5

SERIAL COMMAND SET

This section discusses the SynchroMaster 550 serial control commands. The command set provides access to all of the unit's functions.

GENERAL

The command set is made up of ASCII characters and is not case sensitive. The commands can be spelled out or abbreviated. For example, the **CONTRAST** command can be specified as **contrast, CONTRAST, CONT,** or **cont**.

The entire serial command set for the SynchroMaster 550 is presented in this chapter.

Both forms of the command (long and short) are listed, as well as their associated parameters and descriptions. To execute serial instructions, each command line must be followed by a carriage return.

For example, at the prompt (>), a command would be as follows:

bri fg 123 Typing **bri fg 123** will change the brightness of the foreground input to a new brightness value of 123.

Illegal commands or arguments generate error messages and correct usage instructions.

SERIAL COMMAND SET USAGE

The serial command set can be used to control SynchroMaster 550. For example, to set the foreground as the input to view, type **MODE FG**. The serial command set can also be used to find out the current state for a particular parameter. For example, to find out the brightness level of the foreground, type **BRI FG**. The SynchroMaster 550 will return the current value (i.e. Brightness = 123).

The uppercase letters in the command name can be used to abbreviate the command on the prompt line. For example, **INput**, you can use **IN**, and for **BAUDrate**, you can use **BAUD**. A space is required between a command and its argument.

INPUT COMMANDS

These commands allow you to make adjustments for your inputs and then save these settings into the unit's internal memory.

Command	Arguments	Description
INput	<FG | BG> [AUTO | LOCK | DEBUG]	Sets the input mode for the specified input. *Auto* engages the autosync circuitry. *Lock* turn the autosync circuitry off. *Debug* provides information on input status and reports changes to measured parameters.
INputInteractive	<FG | BG>	Enters input interactive mode to visually adjust timing parameters of the specified input. A white box frame and crosshair appear over the full screen input. Starting with the lower-right corner of the image, use these keyboard controls to position the image within the white frame: **I** = move up **M** = move down **J** = move left **L** = move right With the lower-right corner properly adjusted, address the upper-left corner next by using these keyboard controls: **i** = move up **m** = move down **j** = move left **l** = move right With the image properly adjusted, quit the utility: **q** = quit After you have adjusted the input to your satisfaction, use the *Input Name* command to name your input source, and the *Input Save* command to store the *Input List*.
INputLIST	[<1..50>] [<1..50>] <[ACTIVE]>	Displays the entire *Input List* of saved input timings. If arguments are supplied, displays on the portion of the list requested. The *Active* argument displays all saved list entries.
INputLOAD	<FG | BG> <1..50>	Loads the indicated entry from the *Input List* to the specified input channel. The entry is loaded only if it matches the measured parameters of the signal—sync format and polarity, interlace state, vertical total, and horizontal frequency.
INputName	<FG | BG> <name>	Assigns a name to the specified input. The argument can be up to 17 alphanumeric characters with no spaces (underscore is acceptable). Factory default: Auto_1
INputSave	<FG | BG> <1..50>	Saves the specified input to the selected entry in the *Input List*. These settings are recalled whenever the signal is reapplied to the DGx.
INputDELete	<1..50>	Deletes the specified input from the *Input List.*
INputTiming	<FG | BG> <hfp> <hs> <hbp> <hact> <vfp> <vs> <vbp> <vact>	Sets the timing of the selected input. **Note:** The vertical total cannot be changed from the measured value; that is, the total of <vfp> + <vs> + <vbp> + <vact> must remain constant. See Table 5 for ranges and factory defaults.

INPUT COMMANDS (CONTINUED)

These commands allow you to make adjustments for your inputs and then save these settings into the unit's internal memory.

