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VFC-2100/2200 Serial Interface
RS232/422/485

Serial Parameters:

The following parameters can be adjusted through a front panel menu interface.

- Baud Rate is selectable as 115.2, 57.6, 38.4, 19.2.
- Parity is selectable as NONE, ODD, EVEN.
- Stop Bit is selectable as 1 or 2.
- Data Bit is selectable as 7 or 8.
- Echo is ON or OFF. (Applies to RS232 mode only)

Hardware Interface:

The serial interface will support full duplex operation.
The serial protocols will require hardware flow control in order to function properly under high through put conditions. The VFC will always provide the required signals for hardware flow control. Hardware flow control can be by-passed by asserting the RST and CTS lines appropriately as well as the DTR line. The VFC will not respond if the RTS or DTR line is disabled. If the DTR line is disabled, the RTS line MUST be asserted to allow the VFC to transmit. If hardware flow control is disabled, the DTE device must not overload the VFC or data loss will result. Data loss will result for the following conditions:

1. Data is sent after the RTS line is deactivated by the VFC due to the 3 character UART buffer becoming full.
2. Data is sent after the RTS line is deactivated by the VFC due to the internal 1K (1024 byte)[1] input buffer becoming full.

One method to guarantee no data lose is to wait for the prompt before sending commands.

Protocol Mode Selection:

The VFC will be able to support RS232, RS422 or RS485 serial protocols. This mode will be selectable by the front panel menu system only. When RS485 mode is selected an additional parameter will be available to set the device address. This number will be in the range of 1 to 32. This address ID will remain unchanged between system power cycles. The ID will default to 1 under the following conditions:

- A reset RS Ports is executed during a Factory System Reset.
- A software upgrade is installed.

1. The buffer size may be increased to 2k (2048) to handle large command strings.
2. The ZERO default may be changed to accept all commands.

Command Syntax:

RS232/RS422 Mode selected

The VFC will respond with a '#' prompt when the command processor is ready for a command.

The command syntax is shown below
cmd arg1 arg2 … argn<CR>

cmd	cmd is any valid VFC command, typically 2 to 6 alphabetic (non numeric) characters.
arg	arg1, arg2, … argn are required or optional parameters depending on the command used.
<CR>	carriage return (ASCII 13) terminates the command

A space (ASCII 32) must be inserted between the command and any arguments that follow. A space must also be inserted between all argument parameters except for the last argument in the chain.

All commands in RS232 mode **must** be terminated with a carriage return (ASCII 13). The carriage return will tell the command processor to begin execution of the command.
If the command is not recognized as a valid command, a '?' is returned for unknown command. If the command is recognized but the syntax is incomplete or required parameters are missing the '?' will be returned. If verbose mode is enabled, a message is returned with the word ERROR followed by any syntax or usage information.

When ECHO is enabled, the data received from the DTE device will be echoed back. When ECHO is disabled, only the prompt character '#' is echoed back.

Query commands will return the following:
=result
#

The '=' indicates a result from a command is following. The 'result' will follow directly after the '='. The value of the result will vary depending on the query command used. A new line will be generated and the prompt will indicate the system is ready for a new command. If verbose mode is enabled, information is returned in text form.

RS485 Mode Selected

The command syntax for a single command is shown below:
*cds***id**cmd arg1 arg2 arg3..argn*cde*

cds	*cds* is the command delimiter start character '*' (ASCII 42).
id	id is the device number in the range of 1 to 32. This can be a single character for values less than 10, no preceding zero is required.
cmd	cmd is any valid VFC command, typically 2 to 6 characters in length
arg	arg1,2,n is any required or optional parameters need for the command
cde	*cde* is the command delimiter end character '!' (ASCII 33).

To minimize bus traffic the command words will be kept as short as possible. The units will not respond with prompts or any command error conditions. Echo will be disabled when the RS485 modes is selected.

Command Set

The following commands will be added to the Preliminary RS232 Command Set shown on the last page. The following information is preliminary and may change in final release.

Note on VFC 2200 command set:
The serial commands for all input functions will have a new parameter available to select the A or B scalar inputs. This parameter will always be the last parameter for the command. If the parameter is not used, scalar A will be assumed. Also, if the unit is a 2100 and this parameter is used it will be ignored. Example of 2100 and 2200 commands with the scalar parameter:

```
2100 command sample
      ICNT Op nnn<CR>    Input Contrast Command
      Parameters:
            Op - Operand [C|A|R|G|B] where
                  C=Common contrast value
                  A=Adust all color offsets
                  R=Adjust Red offset
                  G=Adjust Green offset
                  B=Adjust Blue offset
            nnn - Offset Value, C=75 - 125%  A|R|G|B=-25 - 25%

      Ex. ICNT r 20<CR>  "Sets red offset input contrast to 20%"

2200 command sample
      ICNT Op nnn Sclr<CR>  Input Contrast Command
      Parameters:
            Op - Operand [C|A|R|G|B] where
                  C=Common contrast value
                  A=Adust all color offsets
                  R=Adjust Red offset
                  G=Adjust Green offset
                  B=Adjust Blue offset
            nnn - Offset Value, C=75 - 125%  A|R|G|B=-25 - 25%.
            Sclr - Select input scaler for command.
```

Ex. ICNT c 75 b<CR> "Sets common input contrast to 75% for scalar B"
Ex. ICNT c 75<CR> "Sets common input contrast to 75% for scalar A"

Configuration Load and Save

These commands can be used to store or duplicate various VFC configuration files (CFG's). The files can be loaded off the VFC to a disk file on a PC.

