\$CBDB shock wave
	\$67	\$CBD6 Load Extra Esper Palette
(purifier)		
	\$68	\$CBD1 purifier
	\$69	\$CBB6 update sprite layer priority
based on attacker		
	\$6A	\$CBAC align bottom of thread with
bottom of target (ice 3)		
	\$6B	\$CBB1 l? pearl
	\$6C	\$CB5A overcast
	\$6D	\$CB56 disable battle menu
	\$6E	\$CB51
	\$6F	\$CB4D
	\$70	\$CB43
	\$71	\$CB34 restore character palettes
(purifier/hope song)		
	\$72 xx	\$CB48 Branch forward xx if attack
didn't miss		
	\$73 xx	\$CB1D Set graphics for dice roll (xx =
die index)		
	\$74	\$CAB8
	\$75	\$CAE5 super ball
	\$76	\$CAD6 seize
	\$77	\$CADB seize
	\$78	\$CAE0 discard
	\$79	\$CAC2 Characters Run to Left Side of
Screen (takes 56 loops to reach other side)		
	\$7A	\$CAC7 Characters Run to Right Side of
Screen		
	\$7B	\$CACC Flip All Characters (after
running to opposite side of screen)		
	\$7C	\$CAD1 Swap Target and Attacker
	\$7D xx	\$CABD Branch forward xx bytes if dragon
horn effect is active		
	\$7E	\$CAA1 Flip Target Character Vertically
	\$7F	\$CA9D Hide all monsters
	\$80	\$CA65 boss death
	\$81	\$CA61
	\$82	\$CA3D boss death
	\$83	\$CA38
	\$84	\$CA29 chadarnook exit
	\$85	\$CA24 chadarnook exit
	\$86 xx	\$CA0F Play Sound effect xx (pan based
on sprite X position)		
	\$87 xx	\$C9F7 Play Sound effect xx (pan based
on sprite Y position)		
	\$88	\$C9C9

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$89 xx      $C9C1
$8A          $C9A9 Set Target Monster Sprite

Priority to 0

$8B          $C9A5 Play Ching Sound effect
$8C xx      $CA09 Play Sound effect xx (pan center)
$81 xx yy    $F347 Change attacking character's graphic to $xx if facing
left, $yy if facing right
$82 xx yy    $F33F Change targetted character's graphic to $xx if facing
left, $yy if facing right
$83 dddxxxxx $F377 Move Thread
                d: direction (0 = down/forward, 1 = down, 2 =
down/back, 3 = forward, 4 = back, 5 = up/forward, 6 = up, 7 = up/back)
                x: distance - 1
$84 xx      $F7B3 Set Animation Speed to xx
$85          $F89D Move Thread to Attacker Position
$86 dddxxxxx $F491 Move Attacker (data same as command $83)
$87 dddxxxxx $F476 Move Target (data same as command $83)
$88 xx      $F71D Jump forward with weapon for "Fight" command (xx =
frame index)
$89 xx      $F7BC Loop start (loop xx times)
$8A          $F82F Loop end
$8B xx      $F7E6 Animated loop start (loop xx times, increment frame
offset each loop, start at frame 0)
$8C          $F84B Animated loop end
$8D dddxxxxx $F263 Move Thread if Animation is Flipped Horizontally
$8E bf-----h $F27A Show Thread Above/Below Other Sprites
                b: show below
                f: show in front
                h: 1 = show with weapon hand, 0 = show opposite weapon
hand
$8F dddxxxxx $F263 Move Thread if Animation is Flipped Horizontally
$90 --oo---- $F255 Set Thread's Sprite Tile Priority
$91          $F8B4 Move This Thread to Attacker Thread Position
$92 xx yy    $FADB Move Thread along Vector (speed xx, code branch yy)
$93 xx      $FA3D Set position on vector
$94          $F8E0 Set vector from attacker to a random location on the
target (GP Rain, AutoCrossbow)
$95          $F9E6 Set vector from attacker to target
$96 xx yy    $FB63 Branch if ??? (xx = bytes to branch backwards)
$97          $FBD7 boomerang/wing edge/full moon/rising sun
$98 xx bbbbeeee $FBA8 Increment graphic index offset every x frame(s),
(b..e)
$99 ----ppp- $FC37 Set Thread Palette to p
$9A          $FC40 Set Thread Facing Direction to Match Attacker
$9B          $F31A
$9C xx      $F2A2
$9D xx      $F2F1
$9E          $F2B6
$9F xx      $F7CF Animated Loop start (loop count equal to the number of
active threads, xx = 0) (autocrossbow)
$A0 xx yy    $FA4B Jump Forward Along Vector (speed xx, code branch yy)