Command	Arguments	Description
INputTYPE	<FG> <RGB | COMPOSITE | SVIDEO | COMPONENT>	This command is used for channels with video input option boards. The command selects between the four possible inputs types of such a channel. One input per channel can be used at a time. The input argument can only be FG since that is the only input channel which supports the optional video board. Factory default: RGB
INputFormat	<FG>	*InputFormat* is a read-only command for checking the video format of the current video input selection. The command is only valid when *Input Type* is set to either Composite, Component, or S-Video. The response to the command will be NTSC or PAL. The input argument can only be FG since that is the only input channel which supports the optional video board.
LoadInputList	<1..50> <name> <hfp> <hs> <hbp> <hact> <vfp> <vs> <vbp> <vact> <hfreq> <sync> <hpol> <vpol> <il>	Used to set the timing parameter directly to the input host table without going through the autosync process. The argument values are as follows: <hfp> -- Horizontal front porch, in pixels <hs> -- Horizontal sync, in pixels <hbp> -- Horizontal back porch, in pixels <hact> -- Horizontal active, in lines <vfp> -- Vertical front porch, in lines <vs> -- Vertical sync, in lines <vbp> -- Vertical back porch, in lines <vact> -- Vertical active, in lines <hfreq> -- Horizontal frequency, in Hz <sync> -- Sync, number of wires <3 | 4 | 5> <hpol> -- Horizontal sync polarity, positive or negative, <0 | 1> <vpol> -- Vertical sync polarity, positive or negative, <0 | 1> <il> -- Interlace, non-interlaced or interlaced, <0 | 1>

OUTPUT COMMANDS

These commands control the output of the SynchroMaster 550. You may need to make timing adjustments to your signal to better suit your display device.

Command	Arguments	Description
ClearHostList	(none)	Clears the *Host List* of all user-defined hosts.
HOST	(none)	A query command which returns information on the selected host timing.

OUTPUT COMMANDS (CONTINUED)

These commands control the output of the SynchroMaster 550. You may need to make timing adjustments to your signal to better suit your display device.

Command	Arguments	Description
HostInteractive	(none)	Enters the host interactive mode. This is an adjustment mode for changing the Host Timing values to better suit your display device. Once in the interactive mode, a white box and crosshair appear on the output display. Starting with the lower-right corner of the box, use these keyboard controls: **I** = move up **M** = move down **J** = move left **L** = move right With the lower-right corner properly adjusted, address the upper-left corner next by using these keyboard controls: **i** = move up **m** = move down **j** = move left **l** = move right With the image properly adjusted, quit the utility: **q** = quit After you have adjusted the input to your satisfaction, use the *Host Name* command to name your input source, and the *Host Save* command to store the *Host List*.
HostLIST	[<1..63>] [<1..63>]	Displays the entries in the Host List (Table 4). Without arguments, the command returns the entire list. With one argument, it returns information on the specified Host List entry. With both arguments, it returns the portion of the Host List specified by the arguments. The first 10 entries are user-defined. That is, these slots are reserved for host timing strings the user defines with the HostTiming and/or HostInteractive commands, and saves with the HostSave <1…10> command. Entries 11 through 54 include both progressive (non-interlaced) and interlaced hosts with a standard 4:3 or 5:4 aspect ratio. They are listed in order of decreasing resolution and frequency. Entries 55 through 63 are 16:9 wide screen hosts. Factory default: Host #11 See Table 4 for a description of the Host List.
HostLOAD	<1..63>	Loads the indicated host from the *Host List.*
HostName	<name>	Assigns a name to the current host. The argument can be up to 17 alphanumeric characters with no spaces (underscore is acceptable). Factory default: Auto_1
HostSave	<1..10>	Saves the current host settings into the *Host List.* The argument specifies which *Host List* position is used.
HostDELete	<1..10>	Deletes the specified user-defined host.
HostTiming	<input #> <hfp> <hs> <hbp> <hact> <vfp> <vs> <vbp> <vact>	Sets the timing for the current host. Factory default: Host #11, 1280x1024, 75 Hz See Table 4 for a description of Host List.

IMAGE COMMANDS

After you have made your adjustments with the *Input Commands*, you can then adjust the image controls for each input.

Command	Arguments	Description
BRIght	<FG | BG | ALL> <-500..500>	Sets *brightness* value of the selected input. The ALL argument sets brightness for both inputs. Factory default: 0
CONTrast	<FG | BG | ALL> <0..200>	Sets *contrast* value of the selected input. The ALL argument sets contrast for both inputs. Factory default: 100
HUE	<FG> <-180..180>	Sets *hue* value of the selected input. Hue is only valid for video option board inputs. Factory default: 0
SATuration	<FG> <0..200>	Sets *saturation* value of the selected input. Saturation is only valid for video option board inputs. Factory default: 100
SHARPness	<FG> <0 | 1 | 2 | 3>	Sets *sharpness* value of the selected input. Sharpness is only valid for video option board inputs. Factory default: 2
GAMma	<FG | BG | ALL> <0.5...2.0>	Sets a unique gamma value of the selected input. The ALL argument recalls or sets gamma for both inputs. Factory default: 1
WINdow	<FG | BG | ALL> <ON | OFF>	This command is used to turn off one or both inputs. If *Window* is Off and the input to that channel is removed and reapplied within two seconds, then the status remains Off. If *Window* is Off and the input is removed and reapplied after more than two seconds, the *Window* status reverts to On. This allows for the use of a switcher and maintaining the desired On/Off status. It also means that when a previously unused input is used, the *Window* automatically turns On allowing the new input to be displayed. Factory default: ALL ON