DOWNLOAD CFG:

DL Op nn<CR>	
Parameters:	
	Op - [I|O] Selects the Input or Output library to download.
	nn Selects the index number of the configuration. This number can be zero for the current configuration or a number between 1 - 32 for a User Library Configuration.
Example:	**DL I 12<CR>** Downloads the input cfg number 12

This command will download a configuration file from the VFC to the serial port. The download begins immediately after the command is initiated. The user should verify that the CFG is valid before downloading. The format of the CFG data is

<SOH><LIB><Index><Size><BINARY DATA><Sx>

Where
<SOH> is StartOfHeader (0x01)
<LIB> is the current library type, [I]nput, [G]lobal, [O]utput
<Index> is the library index of this file, as a byte value.
<Size> is the number of bytes in the binary data field, as a byte value.
<BINARY DATA> is the data library structure in binary format.
<Sx> is a 8 bit checksum in as a byte field, applied to binary data only.

Current file sizes are:

Global Library - 84 bytes (672 bits)
Input Library - 154 bytes (1232 bits)
Output Library - 198 bytes (1584 bits)

All files will have additional 5 bytes (40 bits) of header information added to them.

UPLOAD CFG:

UL Op nn<CR>	
Parameters:	
	Op - [I|O] Selects the Input or Output library to download.
	nn Selects the index number of the configuration. The number can be between 1 - 32 for a User Library Configuration.
Example:	**UL O 3<CR>** Uploads file to the output cfg location 3.

This command will upload a configuration file from the serial port to the VFC.
The upload begins once a valid SOH character is detected indicating the start of header. This allows multiple units to receive the UL command and then wait to receive the same CFG file from a PC or source VFC.

RS232 Command Set Description

Inquiry command (*Changes from current systems*)
The inquiry commands original syntax was a question mark "?" directly after the command followed by a carriage return as shown below.

CMDST?<CR>

The new syntax follows the standard syntax for all commands in that it is no longer a special case. This allows parameters to be passed in with a query command as shown.

AOIHV ? B<CR>

This change was required due to the addition of a second scalar board to the 2200 system. Queries based on commands that accept a scalar input parameter can now specify which system, A or B, should return the information.

The old syntax can still be used with out creating an error but it is discouraged.

Parameter conventions
Parameters are shown following the command. For ALL commands the scalar parameter (sclr) is optional. Scalar A will be assumed for all cases.

op is used to represent the operation to perform. Depending on the command it can have one to four characters as a parameter.

The ? parameter indicates that the command can only respond to an inquiry and can not accept input.

Parameters shown with repeated characters represent the maximum number of positions the parameter can represent. For example the
AOIHC hhhh sclr command can accept a horizontal parameter of 409 to 1509 pixels and an optional scalar parameter.

Values shown as:

v[307-726] - Represent a range of possible values. This example shows a range of 307 to 726 for the v parameter.

op[D|E|M] - Represents a set of possible values but only one can be used per command. This example shows that the op parameter can be D or E or M.

op[CRGB] - Represents a set of possible values where any combination can be sent as a parameter. This example shows that C and/or R and/or G and/or B can be used as a parameter. Do NOT separate values with spaces when using more that one value.
RBG is a valid parameter. R B G is NOT a valid parameter.

Verbose Mode Errors
In verbose mode the following errors may be displayed.
"ERROR: Command Format" - This error indicates the command syntax is incorrect. The correct syntax is displayed on the next line following the error.

"ERROR: Parameter Out of Range" - One of the parameters passed in the command is out of range. Not all command parameters are tested for range and not all generate errors for out of range.

"ERROR: Command Execution" - The command syntax and parameter information was correct but the command could not execute or encountered an error during execution.

"ERROR: Command Not Available" - This command is not available in the current mode of operation.

