

**SignalVu™**  
**Vector Signal Analysis Software**  
**Programmer Manual**

[www.tektronix.com](http://www.tektronix.com)



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**Tektronix**

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# Overview

This document provides supplementary information about the remote commands for the SignalVu Vector Signal Analysis Software. The SignalVu software enables you to use the DPO7000, DPO70000/B, DSA70000/B, and MSO70000 Series Digital Oscilloscopes to analyze RF signal behavior with the same software used on the RSA6100A Series Real-Time Spectrum Analyzers. The remote command details are described in the following manuals that can be downloaded from [www.tektronix.com/manuals](http://www.tektronix.com/manuals).

- RSA6100A Series Real-Time Spectrum Analyzers Programmer Manual (Tektronix part number 077-0249-XX)
- DPO7000, DPO70000/B, DSA70000/B, and MSO70000 Series Digital Oscilloscopes Programmer Manual (Tektronix part number 077-0010-XX)

The SignalVu software supports the use of the RSA6100A Series commands with some limitations. For example, commands that control output functions are not supported. The details are given in the following sections, *Measurement Display Support* and *Remote Command Support*. Some commands are added for the SignalVu software, which are described in *Additional Commands*. The error messages and codes are listed in the last section, *Error Messages and Codes*.

## Setting Up Remote Communications

Connect your oscilloscope to a controller and set a unique device address. The default settings for the GPIB configuration are:

- GPIB Address 1
- GPIB Mode GPIB Talk/Listen

To change either of the GPIB settings, do the following:

1. Select **GPIB Configuration** from the Utilities menu.
2. Click the **Configuration Talk/Listen** button.
3. Change the **GPIB Address** to a unique address.
4. Click the **Close** button.

The instrument is now set up for bidirectional communication with your controller.

For details, refer to the *DPO7000, DPO70000/B, DSA70000/B, and MSO70000 Series Digital Oscilloscopes Programmer Manual*.

## Measurement Display Support

The RSA6100A Series spectrum analyzers have various measurement displays, which are categorized into four groups. The following table lists all measurement displays available on the RSA6100A Series spectrum analyzers. The columns at right show whether or not a display is supported by the SignalVu software.

### Measurement display support

| Display group                                       | Measurement display             | Supported | Not supported |
|---|---------------------------------|-----------|---------------|
| General signal viewing                              | Amplitude versus Time           | X         |               |
|   | Demodulate I&Q versus Time      | X         |               |
|   | DPX spectrum                    |           | X             |
|   | EVM versus Time                 | X         |               |
|   | Eye Diagram                     | X         |               |
|   | Frequency versus Time           | X         |               |
|   | Phase versus Time               | X         |               |
|   | RF I&Q versus Time              | X         |               |
|   | Spectrogram                     | X         |               |
|   | Spectrum                        | X         |               |
|   | Time overview                   | X         |               |
| Analog Modulation                                   | Amplitude modulation            | X         |               |
|   | Frequency modulation            | X         |               |
|   | Phase modulation                | X         |               |
| Phase Noise and Jitter Measurement (Option 11 only) | Phase Noise Display             |           | X             |
| General purpose digital modulation (Option 21 only) | Constellation                   | X         |               |
|   | Demod I&Q versus Time           | X         |               |
|   | Frequency Deviation versus Time | X         |               |
|   | Magnitude error versus Time     | X         |               |
|   | Phase error versus Time         | X         |               |
|   | Signal quality                  | X         |               |
|   | Symbol table                    | X         |               |
|   | Symbol maps                     | X         |               |
| User defined filters                                | X                               |           |               |