IMAGE POSITIONING/VISIBILITY COMMANDS

These commands control the display configurations, including chroma key, zoom and pan, and freezing inputs.

Command	Arguments	Description
ALPHA	<0..255>	Sets the proportion of foreground to background when the *Mode* is set to *Alpha*. Maximum value of 255 shows 100% of the foreground and minimum value of 0 shows 100% of the background. Factory default: 128
ChromaKeyColor	<WHITE | YELLOW | CYAN | GREEN | MAGENTA | RED | BLUE | BLACK>	Sets the chroma key to one of the 100% color bar colors. Factory default: Black

IMAGE POSITIONING/VISIBILITY COMMANDS (CONTINUED)

These commands control the display configurations, including chroma key, zoom and pan, and freezing inputs.

Command	Arguments	Description
ChromaKeyInteractive	(none)	This command causes the foreground image to appear on the screen. A white intersecting line appears over the foreground image. Position the cursor over the desired key color using the following keyboard controls: **i** = move up **m** = move down **j** = move left **l** = move right **enter** = select **q** = quit Once you press Enter, the chroma key is enabled (i.e. the selected color disappears and the background image shows through). The second part of *ChromaKeyInteractive* is to adjust the transition and range of the chroma key. Increasing or decreasing the transition and range is done by using the following keyboard controls: **i** = increase range **m** = decrease range **j** = decrease transition **l** = increase transition **q** = quit Press "q" to finish the adjustment phase and save the chroma key parameters.
ChromaKeySetup	<0..255> <0..255> <0..255> <0..255> <0..63>	Sets the characteristics of the chroma keyer. The chroma keyer examines the foreground signal, and if the foreground signal is within a specified color range, the background signal is allowed to show through. The arguments are defined as follows: **Red <0..255>** The red coordinates, 0 representing no red and 255 representing maximum red. **Green <0..255>** The green coordinates, 0 representing no green and 255 representing maximum green. **Blue <0..255>** The blue coordinates, 0 representing no blue and 255 representing maximum blue. **Range <0..255>** This value defines a tolerance range for the selected chroma key color. **Transition <0..63>** This parameter dictates the rate at which the output fades between foreground and background with change in foreground color. A value of 0 degenerates to a one-bit key (either foreground or background). A value of 63 gives a large range of foreground colors for which the output is a mix of foreground and background. Factory default: 0 0 0 255 0

IMAGE POSITIONING/VISIBILITY COMMANDS (CONTINUED)

These commands control the display configurations, including chroma key, zoom and pan, and freezing inputs.

Command	Arguments	Description
DoubleBuffer	<FG | BG> <ON | OFF>	The double buffering feature eliminates pointer crossover. This is a visual artifact which can be visible in imagery containing horizontal motion—for example, a camera panning from left to right—or scene changes. It appears as a brief, horizontal break in the picture. Your eye may not discern it, but what you are seeing is a portion of one frame of video and a portion of another. With *DoubleBuffer* On, pointer crossover is eliminated. The trade off is that horizontal motion may appear a little jerkier. *DoubleBuffer* is applicable to both RGB and video inputs. *DoubleBuffer* is only valid if the output host is progressive (non-interlaced), and if the input is an RGB signal, it must also be progressive. DoubleBuffer is also valid for all video inputs on the video input option board. Factory default: ON
FreeZe	<FG | BG> <ON | OFF>	Turns freeze status of selected input on or off. The freeze status is maintained through switches between modes (e.g. foreground, background, alphablend), as it is the input that is frozen, not the output. Any change to the host timing resets the freeze status to off. Factory default: OFF
KeyInvert	<ON | OFF>	Reverses the inputs on the SynchroMaster so that Input 1 becomes the background and Input 2 becomes the foreground. This command is useful if using the video input option board because the video channel can be used as the background. Factory default: OFF
MODE	<ForeGround | BackGround | ChromaKey | AlphaBlend>	Sets the mode of the combiner. Factory default: Foreground
OPTimize	<ON | OFF>	Improves the horizontal resolution. This command is useful when the display device is a CRT and the output resolution (host) is less than 1280x1024 pixels. If the display is a discrete (sampled) device, such as an LCD or DLP, and you turn optimize ON, you may get a modulus mismatch, creating vertical banding. Factory default: OFF
OVERSCAN	<FG> <ON | OFF>	Overscan performs an automatic 2% enlargement on a video inputs only. It has no effect on WSR values, and it applies to all video inputs for the specified channel. Overscan is useful in trimming out excess blanking in video signals or head switching for VTR sources. Unlike WSR, when *overscan* is turned on, the enlargement is automatic and constant even when switching between the various video input types. Factory default: OFF
PAN	<FG | BG>	Activates the pan utility for the selected input. Only a zoomed input can be panned.