RS232 Command Set - Version 1.08

```
Command Help Menu
All Command Parameters are input in ASC II form.
All Commands are terminated with a carriage return. (ASCII 13)
? Command Parameters are inquiry only.
Sclr Command Parameter is [A|B]. (VFC 2200 only)
```

Ex:
AOIWN ? B<CR>
returns Scaler B information
=wwww,hhhh,vvvv

AOIHC op hhhh sclr	AOI Horizontal Center: op[A|R] h[xxx.x%] sclr[A|B]
AOIHV op hhhh vvvv sclr sclr[A|B]	AOI H & V Centers: op[A|R] h[xxx.x%] v[xxx.x%]
AOIVC op vvvv sclr	AOI Vertical Center: op{A|R] v[xxx.x%] sclr[A|B]
AOIWD op wwww sclr	AOI Width: op[A|R] w[xxx.x%] sclr[A|B]
AOIWN op wwww hhhh vvvv sclr sclr[A|B]	AOI Width, H & V Center: op[A|R] w[xxx.x%] h[xxx.x%] v[xxx.x%]
AUTOS op sclr	Auto SYNC: op[D|E|M] sclr[A|B|U]
CHR c	Echo Character Command: c[Alph. Char.]
CMDST?	Last Command Status
DEBUG?	Debug Inquiry
DFRMT?	Data Format
DL op nn sclr	Download CFG: op[I|O] nn[0-96]
DSLV src dst n.n wm	Dissolve Inputs: src[A|B] dst[A|B] n[0-10.0]sec wm[0|1]
ECHO n	RS232 Echo: n[0|1], OFF|ON
FPLCK?	Front Panel Lock
FREEZ n sclr	Freeze On/Off: n[0|1], OFF|ON
GLENA n	Genlock: n[0|1], Disable|Enable
GLHPH nnn	Genlock H Phase
HELP i	Help Command: i[A-Z], Help Index
IAR n.nnn sclr	Input Aspect: Ratio(n.nnn): n[0-2.000]
IARB n sclr	Input Aspect Ratio Box: n[0|1], OFF|ON
IBRT op nnn sclr	Input Brightness: op[C|R|G|B] c[75 - 125]% RGB[-25 - 25]%
ICDEL nn	Input Configuration Delete: n[CNF Index]
ICGTE n sclr	Input Clamp Gate: n[0-2], SYNC|PRCH|DLY
ICNT op nnn sclr	Input Contrast: op[C|R|G|B] c[75 - 125]% RGB[-25 - 25]%
ICREC nn sclr	Input Configuration Recall: n[CNF Index]
ICSAV nn s[8] sclr	Input Configuration Save: n[CNF Index] s[Name]
ICSP n sclr	Input Colorspace: n[0-5], RGB|B50|B60|MII|EBU|S240
IFHV op n.n sclr	Input Horizontal/Vertical Filter: op[H|V] n.n[0.0 – 8.0]

IFMD n sclr	Input Filter Mode: n[0|1] OFF|ON
IHAC nnnn sclr	Input Horizontal Active: n[Pixels]
IHFP nn sclr	Input Horizontal Front Porch: n[Pixels]
IHTT nnnn sclr	Input Horizontal Total: n[Pixels]
IINFO sclr?	Input Timing, H,V,Vtot,Int
IOS n.nn sclr	Input Oversample: n[0.5-2.00]
IPED nnn sclr	Input Pedestal: n[0-500]
IRSP op nnn sclr	Input Raster Size/Position: op[L|R|T|B] n[-999 – 999]
ISAT nnn sclr	Input Saturation: n[50-200]%
IVAC nnnn sclr	Input Vertical Active: n=[lines]
IVFP nn sclr	Input Vertical Front Porch: n[lines]
IVLV nnn sclr	Input Video Level: n[0-1000]
LCK? op sclr	Video Lock: op[I|O] Input|Output
OAR n.nnn	Output Aspect Ratio: n[0-2.000]
OBRT op nnn	Output Brightness: op[C|R|G|B] c[75 - 125]% RGB[-25 - 25]%
OCDEL nn	Output Configuration Delete: n[CNF Index]
OCNT op nnn	Output Contrast op[C|R|G|B] c[75 - 125]% RGB[-25 - 25]%
OCREC nn	Output Configuration Recall: n[CNF Index]
OCRECF nn	Output Configuration Factory Recall: n[CNF Index]
OCSAV nn ssssssss	Output Configuration Save: n[CNF Index] s[Name]
OGAMC n.nn	Output Gamma Correction: n[0.50-3.00]
OHAC nnnn	Output Horizontal Active: n[Pixels]
OHFP nn	Output Horizontal Front Porch: n[Pixels]
OHFQ nnnnn	Output Horizontal Frequency: n[Hz]
OHSY nn	Output Horizontal Sync: n[Pixels]
OHTT nnnn	Output Horizontal Total: n[Pixels]
OINT n	Output Interlaced: n[0|1], NON_INT|INTERLACED
OMOD m opn	Output Mode Configuration: m[0|1], B|B/A (Preview)
OPED n	Output Pedestal: n[0|1], OFF|ON
ORSP op nnn	Output Raster Size/Position: op[HV] n[-999 – 999]
OSEQ n	Output Serr & Eq: n[0-3], None,Eq,Serr,Both
OSYNC n	Output Sync.: n[1-7], GR|-C|+H+V|+H-V|-H+V|-H-V|3LEV
OTPM m typ inv bx gr	Output Test Pattern: M[0-2] OFF|ON|AUTO typ[0-9] inv[0|1] bx[0|1] gr[0|1]
OVAC nnnn	Output Vertical Active: n[Lines]
OVFP nn	Output Vertical Front Porch: n[Lines]
OVLV nnn	Output Video Level [445-3000]
OVSY nn	Output Vertical Sync: n[lines]
OVTT nnnn	Output Vertical Total: n[Lines]
OWHS op hhhh sclr	OW Horizontal Start: op[A|R] h[0-HActive]pixels
OWHV op hhhh vvvv sclr	OW Horizontal & Vertical Centers