## Measurement display support, (cont.)

| Display group                     | Measurement display    | Supported | Not supported |
|-----------------------------------|------------------------|-----------|---------------|
| RF measurements                   | CCDF                   | X         |               |
|                                   | Channel power and ACPR | X         |               |
|                                   | MCPR                   | X         |               |
|                                   | Occupied Bandwidth     | X         |               |
|                                   | Spurious               | X         |               |
| Pulsed RF<br>(Option 20 only)     | Pulse statistics       | X         |               |
|                                   | Pulse table            | X         |               |
|                                   | Pulse trace            | X         |               |
| DPX® Display<br>(Option 200 only) | DPX® Density Trigger   |           | X             |
|                                   | DPX® spectrum display  |           | X             |

**NOTE.** Option 20 and 21 are called Option SVP and SVM, respectively for the SignalVu software.

# Remote Command Support

The SignalVu software supports the use of the RSA6100A Series spectrum analyzer remote commands with some limitations. The following table summarizes the RSA6100A Series commands supported and not supported by the SignalVu software for each command group. For details on the RSA6100A Series remote commands, refer to the *RSA6100A Series Real-Time Spectrum Analyzers Programmer Manual*.

## Command support summary

| Command group | Function   | Commands supported   | Commands not supported   |
|---------------|--|--|--|
| IEEE common   | Conforms to the IEEE Std 488.2.  | Use the oscilloscope IEEE common commands. <sup>1</sup>  |  |
| ABORt         | Resets the trigger system and stops measurements.  | ABORt<br>(Aborts acquisitions and measurements.)   | -  |
| CALCulate     | Controls the markers and the search operations.  | All  | CALCulate:DPSA:  |
| CALibration   | Calibrates the instrument.   | Use the oscilloscope CALibrate commands. <sup>1</sup>  |  |
| DISPlay       | Controls the presentation of text, graph, and trace.   | All  | DISPlay:DPSA:<br>DISPlay:CCDF:   |
| FETCh         | Retrieves the measurements from the last acquired data.  | All except in the right box.   | FETCh:RFIN:IQ:SCALE?<br>FETCh:DPSA:  |
| INITiate      | Controls the initiation of data acquisition.   | All  | -  |
| INPut         | Controls the characteristics of the signal input.  | All except in the right box.   | INPut[:RF]:ATTenuation<br>INPut[:RF]:ATTenuation:AUTO<br>INPut[:RF]:ATTenuation:MONitor:STATe<br>INPut[:RF]:GAIN:STATe                 |
| MMEMory       | Provides mass storage capabilities for the instrument. Setup and TIQ files (:MMEMory:xxx:IQ and :MMEMory:xx:STATe) contain complete oscilloscope setup information. When one of these files is loaded, the oscilloscope is setup according to the saved oscilloscope settings in the file. | All except in the right box. (See <i>Note</i> following this table.)<br>You can also use the FILESystem commands of the oscilloscope. <sup>1</sup> | MMEMory:CALibration:LOAD:CORRection<br>:EXTeRnal:EDIT<x><br>MMEMory:CALibration:STORe:CORRection<br>:EXTeRnal:EDIT<x><br>MMEMory:DPSA: |
| OUTPut        | Controls the characteristics of the signal output.   | -  | All  |
| READ          | Obtains the measurement results by acquiring fresh data.   | All except in the right box.   | READ:DPSA  |



## Command support summary, (cont.)

| Command group | Function  | Commands supported   | Commands not supported  |
|---------------|---|--|---|
| SENSe         | Sets up detailed conditions for each measurement. | All except in the right box. (See <i>Note</i> following this table.)<br>You can also use the additional commands. (See page 6, <i>Additional Commands</i> .) | [SENSe]:ACQuisition:FFRame:ACTual?<br>[SENSe]:ACQuisition:FFRame:Limit<br>[SENSe]:ACQuisition:FFRame:STATe<br>[SENSe]:ANALYsis:ADVanced:DITHer<br>[SENSe]:ROSCillator:SOURce<br>[SENSe]:DPSA: |
| STATus        | Controls the status and event registers.          | -  | All   |
| SYSTem        | Sets or queries system parameters for operation.  | All except in the right box.   | SYSTem:COMMunicate:GPIB[:SELF]:ADDRESS<br>SYSTem:DATE<br>SYSTem:TIME<br>SYSTem:VERSion<br>SYSTem:HW:VERSion   |
| TRACe         | Controls trace activation and math operations.    | All except in the right box.   | TRACe:DPSA  |
| TRIGger       | Controls triggering.                              | Use the oscilloscope TRIGger commands. <sup>1</sup>  |   |
| UNIT          | Specifies fundamental units for measurement.      | -  | UNIT:POWer<br>(Use the [SENSe]:POWer:UNITs command.)  |

