

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
	\$3E xx	\$D126 Set main screen designation

(\$212C)		
	\$3F	\$D0E0 sonic dive
	\$40 -----mmm	\$D0D3 Set screen mode (\$2105) m: screen mode
(positive is smaller) and move (dx,dy)	\$41 cx cy dx dx	\$D06D Shrink/Grow BG1 by (cx,cy)
	\$42 -----vh	\$D064 Set MODE7 Settings register
(\$211A)		v: vertical flip h: horizontal flip
	\$43	\$D00B moon song/charm
	\$44	\$CFCC fire beam/bolt beam/ice beam
	\$45 xx	\$CFC0 Set BG1/BG2 Mask Settings
Hardware Register (\$2123)		
	\$46	\$CFB9
	\$47	\$CFAA
	\$48	\$CF8D clear
	\$49	\$CF7F ink hit/virite
	\$4A	\$CF6A
	\$4B	\$D2CC update red/yellow gradient lines
(megazerker)		
	\$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
(xx -> \$2124)		
	\$58 xx	\$CD17 change circle shape to xx
	\$59	\$CD12 goner/flare star
	\$5A	\$CD0D mind blast
	\$5B	\$CD08 mind blast
	\$5C	\$CD03 mind blast
	\$5D	\$CCDF
	\$5E	\$CC98 overcast
	\$5F xx	\$CC93 Increase/Decrease Blue Backdrop
Gradient (used by Overcast)		
status 1, etc.) (morph/revert)	\$60 aabbccdd	\$CC3F Toggle attacker status (aa =
	\$61 xx yy zz	\$CC1A
	\$62	\$CBF5 evil toot/fader
with speed xx (evil toot)	\$63 xx	\$D361 move in narrow vertical sine wave
	\$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
	\$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)
\$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 rgbffffff	\$EC6E Set sprite palette 3 color subtraction (absolute)
	r: affect red
	g: affect green
	b: affect blue
	f: amount to subtract
\$AB rgbffffff	\$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 rgbffffff	\$EBDA Set background palette color subtraction (absolute)
\$B0 rgbffffff	\$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 rgbffffff	\$ECEA	Set monster palettes color subtraction (absolute)
\$BA rgbffffff	\$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)		
\$CA	\$E798	
\$CB edddddd	\$E779	Enable/Disable Echo Sprites (4 copies of character
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
		g: affect green
		b: affect blue
		a: 0 = increase subtraction amount, 1 = decrease
subtraction amount		


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                                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
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

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\$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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