OWVS op vvv sclr	OW Vertical Start: v[0-Vactive]lines
OWWD op wwww sclr	OW Width: w[820-1230]pixels
OWWN op wwww hhhh vvvv sclr	OW Width Horizontal & Vertical Center
RESET	Reset - Factory Defaults
SRC? op sclr	Check Video Source: op[I|O] Input|Output
TRN dst dn n.n wn	Transition: dst[A|B] dn[1-12] n.n[0-5.0] wn[0|1]
UL op nn s[8]	Upload CFG: op[I|O] nn[1-96] s[Name]
VER?	Version Information
VRBOS n	Verbose Mode: n[0|1], OFF|ON
WAI sclr	Who Am I: sclr[A|B]

VFC-2200 Command List/Description

Command:

AOIHC op hhhh sclr

Description:

Adjusts the horizontal center of the display (area of interest)

Parameters:

op - Select Position mode; [A|R] Absolute, Relative.
hhhh - Horizontal Center; h[xxx.x]% Current limits +/- 90.0%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

AOIHC A –90.0 A : adjusts the horizontal center of the display to -90% (to the left) on Scaler A

AOIHC A +45.0 A : adjusts the horizontal center of the display to +45% (to the right) on Scaler A

AOIHC R –90.0 A : adjusts the horizontal center of the display to -90% (to the left) relative to it's current position on Scaler A.

AOIHC R +90.0 B : adjusts the horizontal center of the display to +90% (to the right) relative to it's current position on Scaler B

Command:

AOIHV op hhhh vvvv sclr

Description:

Adjusts the display's horizontal and vertical center

Parameters:

op - Select Position mode; [A|R] Absolute, Relative.
hhhh - Horizontal Center; h[xxx.x]% Current limits +/- 90.0%
vvvv - Vertical Center; v[xxx.x]% Current limits +/- 90.0%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

AOIHV A –90.0 –50.0 A : adjusts the horizontal center of the display to -90% (to the left) and adjusts the horizontal center of the display to -50% (to the top) on Scaler A

Command:

AOIVC op vvvv sclr

Description:

Adjusts the display's vertical center

Parameters:

op - Select Position mode; [A|R] Absolute, Relative.
vvvv - Vertical Center; v[xxx.x]% Current limits +/- 90.0%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

AOIVC A –90.0 A : adjusts the vertical center of the display to -90% (to the top) on Scaler A.

AOIVC A +90.0 A : adjusts the vertical center of the display to +90% (to the bottom) on Scaler A.

AOIVC R –90.0 A : adjusts the vertical center of the display to -90% (to the left) relative to it's current position on Scaler A.

Command:

AOIWD op wwww sclr

Description:

Adjusts the display's width (zoom in/zoom out)

Parameters:

op - Select Position mode; [A|R] Absolute, Relative.
wwww - Window Width; w[xxx.x]%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

AOIWD A 110.0 B : adjusts the width of the display to 110.0% on Scaler B.

Command:

AOIWN op wwww hhhh vvvv sclr

Description:

Adjusts the display's width, horizontal center, and vertical center

Parameters:

op - Select Position mode; [A|R] Absolute, Relative.
wwww - Window Width; w[xxx.x]%
hhhh - Horizontal Center; h[xxx.x]% Current limits +/- 90.0%
vvvv - Vertical Center; v[xxx.x]% Current limits +/- 90.0%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

AOIWN A 120 50 20 A : adjusts the width of the display to 120%, the horizontal to 50 and the vertical to 20 on Scaler A.

Command:

AUTOS op sclr

Description:

Turns the Auto Sync on or off

Parameters:

op - Select Auto SYNC mode; [D|E|M] Disable,Enable,Manual
sclr - Select Scaler; [A|B|U] Scaler A or B or Union (A&B) (ignored if the 2nd scaler is not installed)

Examples:

AUTOS D A : disables the Auto Sync on Scaler A
AUTOS E B : enables the Auto Sync on Scaler B

Command:

CHR c

Description:

Echoes back the character inputted in upper case format

Parameters:

c - ASCII Char to be echoed back in upper case format.

Example:

CHR k : returns the upper case character K

Command:

CMDST?

Description:

Checks the status of the last command executed. Returns 0=completed, no errors. Returns 1 (or more)=indicates last error condition.

Parameters:

None

Command:

DEBUG?