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\$A1 xx yy	\$FA90	Jump Backward Along Vector (speed xx, code branch yy)
\$A2	\$F2E1	drill
\$A3 xxxx	\$F1E5	Shift Color Palette Left
\$A4 xxxx	\$F21D	Shift Color Palette Right
		aaaabbbb ccccdddd
		a: offset color
		b: number of colors
		c: palette index
		d: speed (number of loops per shift)
\$A5 aabbccxyyyzz	\$F0EC	circle origin (aa,bb), (80,80) is center of screen
		cc: grow speed?
		xx
		yyyy: max size
\$A6 xx yy zz	\$F094	Move circle (\$xx,\$yy), size changes by zz (signed)
\$A7	\$F088	Update Circle?
\$A8	\$F073	Move circle to attacker
\$A9 xx yy	\$EFC8	Move circle (\$xx,\$yy) (signed, based on character facing direction)
\$AA rgbfffff	\$EC6E	Set sprite palette 3 color subtraction (absolute)
		r: affect red
		g: affect green
		b: affect blue
		f: amount to subtract
\$AB rgbfffff	\$EC58	Set sprite palette 3 color addition (absolute)
		r: affect red
		g: affect green
		b: affect blue
		f: amount to add
\$AC xx yy	\$EE9C	set background Scroll HDMA data
		123ffffff vhaaaaaa
		1: affect BG1
		2: affect BG2
		3: affect BG3
		f: frequency
		v: vertical
		h: horizontal
		a: amplitude (max 14, must be even ???)
\$AD nnxxxxxx	\$EFA3	Set BG Scroll HDMA Index
		n: BG (0,1,2)
		x: index
\$AE vh---123	\$ED86	Update Scroll HDMA data
		v: vertical
		h: horizontal
		1: affect BG1
		2: affect BG2
		3: affect BG3
\$AF rgbfffff	\$EBDA	Set background palette color subtraction (absolute)
\$B0 rgbfffff	\$EBC4	Set background palette color addition (absolute)