IMAGE POSITIONING/VISIBILITY COMMANDS (CONTINUED)

These commands control the display configurations, including chroma key, zoom and pan, and freezing inputs.

Command	Arguments	Description
ZooM	<FG | BG>	Activates the zoom utility. *Zoom* affects the WSR value for the input. The maximum zoom is limited in all cases to no more than two times the original image. Not all inputs generate a 2x zoom ratio, however. The amount of available zoom range is dependent on the pixel rate of the input signal. *Zoom* resets to an unzoomed state whenever the signal is acquired or reacquired. That is, if you remove or replace the input signal, or if you change the input type selection on a single channel with the *InputType* command, then zoom resets to the default values for the new signal.
RSR	<FG | BG>	Resets the source rectangle (WSR) to default value, that is equal to the HACT and VACT measurements of the specified input signal. RSR "unzooms" a zoomed image. RSR also resets brightness, contrast, gamma, hue, saturation, and sharpness values to defaults.
WDP	<FG | BG>	If your *mode* is set to *ChromaKey* and the *ChromaKeyColor* is black, this command allows you to change the position of your destination rectangle. Typing this command enters an interactive mode where you can change the position of your window. Use these keyboard controls: **i** = move up **m** = move down **j** = move left **l** = move right With the image properly adjusted, quit the utility: **q** = quit
WDR	<FG | BG> <x> <y> <width> <height>	This command sets both the position and size of an input's destination rectangle. The <x> and <y> arguments represent the monitor coordinates of the rectangle's top left corner, but hardware limitations may cause actual placement to differ slightly from that specified. The <width> and <height> arguments represent the pixel width and line height of the destination rectangle. The rectanlge can be positioned and sized so that part of it is positioned off the screen. WDR is limited to the output resolution of the SynchroMaster 550.

IMAGE POSITIONING/VISIBILITY COMMANDS (CONTINUED)

These commands control the display configurations, including chroma key, zoom and pan, and freezing inputs.

Command	Arguments	Description
WDS	<FG | BG>	If your *mode* is set to *ChromaKey* and the *ChromaKeyColor* is black, this command allows you to change the size of your destination rectangle. Typing this command enters an interactive mode where you can change the size of your window. Use these keyboard controls: **s** = smaller **l** = larger With the image properly sized, quit the utility: **q** = quit
WSR	<FG | BG> <x> <y> <width> <height>	Sets the source rectangle for the selected input. The source rectangle is the portion of the original input that is displayed on screen. By default, WSR is set to show the entire image. That is, the default value for RGB inputs is equal to the HACT and VACT measurements of the specified input signal. For video, WSR defaults to 720 x 480 for NTSC and 720 x 574 for PAL. The source rectangle is used to zoom in or out on an image. The <x> and <y> coordinates represent coordinate screen starting point from which to draw the supplied values of <width> and <height>. Example—To zoom in on the upper left quadrant of an 800 x 600 input, the WSR values are: **wsr <FG | BG> 0 0 400 300** To display only the bottom right quadrant, the WSR values are: **wsr <FG | BG> 400 300 400 300** The full, default source rectangle for this 800 x 600 input is: **wsr <FG | BG> 0 0 800 600** WSR resets to defaults whenever the signal is acquired or reacquired. That is, if you remove or replace the input signal, or if you change the input type selection on a single channel with the *InputType* command, then WSR resets to the default values for the newly acquired signal.