Description:

Checks if Debug mode is enabled or disabled Returns 0=disabled or 1=enabled.

Parameters:

None

Command:

DFRMT?

Description:

Checks for the Data format

Parameters:

None

Command:

DL op nn sclr

Description:

Download User CFG Command – I/O Library to RS232 (Referenced from PC side)

Parameters:

op - Select Input or Output Library; op[I|O]
nn - Index position in library, 0 to USERLIB_SIZE
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

(Assuming that there is a saved Input Configuration in Index #1 from Scaler A. Make sure the Data Terminal is using RAW ASCII format)
Type in the following command and do not press the "Enter" key:
DL I 1 A
Go to the RETRIEVE FILE.option
Provide the file with an appropriate filename and click OK. The configuration has now been downloaded.
Note : Refer to the command UL if you want to upload a configuration.

Command:

DSLV src dst n.n wm

Description:

Dissolves the Source Input display with the Final Input display

Parameters:

src - Source Input; src[A|B]
dst - Final Input; dst[A|B]

n - Fade Rate in seconds; n[0 - 10.0]
wm - Window Mode; wm[F|W] FULL SCREEN|WINDOW

Example:

(Assuming that Ch A is currently being displayed and we want to show Ch B)
DSLV A B 2.1 F : dissolves Ch A with Ch B using the fade rate of 2.1 seconds and displaying Ch B full screen

Command:

ECHO n

Description:

Enables or disables echo mode (when typing in these RS-232 commands)

Parameters:

n - Echo Enable/Disable; n[0|1], OFF|ON

Examples:

ECHO 1 : enables echo mode
ECHO 0 : disables echo mode

Command:

FPLCK?

Description:

Checks if the Front Panel is locked/unlocked (0=unlocked, 1=locked)

Parameters:

None

Command:

FREEZ n sclr

Description:

Enable/Disable Freeze

Parameters:

n - Freeze Enable/Disable; n[0|1], OFF|ON
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

FREEZ 1 A : enables freeze on the display on Scaler A.
FREEZ 0 A : disables freeze on the display on Scaler A.

Command:

GLENA n

Description:

Enable/Disable Genlock

Parameters:

n - Genlock Enable/Disable; n[0|1], OFF|ON

Example:

GLENA 1 : enables Genlock

Command:

GLHPH nnn

Description:

Adjusts the value of Genlock H Phase

Parameters:

nnn - Genlock H Phase

Example:

GLHPH 20 : adjusts the value of Genlock H Phase to 20

Command:

HELP i

Description:

Displays the RS-232 commands along with their format and description on the terminal port.

Parameters:

i - Index value [a-z,A-Z] Jumps to given index

Examples:

HELP : displays all of the RS-232 commands
HELP I: displays all RS-232 commands from I to Z

Command:

IAR n.nnn sclr

Description:

Adjusts the Input Aspect Ratio value

Parameters:

n.nnn- Aspect Ratio; n[0-2.000]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IAR 1.245 A : adjusts the Aspect Ratio on Scaler A to be 1.245

Command:

IARB n sclr

Description:

Enables or disables the Input Aspect Ratio Box

Parameters:

n - Aspect Ratio Box; n[0|1]; OFF|ON
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IARB 1 A : enables the Input Aspect Ratio Box on Scaler A

Command:

IBRT op nnn sclr

Description:

Adjusts the Input Brightness value

Parameters:

op - Select Brightness Control; [C|R|G|B] Common, Red,Green,Blue Offset
nnn - Brightness value; C Range 75 - 125%, RGB Range -25 - 25%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IBRT C 110 A : adjusts the Input Brightness on Scaler A to be 110%

Command:

ICDEL nn

Description:

Deletes a specified Input Configuration.

Parameters:

nn - Input Configuration Index; n[CNF Index]

Command:

ICGTE n sclr

Description:

Adjusts the Input Clamp Gate mode

Parameters:

n - Clamp Gate Selection; SYNC|PRCH|PDLY; 0|1|2
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

ICGTE 0 A : adjusts the Input Clamp Gate on Scaler A to be SYNC
ICGTE 1 A : adjusts the Input Clamp Gate on Scaler A to be PRCH
ICGTE 2 A : adjusts the Input Clamp Gate on Scaler A to be PDLY

Command:

ICNT op nnn sclr

Description:

Adjusts the Input Contrast values

Parameters:

op - Select Contrast Control; [C|R|G|B]; Common|Red|Green|Blue
nnn - Contrast value, C Range 75 - 125%, RGB Range -25 - 25%
sclr - Select Scaler A/B (ignored if the 2nd scaler is not installed)

Example:

ICNT C 100 A : adjusts the Common Input Contrast value as 100%

Command:

ICREC nn sclr

Description:

Recalls a stored Input Configuration.