\$B1	rgbaffff	\$ECAC	Set sprite palette 1 color subtraction (absolute)
\$B2	rgbaffff	\$EC96	Set sprite palette 1 color addition (absolute)
\$B3	rgbaffff	\$EC4F	Add color to sprite palette 3 (relative)
		r:	affect red
		g:	affect green
		b:	affect blue
		a:	0 = increase addition amount, 1 = decrease addition amount
		f:	amount to increase/decrease
\$B4	rgbaffff (relative)	\$EC46	Subtract color from sprite palette 3 palette
		r:	affect red
		g:	affect green
		b:	affect blue
		a:	0 = increase subtraction amount, 1 = decrease subtraction amount
		f:	amount to increase/decrease
\$B5	rgbaffff	\$EBB2	Add color to background palette (relative)
\$B6	rgbaffff	\$EBBB	Subtract color from background palette (relative)
\$B7	rgbaffff	\$EC84	Add color to sprite palette 1 (relative)
\$B8	rgbaffff	\$EC8D	Subtract color from sprite palette 1 (relative)
\$B9	rgbfffff	\$ECEA	Set monster palettes color subtraction (absolute)
\$BA	rgbfffff	\$ECD4	Set monster palettes color addition (absolute)
\$BB	rgbaffff	\$ECCB	Add color to monster palettes (relative)
\$BC	rgbaffff	\$ECC2	Subtract color from monster palettes (relative)
\$BD	abcd----	\$EAA1	Hide/Show BG1/BG3 Animation Thread Graphics
		a:	affect bg1
		b:	affect bg3
		c:	bg1 (0 = show, 1 = hide)
		d:	bg3 (0 = show, 1 = hide)
\$BE	xx	\$EA98	Set Screen Mosaic to xx (\$2106)
\$BF	xxxx	\$EA85	Jump to Subroutine \$xxxx
\$C0		\$EA76	Return from Subroutine
\$C1	xx yy	\$EA05	xx = vector movement speed ???, yy = number of bytes to branch backwards
\$C2	abc-----	\$E9EB	Unpause Animation
		a:	unpause bg1
		b:	unpause bg3
		c:	unpause sprites
\$C3		\$F02F	Move circle to target
\$C4	ab-----	\$E99F	Move BG1/BG3 Thread to This Thread's Position
		a:	affect bg1
		b:	affect bg3
\$C5	4 addresses	\$E8FB	jump based on swdtech hit
\$C6	xx yy	\$E830	quadra slam/quadra slice
\$C7	<varies>	\$C873	Command \$C7 Subcommands
		\$00 xx	\$C2C39B Change Attacking Character Facing Direction (xx: 0 = face left, 1 = face right)
		\$01	\$C2C362 reset position offsets for attacking character
		\$02	\$C2C31E save attacking character position

	\$03	\$C2C339 restore attacking character
position and reset offsets	\$04	\$C2C303 restore attacking character
position	\$05 xx	\$C2C2B7 (unused)
	\$06 xx yy	\$C2C26A
	\$07	\$C2C247 update character action based on
vector direction (walking)	\$08 xx yy	\$C2C1D6 set vector target (xx,yy) from
attacker	\$09	\$C2C1B3 update character action based on
vector direction (arms up)	\$0A xx	\$C2C194 (unused)
	\$0B xx yy zz	\$C2C171 spc command
	\$0C xx yy	\$C2C136 change actor xx graphic index to
yy	\$0D xx	\$C2C115
	\$0E xx	\$C2C0F8 enable/disable screen shaking (xx
-> \$6285)	\$0F	\$C2C0F2 (unused)
	\$10 xx	\$C2C0B9
	\$11	\$C2C0B0 disable running with L+R
\$C8 xx	\$E7B1	Set attacker modified graphic index
\$C9 xx	\$DAE4	Play sound effect xx (\$00 means play default for this
animation)	\$E798	
\$CA	\$E779	Enable/Disable Echo Sprites (4 copies of character
\$CB edddddd		sprite)
		e: 1 = enable, 0 = disable
		d: frame delay between echo sprites (bitmask)
\$CC rgbffffff	\$EC24	Set sprite palette 2 color subtraction (absolute)
		r: affect red
		g: affect green
		b: affect blue
		f: amount to subtract
\$CD rgbffffff	\$EC02	Set sprite palette 2 color addition (absolute)
		r: affect red
		g: affect green
		b: affect blue
		f: amount to add
\$CE rgbaffff	\$EBF0	Add color to sprite palette 2 (relative)
		r: affect red
		g: affect green
		b: affect blue
		a: 0 = increase addition amount, 1 = decrease addition
amount		f: amount to increase/decrease
\$CF rgbaffff	\$EBF9	Subtract color from sprite palette 2 (relative)
		r: affect red