<sup>1</sup> Refer to the DPO7000, DPO70000/B, and DSA70000/B Series Digital Oscilloscopes Programmer Manual.

- Note**
- The :MMEMory:LOAD:IQ command accepts the file extensions other than .tiq as well. In the RSA6100A Series spectrum analyzers, this command ignores the file extension passed in (if any), and assumes that it is .tiq. In the SignalVu software, the file extension can be either .tiq or .wfm, and so is not ignored. If no file extension is included, it is assumed to be .tiq.
  - To avoid conflicts with the oscilloscope commands, use the following syntax.
    - Use the command header [SENSe]:SIGNAlvu:ACQuisition for the [SENSe]:ACQuisition commands. For example, replace the [SENSe]:ACQuisition:BANDwidth command with [SENSe]:SIGNAlvu:ACQuisition:BANDwidth.
    - Replace the [SENSe]:MEASurement:FREQuency command with [SENSe]:FREQuency.

## Additional Commands

This section describes the commands added for the SignalVu software.

### Additional commands

| Command   | Description   |
|---|---|
| CALCulate:SYNC:MARKer<X>:CURSor<Y>                      | Synchronizes oscilloscope cursors with SignalVu markers.                                  |
| INPut:TYPE  | Selects or queries the input type.  |
| [SENSe]:SIGNalvu:ACQuisition:CHANnel                    | Selects or queries the oscilloscope data to be used for processing.                       |
| [SENSe]:SIGNalvu:ACQuisition:CONTRol:HORIZontal         | Determines whether to enable controlling the oscilloscope horizontal settings.            |
| [SENSe]:SIGNalvu:ACQuisition:CONTRol:SAMPlerate         | Determines whether to enable controlling the oscilloscope sample rate.                    |
| [SENSe]:SIGNalvu:ACQuisition:CONTRol:VERTical           | Determines whether to enable controlling the oscilloscope vertical settings.              |
| [SENSe]:SIGNalvu:ACQuisition:DIGitizer:SAMPle:RATE      | Sets or queries the oscilloscope digitizer sample rate.                                   |
| [SENSe]:SIGNalvu:ACQuisition:DIGitizer:SAMPle:RATE:AUTO | Sets or queries the Digitizer Sample Rate auto state.                                     |
| [SENSe]:SIGNalvu:ACQuisition:FFRame:LIMit               | Sets or queries the limit on the number of frames acquired in FastFrame acquisition mode. |
| [SENSe]:SIGNalvu:ACQuisition:FFRame:STATE               | Specifies whether to enable or disable FastFrame acquisition.                             |
| [SENSe]:SIGNalvu:ACQuisition:FFRame:ACTual?             | Query the number of frames acquired in the latest FastFrame acquisition.                  |
| [SENSe]:SIGNalvu:ACQuisition:IQ:CALibrate               | Initiates an IQ calibration, if INPut:TYPE is set to IQ or Diff IQ.                       |
| [SENSe]:SIGNalvu:ACQuisition:RESet                      | Resets the oscilloscope.  |
| [SENSe]:SIGNalvu:ACQuisition:TRANsfer                   | Initiates the Transfer Again function.  |
| [SENSe]:SIGNalvu:ACQuisition:TRANsfer:ENABLEd?          | Queries whether the Transfer Again function is enabled.                                   |

The oscilloscope settings are controlled automatically, based on its own settings. However, there may be some cases where you manually control these settings. Use [SENSe]:SIGNalvu:ACQuisition:CONTRol commands to determine whether to control a group of oscilloscope settings automatically or manually.