Parameters:

nn - Input Configuration Index; n[CNF Index] (Total index avail : 96)
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

(Assuming there is a saved Input Configuration in Index #1)
ICREC 1 A : loads the Input Configuration stored on Index #1 for Scaler A

Command:

ICSAV nn s[8] sclr

Description:

Saves an Input Configuration to a specified index

Parameters:

nn - Input Configuration Index; n[CNF Index] (Total index avail : 96)
s[8] - Input Configuration Name; s[Name]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

ICSAV 1 TEST A : saves the input configuration currently on Scaler A to Index #1

with the label name TEST

Command:

ICSP n sclr

Description:

Selects an Input Colorspace

Parameters:

n - Input Colorspace; n[0-5], RGB|B50|B60|MII|EBU|S240
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

ICSP 0 A : selects the RGB Colorspace for Scaler A
ICSP 1 A : selects the B50 Colorspace for Scaler A

Command:

IFHV op n.n sclr

Description:

Adjusts the Input's Horizontal/Vertical Filter values

Parameters:

op - [H|V]; Horizontal or Vertical filter.
n.n - Filter value; n[0.0 - 8.0]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IFHV H 1.3 A : adjust the Horizontal filter value to be 1.3 on Scaler A

Command:

IFMD n sclr

Description:

Enables or disables the Special Input Filter

Parameters:

n - Special Filter Enable; n[0|1], OFF|ON
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Examples:

IFMD 1 A : enables the filter for Scaler A
IFMD 0 A : disables the filter for Scaler A

Command:

IHAC nnnn sclr

Description:

Adjusts the Input Horizontal Active value

Parameters:

nnnn- Input Horizontal Active: n[Pixels]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IHAC 1024 A : adjusts the Input Horizontal Active value to 1024 on Scaler A

Command:

IHFP nn sclr

Description:

Adjusts the Input Front Porch value

Parameters:

nn - Input Horizontal Front Porch: n[Pixels]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IHFP 10 A : adjusts the Input Front Porch value to 10 on Scaler A

Command:

IHTT nnnn sclr

Description:

Adjusts the Input Horizontal Total value

Parameters:

nnnn - Input Horizontal Total: n[Pixels]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IHTT 1000 A : adjusts the Input Horizontal Total value to 1000 on Scaler A

Command:

IINFO sclr?

Description:

A query done on the Input Timing values

Parameters:

sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

* IINFO A?
78.2.72.1005.0

Command:

IOS n.nn sclr

Description:

Adjusts the Input Oversample value

Parameters:

n.nn - Oversample: n[0.5-2.00]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IOS 1.00 A : adjusts the Input Oversample value as 1.00 on Scaler A

Command:

IPED nnn sclr

Description:

Adjusts the Input Pedestal Level

Parameters:

nnn - Setup Level; n[0-500]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IPED 300 A : adjusts the Input Pedestal value as 300 on Scaler A

Command:

IRSP op nnn sclr

Description:

Adjusts the Input Raster Size/Position

Parameters:

op - Select Raster Control; [L|R|T|B] Left,Right,Top,Bottom
nnn - Increment/Decrement value; -999 - 999
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IRSP R 100 A : increments the Right Input Raster Size/Position by 100 on Scaler A

Command:

ISAT nnn sclr

Description:

Adjusts the Input Color Balance Saturation (only applicable if input is NOT RGB)

Parameters:

nnn - Input Saturation: n[50-200]%
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

ISAT 110.0 A : adjusts the Input Color Balance to 110.0%

Command:

IVAC nnnn sclr

Description:

Adjusts the Input Vertical Active value

Parameters:

nnnn - Input Vertical Active: n[Lines]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IVAC 1024 A : adjusts the Input Vertical Active value to 1024

Command:

IVFP nn sclr

Description:

Adjusts the Input Vertical Front Porch value

Parameters:

nn - Input Vertical Front Porch: n[Lines]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IVFP 10 A : adjusts the Input Vertical Front Porch value as 10

Command:

IVLV nnn sclr

Description:

Adjusts the Input Video Level

Parameters:

nnn - Input Video Level; n[0-1000]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Example:

IVLV 200 A : adjusts the Input Video Level as 200 on Scaler A

Command:

LCK? op sclr

Description:

Video Lock Command

Parameters:

op - Select Video IO; [I|O] Input,Output
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

OAR n.nnn

Description:

Adjusts the Output Aspect Ratio value

Parameters:

n.nnn - Aspect Ratio; n[0-2.000]

Example:

OAR 1.500 : adjusts the Output Aspect Ration value as 1.500

Command:

OBRT op nnn

Description:

Adjusts the Output Brightness value

Parameters:

op - Select Brightness Control; [C|R|G|B] Common,Red,Green,Blue Offset
nnn - Brightness value; C Range 75 - 125%, RGB Range -25 - 25%

Example:

OBRT C 99 : adjusts the Common Output Brightness value as 99%

Command:

OCDEL nn

Description:

Deletes a stored Output Configuration

Parameters:

nn - Output Configuration Index; n[CNF Index] (Total index avail : 96)

Example:

(Assuming there is a saved Output Configuration in Index location#1)
OCDEL 1 : deletes the saved Output Configuration in location #1

Command:

OCNT op nnn

Description:

Adjusts the Output Contrast value

Parameters:

op - Select Contrast Control; [C|R|G|B]; Common|Red|Green|Blue
nnn - Contrast value, C Range 75 - 125%, RGB Range -25 - 25%

Example:

OCNT C 100 : adjusts the Common Output Contrast value to 100%

Command:

OCREC nn

Description:

Recalls a stored Output Configuration

Parameters:

nn - Output Configuration Index; n[CNF Index] (Total index avail : 96)

Example:

(Assuming there is a saved Output Configuration in Index #1)
OCREC 1 : recalls the Output Configuration stored in Index #1

Command:

OCRECF nn

Description:

Recalls a Factory Installed Output Configuration

Parameters:

nn - Output Configuration Index; n[CNF Index]

Command:

OCSAV nn ssssssss

Description:

Saves an Output Configuration

Parameters:

nn - Output Configuration Index; n[CNF Index] (Total index avail : 96)
ssssssss - Output Configuration Name; s[Name]

Example:

OCSAV 1 TEST : saves the output setting currently used into Index #1 with a label name of TEST

Command:

OGAMC n.nn

Description:

Adjusts the Output Gamma value

Parameters:

n.nn - Output Gamma Correction; n[0.50-3.00]

Example:

OGAMC 2.50 : adjusts the Output Gamma value to 2.50

Command:

OHAC nnnn

Description:

Adjusts the Output Horizontal Active value

Parameters:

nnnn - Output Horizontal Active: n[Pixels]

Example:

OHAC 1024 : adjusts the Output Horizontal Active value to be 1024

Command:

OHFP nn

Description:

Adjusts the Output Horizontal Front Porch value

Parameters:

nn - Output Horizontal Front Porch: n[Pixels]

Example:

OHFP 60 : adjusts the Output Horizontal Front Porch value as 60

Command:

OHFQ nnnnn

Description:

Adjusts the Output Frequency value

Parameters:

nnnn - Output Horizontal Frequency: n[Hz]

Example:

OHFQ 48780 : adjusts the Output Horizontal Frequency to be 48,780 Hz

Command:

OHSY nn

Description:

Adjusts the Output Horizontal Sync value

Parameters:

nn - Output Horizontal SYNC: n[Pixels]

Example:

OHSY 96 : adjusts the Output Horizontal Sync value to be 96

Command:

OHTT nnnn

Description:

Adjusts the Output Horizontal Total value

Parameters:

nnnn - Output Horizontal Total: n[Pixels]

Example:

OHTT 1300 : adjusts the Output Horizontal Total value as 1300

Command:

OINT n

Description:

Enables or disables the Output Interlaced mode

Parameters:

n - Interlace Mode: n[0|1], NON-INTERLACED|INTERLACED

Example:

OINT 1 : enables the Output Interlaced mode

Command:

OMOD m opn

Description:

Adjusts the Output Mode

Parameters:

m - Mode: n[0|1], B|B/A (Preview)
opn - Output Port Number: Default 3 not used at this time

Command:

OPED n

Description:

Enables or disables the Output Pedestal

Parameters:

n - Output Pedestal; n[0|1], OFF|ON

Example:

OPED 1 : enables the Output Pedestal

Command:

ORSP op nnn

Description:

Adjusts the Output Raster Size/Position

Parameters:

op - Select Raster Control; [H|V] Horizontal, Vertical.
nnn - Increment/Decrement value; -999 - 999

Example:

ORSP H 100 : increment the Horizontal Raster Size/Position by 100

Command:

OSEQ n

Description:

Adjusts the Output Serr and Eq

Parameters:

n - Output Serr and Eq: n[0-3]; None, Eq, Serr, Both

Example:

OSEQ 3 : adjusts the Output Serr and Eq to have both (Serr and Eq.)

Command:

OSYNC n

Description:

Adjusts the Output Sync

Parameters:

n - Output Sync: n[1-7], GR|-C|+H+V|+H-V|-H+V|-H-V|3LEV

Example:

OSYNC 3 : adjusts the Output Sync value to be +H+V

Command:

OTPM m typ inv bx gr

Description:

Enables/disables the Output Test Pattern and select Test Pattern options

Parameters:

m - Output TP Enable: m[0-2] OFF|ON|AUTO
typ - Test Pattern Type: typ[0-9]

inv - Test Pattern Inversion: inv[0|1] OFF|ON
bx - Test Pattern Raster Box: bx[0|1] OFF|ON
gr - Test Pattern Grid: gr[0|1] OFF|ON

Example:

OTPM 1 2 0 0 1: enables the Test Pattern to be shown on the screen. Test Pattern type 2 has been selected with no inversion, no raster box, and with a grid.