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g: affect green
b: affect blue
a: 0 = increase subtraction amount, 1 = decrease
subtraction amount
f: amount to increase/decrease
$D0 vhftpppm $E746 Set sprite data for all character/monster sprites
$D1 xx $E73D Validate/Invalidate Character/Monster Order Priority
(0 = validate, 1 = invalidate)
$D2 xx yy $F86D Set Target Position (xx,yy) doesn't actually move
target
$D3 $F044 Move Circle to Attacking Character
$D4 xxxx yy $E722 Set Color Addition/Subtraction Data
shbo4321 mmss--cd (+$2130)
s: 0 = add, 1 = subtract
h: 0 = full add/sub, 1 = half add/sub
bo4321: layers affected by add/sub (b =
background)
m: 0
s: 0
c: 0 = fixed color add/sub, 1 = subscreen
add/sub
d: 0
---o4321 subscreen designation ($212D)
o4321: layers to add/sub
$D5 -----vh $E707 Flip Monster (v = vertical, h = horizontal)
$D6 $E6CD
$D7 xx $E68D Move Fire Dance Sprites
$D8 xx yy zz $E5F9 x: x speed, y: y speed, z: ???
$D9 xx $E5F0 (bum rush)
$DA xxxx $E528 update tornado (w wind/spiraler)
$DB xx $E509 Branch forward xx bytes if character already stepped
forward to attack
$DC $E43A Rotate Triangle 2D
$DD xx yy dd rr $E416 Init Triangle
$DE $E401 move triangle to attacker position
$DF $E3EC move triangle to target position
$E0 xx yy dd rr $E3A0 Modify Triangle
$E1 xx $E328 show/hide attacker sprite
$E2 $DD8D
$E3 $DD42
$E4 $E286
$E5 xx yy zz $E15D yy = number of bytes to branch backwards
$E6 xx yy zz $E1B3 yy = number of bytes to branch backwards
$E7 $E25A
$E8 rr tt $DCDF Move rr,tt in polar coordinates (radius,theta)
$E9 xx yy $DC9B Move randomly (0...xx,0...yy)
$EA 13--xxxx $DC81 Set BG Tile Data Quadrants
1 = affect bg1
3 = affect bg1
x = quadrant
$EB xxxx ... $DC66 Jump to $xxxx... based on thread index (number of

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addresses is number of threads)
$EC xx          $DC55 Change Thread Layer (0 = sprite, 1 = bg1, 2 = bg3)
$ED             $DB8F
$EE --oo----    $E5C5 Set Target's Sprite Tile Priority
$EF rr tt       $DCD9 similar to $E8
$F0 5 words     $DB6C Jump based on current target index (char1, char2,
char3, char4, monster)
$F1 xx          $E2C0
$F2             $F980 Set a trajectory from target center to attacker
$F3 5 words     $DB64 Jump based on current attacker index (char1, char2,
char3, char4, monster)
$F4 -----t    $F30F Set Sprite Layer Priority
$F5             $F7FC Loop End (loop until no threads are active)
$F6             $E4A2 Rotate Triangle 3D
$F7 xx          $DB50 Wait until vertical scanline position xx
$F8 xxxx yyyy   $DB31 Jump to either xxxx or yyyy if magitek mode is enabled
$F9 xx yy zz     $DAF9
$FA xxxx        $DB23 Jump to $xxxx
$FB rgbffffff   $ED4C Set character palettes color subtraction (absolute)
                    r: affect red
                    g: affect green
                    b: affect blue
                    f: amount to subtract
$FC rgbffffff   $ED12 Set character palettes color addition (absolute)
                    r: affect red
                    g: affect green
                    b: affect blue
                    f: amount to add
$FD rgbaffff    $ED00 Add color to character palettes (relative)
                    r: affect red
                    g: affect green
                    b: affect blue
                    a: 0 = increase addition amount, 1 = decrease addition
amount
                    f: amount to increase/decrease
$FE rgbaffff    $ED09 Subtract color from character palettes (relative)
                    r: affect red
                    g: affect green
                    b: affect blue
                    a: 0 = increase subtraction amount, 1 = decrease
subtraction amount
                    f: amount to increase/decrease
$FF             End of Animation

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