MISCELLANEOUS COMMANDS

These commands control a variety of general SynchroMaster 550 functions.

Command	Arguments	Description
AUTOSAVE	<ON | OFF>	The *AutoSave* feature automatically stores the system configuration approximately every ten seconds. The process stores configuration information such as *HostList*, *InputList*, *Host* settings, and display parameters. *AutoSave* allows you to turn the NVRAM automatic update mode on or off. **Note:** The *AutoSave* feature can cause sluggish response to some SynchroMaster 550 controls. While the *Auto Save* feature is useful during setup of the system, it is best set to Off during live presentations. Factory default: OFF
Help	[<command>]	*Help*, without an argument will display the entire serial command set. *Help*, with a command as an argument will display detailed information about that command.
ID	(none)	Displays the product identification, product name, firmware version number, date, and serial number.
VERSION	(none)	Returns firmware, hardware, and bootcode revision information.
RestoreFactoryDefaults	(none)	Restores all user settings to their factory default values.
SAVECONFIGURATION	(none)	Forces an update and explicit save of the system's NVRAM. This stores configuration information such as *HostList*, *InputList*, *Host* settings and display parameters.
STATus	(none)	Returns the *Status* of the SynchroMaster 550 and its current settings.
TestPattern	<ON | OFF>	This command turns the internal *TestPattern* (color bars) on and off. Factory default: OFF
UPDATEFIRMWARE	(none)	This command updates the firmware for the SynchroMaster 550. If the baud rate is other than 115,200, the user will be prompted to change the baud rate of the terminal emulator and the SynchroMaster to 115,200. When this is complete, the *Updatefirmware* command must be re-issued and confirmed. The user is prompted to download the file. On the screen, progress dots appear during the download.

SERIAL PORT COMMANDS

These commands control baud rate and echo settings.

Command	Arguments	Description
BAUDrate	<1200 | 2400 | 9600 | 19200 | 38400 | 57600 | 115200>	Sets the serial port *baud* rate. The value is automatically saved in NVRAM. Factory default: 9600
ECHO	<ON | OFF>	Turns the serial *echo* On/Off. The value is saved in the NVRAM. The *echo* is only on commands typed and sent to the unit. **Note:** *Echo* setting has no effect on responses issued by the SynchroMaster 550; responses are always visible, regardless of the *echo* status. Factory default: ON

TABLE 4. Host List

#	NAME	HFP	HS	HBP	HACT	VFP	VS	VBP	VACT	HFREQ	SYNC		HPOL	VPOL	ILI
1..10					(user defined hosts)										
62	1360x1024__75.1	32	136	272	1360	3	3	35	1024	80000	5	1	1		0
63	1360x768__60	92	40	276	1360	3	6	18	768	47700	5	1	1		0
11	VESA_1280x1024_75	16	144	248	1280	1	3	38	1024	799805		1	1		0
12	VESA_1280x1024_60	48	112	248	1280	1	3	38	1024	639835		1	1		0
13	1280x1024___59.94	48	112	248	1280	1	3	38	1024	638975		1	1		0
14	1280x1024_____50	52	116	250	1280	1	3	38	1024	532995		1	1		0
15	VESA_1280x960__60	96	112	312	1280	1	3	36	960	600025		1	1		0
16	1280x960____59.94	96	112	312	1280	1	3	36	960	599415		1	1		0
17	1280x960_____50	96	112	312	1280	1	3	36	960	500005		1	1		0
18	EIA_1260x946___30	44	136	164	1260	8	8	61	473	306925		1	1		1
19	EIA_1164x874___30	36	112	140	1164	6	6	59	437	283425		1	1		1
20	SUN_1152x900___66	30	128	194	1152	2	4	31	900	617975		1	1		0
21	APPLE_1152x870_75	32	128	144	1152	3	3	39	870	686815		1	1		0
22	VESA_1152x864__75	64	128	256	1152	1	3	32	864	675035		1	1		0
23	EIA_1080x809___30	26	96	118	1080	6	6	54	404	262445		1	1		1
24	1024x768_____100	24	136	160	1024	3	6	29	768	806065		1	1		0
25	VESA_1024x768__85	48	96	208	1024	1	3	36	768	686815		1	1		0
26	VESA_1024x768__75	16	96	176	1024	1	3	28	768	600245		1	1		0
27	VESA_1024x768__70	24	136	144	1024	3	6	29	768	564785		0	0		0
28	VESA_1024x768__60	24	136	160	1024	3	6	29	768	483655		0	0		0
29	1024x768____59.94	24	134	158	1024	3	6	29	768	483115		0	0		0
30	1024x768_____50	24	136	160	1024	3	6	29	768	403035		0	0		0
31	VESA_1024x768__43	8	176	56	1024	0	8	41	384	356015		1	1		1
32	EIA_900x674____30	20	64	80	900	5	5	45	337	218705		1	1		1
33	APPLE_832x624__74	32	64	224	832	2	3	38	624	497165		1	1		0
34	EIA_832x624____30	16	56	64	832	5	5	41	312	202535		1	1		1
35	800x600_____100	32	96	128	800	1	2	22	600	625005		1	1		0
36	VESA_800x600___85	32	64	152	800	1	3	27	600	536735		1	1		0
37	VESA_800x600___75	16	80	160	800	1	3	21	600	468755		1	1		0
38	VESA_800x600___72	56	120	64	800	37	6	23	600	480795		1	1		0
39	VESA_800x600___60	40	128	88	800	1	4	23	600	378805		1	1		0
40	800x600_____59.94	40	128	88	800	1	4	23	600	376425		1	1		0
41	VESA_800x600___56	24	72	128	800	1	2	22	600	351565		1	1		0
42	800x600_____50	32	96	128	800	1	2	22	600	312505		1	1		0