Command:

OVAC nnnn

Description:

Adjusts the Output Vertical Active value

Parameters:

nnnn - Output Vertical Active: n[Lines]

Example:

OVAC 768 : adjusts the Output Vertical Active value as 768

Command:

OVFP nn

Description:

Adjusts the Output Vertical Front Porch value

Parameters:

nn - Output Vertical Front Porch: n[Lines]

Example:

OVFP 3 : adjusts the Output Vertical Front Porch value as 3

Command:

OVLV nnn

Description:

Adjusts the Output Video Level

Parameters:

nnn - Output Video Level: n[445-3000]

Example:

OVLV 700 : adjusts the Output Video Level as 700

Command:

OVSY nn

Description:

Adjusts the Output Vertical Sync value

Parameters:

nn - Output Vertical Sync: n[Lines]

Example:

OVSY 3 : adjusts the Output Vertical Sync value as 3

Command:

OVTT nnnn

Description:

Adjusts the Output Vertical Total value

Parameters:

nnnn - Output Vertical Total: n[Lines]

Example:

OVTT 813 : adjusts the Output Vertical Total as 813

Command:

OWHS op hhhh sclr

Description:

Adjusts the OW Horizontal Start values

Parameters:

op - Select Position mode; [A|R] Absolute, Relative
hhhh - OW Horizontal Start; h[0-HActive]pixels
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

OWHV op hhhh vvvv sclr

Description:

Adjusts the OW Horizontal & Vertical Centers

Parameters:

op - Select Position mode; [A|R] Absolute, Relative
hhhh - OW Horizontal Start; h[0-HActive]pixels
vvvv - OW Vertical Start; v[0-VActive]lines
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

OWVS op vvv sclr

Description:

Adjusts the OW Output Vertical Start

Parameters:

op - Select Position mode; [A|R] Absolute, Relative
vvvv - OW Vertical Start; h[0-VActive]pixels
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

OWWD op wwww sclr

Description:

Adjusts the OW Width

Parameters:

op - Select Position mode; [A|R] Absolute, Relative
wwww - Window Width; w[820-1230 pixels]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

OWWN wwww hhhh vvvv sclr

Description:

Adjusts the OW Width Horizontal & Vertical Centers

Parameters:

op - Select Position mode; [A|R] Absolute, Relative
wwww - Window Width; w[820-1230 pixels]

hhhh - Horizontal Start; h[0-HActive pixels]
vvvv - Vertical Start; v[0-VActive lines]
sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)

Command:

RESET

Description:

Resets the system to factory defaults

Parameters:

None

Command:

SRC ? op sclr

Description:

Checks for the Video Source

Parameters:

op - Select Video IO; [I|O] Input,Output
sclr - Select Scaler; [A|B] Scaler A or B (ignored if 2nd scaler is not installed)

Example:

SRC ? O: checks for the Video Source for the Output

Command:

TRN dst dn n.n wn

Description:

Transitions from the current display to the Final Input display (with extra available features
on the transistion method)

Parameters:

dst - Final Input; dst[A|B]
dn - Transistion Numbers :
1 = Dissolve
2 = Wipe Right
3 = Wipe Left
4 = Wipe Down
5 = Wipe Up
6 = Curtain Open
7 = Curtain Close
8 = Box In
9 = Box Out
10= Grid In
11= Grid Out
12= Random Cube
n.n - Fade Rate in seconds; n[0 - 5.0]
wm - Window Mode; wm[F|W] FULL SCREEN|WINDOW

Example:

TRN A 2 4.9 F : dissolve with Ch A using transistion # 2 (wipe right effect) with a fade rate of 4.9 seconds. Display the result in FULL SCREEN mode

Command:

UL op nn s[8]

Description:

Upload CFG

Parameters:

op - Select Input or Output Library; op[I|O]
nn - Index position in library, 0 to USERLIB_SIZE, if 0 original index in file is used
s[8] - Cfg name upto 8 characters. (Optional Parameter)

Example:

(Assuming that there is a saved Input Configuration file that you want to upload the configuration onto the VFC 2200 in Index #10. Make sure the Data Terminal is using RAW ASCII format)
Type in the following command and do not press the “Enter” key:
UL I 10 A
Go to the SEND FILE.option
Select the file containing the configuration and click OK. The configuration has now been uploaded to Index #10 in the VFC 2200.
Note : Refer to the command DL if you want to download a configuration from the VFC.

Command:

VER?

Description:

This is a version query. The return format is **sss.rr.o-m** where:
sss is the software version
rr is the version of the rbf set
o is the type of options installed
m is the 2100/2200 model. (1 is 2200)

Parameters:

None

Command:

VRBOS n

Description:

Provides descriptive error and syntax messages for command line operation.

Parameters:

n - Verbose Mode Enable/Disable; n[0|1], OFF|ON

Example:

Verbose 1 : enables Verbose Mode

Command:

WAI sclr

Description:

Returns Current format number and name "Ex. 1-SMTE240"

Parameters:

sclr - Select Scaler; [A|B] Scaler A or B (ignored if the 2nd scaler is not installed)