43	PAL_768x576____25	22	70	84	768	5	5	39	288	156255	0	0	1
44	640x480_____100	16	96	48	640	10	2	33	480	525015	0	0	0
45	VESA_640x480___85	56	56	80	640	1	3	25	480	432695	0	0	0
46	VESA_640x480___75	16	64	120	640	1	3	16	480	375005	0	0	0
47	VESA_640x480___72	24	40	128	640	9	3	28	480	378605	0	0	0
48	VESA_640x480___60	16	96	48	640	10	2	33	480	314735	0	0	0
49	640x480_____59.94	16	96	48	640	10	2	33	480	314735	0	0	0
50	640x480_____50	16	96	48	640	10	2	33	480	262505	0	0	0
51	NTSC_640x480___30	44	112	104	1280	6	6	29	242	157345	0	0	1
52	VESA_720x400___85	36	72	108	720	1	3	42	400	379275	0	1	0
53	VESA_640x400___85	32	64	96	640	1	3	41	400	378605	0	1	0
54	VESA_640x350___85	32	64	96	640	32	3	60	350	378605	1	0	0
55	1280x768_____56	48	112	248	1280	1	3	30	768	451165	0	0	0
56	1280x720_____100	110	40	220	1280	5	5	20	720	750015	0	0	0
57	1280x720_____60	108	40	214	1280	5	5	20	720	450005	0	0	0
58	1280x720____59.94	112	40	224	1280	5	5	20	720	449555	0	0	0
59	1280x720_____50	110	40	220	1280	5	5	20	720	375005	0	0	0
60	852x480_____60	20	66	52	852	6	6	33	480	314915	0	0	0
61	852x480_____59.94	20	66	52	852	6	6	33	480	314685	0	0	0

TABLE 5. Definitions and Ranges for Timing Parameters

Parameter	Definition	Range (default value)
HFP	Horizontal front porch	0 to 640 pixels (16)
HS	Horizontal sync	16 to 640 pixels (144)
HBP	Horizontal back porch	0 to 640 pixels (248)
HACT	Horizontal active	16 to 1280 pixels (1280)
VFP	Vertical front porch	0 to 512 lines (1)
VS	Vertical sync	2 to 32 lines (3)
VBP	Vertical back porch	0 to 512 lines (38)
VACT	Vertical active	12 to 1024 lines (1024)
HFREQ	Horizontal frequency in Hz	15 to 90 kHz (75)
SYNC	Sync format	3, 4, or 5 wires (5)
HPOL	Horizontal sync polarity	1 or 0 (1)

TABLE 5. Definitions and Ranges for Timing Parameters (Continued)

VPOL	Vertical sync polarity	1 or 0 (1)
IL	Interlaced/Noninterlaced	1 or 0 (0)