### CALCulate:SYNC:MARKer<X>:CURSor<Y>

Command Only. Synchronizes oscilloscope cursors with SignalVu markers. The command fails if the marker specified is not turned on.

**Conditions** Measurement views: All

**Group** Calculate commands

|                  |   |
|------------------|---|
| <b>Syntax</b>    | <code>CALCulate:SYNC:MARKer&lt;X&gt;:CURSor&lt;Y&gt;</code>   |
| <b>Arguments</b> | <p><code>&lt;X&gt;::=&lt;NR1&gt;</code> specifies the marker to which the oscilloscope's cursor will be synchronized. Range: 0 to 4.</p> <p><code>&lt;Y&gt;::=&lt;NR1&gt;</code> specifies the cursor that will be synchronized to the SignalVu maker specified. Range: 0 or 1.</p> |
| <b>Examples</b>  | <code>CALCulate:SYNC:MARKer1:CURSor2</code> synchronizes Cursor 2 with Marker 1.  |

## **:INPut:TYPE**

Selects or queries the signal input type.

|                   |   |
|-------------------|---|
| <b>Conditions</b> | Measurement views: All  |
| <b>Group</b>      | Sense commands  |
| <b>Syntax</b>     | <code>:INPut:TYPE &lt;string&gt;</code><br><code>:INPut:TYPE?</code>  |
| <b>Arguments</b>  | <p><code>&lt;string&gt;::={ RF   IQ   DIFFiq }</code></p> <p>The <code>&lt;string&gt;</code> argument specifies the source:</p> <ul style="list-style-type: none"> <li>■ RF enables one source.</li> <li>■ IQ enables two sources.</li> <li>■ DIFFiq enables four sources.</li> </ul> |
| <b>Examples</b>   | <code>:INPut:TYPE DIFFIQ</code> enables four input sources.   |

## **[SENSe]:SIGNAlvu:ACQuisition:CHANnel**

Selects or queries the oscilloscope channel or waveform to be used for processing and the signal input type. When the channel is changed, the new selected channel will be turned on (display on), and the previously selected channel will be turned off (display off). The selected channel is always set display on.

|                   |                        |
|-------------------|------------------------|
| <b>Conditions</b> | Measurement views: All |
|-------------------|------------------------|

|                  |  |
|------------------|--|
| <b>Group</b>     | Sense commands   |
| <b>Syntax</b>    | <pre>[SENSE]:SIGNALVU:ACQUISITION:CHANNEL:&lt;signal&gt; &lt;string&gt; [SENSE]:SIGNALVU:ACQUISITION:CHANNEL:&lt;signal&gt;?</pre>   |
| <b>Arguments</b> | <p><code>&lt;signal&gt; ::= { RF   I   Q   IPLus   IMINus   QPLus   QMINus }</code></p> <p>The <code>&lt;signal&gt;</code> argument specifies the signal input type:</p> <ul style="list-style-type: none"> <li>■ RF specifies an RF input.</li> <li>■ I specifies an I signal input</li> <li>■ Q specifies a Q signal input</li> <li>■ IPLus specifies an I+ signal input</li> <li>■ IMINus specifies an I– signal input</li> <li>■ QPLus specifies an Q+ signal input</li> <li>■ QMINus specifies an Q– signal input</li> </ul> <hr/> <p><b>NOTE.</b> The <code>&lt;signal&gt;</code> argument can be omitted if you wish to set the source for the RF input. The <code>&lt;signal&gt;</code> argument is required for all input types except RF. See the example section that follows.</p> <hr/> <p><code>&lt;string&gt; ::= { "CH1"   "CH2"   "CH3"   "CH4"<br/>  "MATH1"   "MATH2"   "MATH3"   "MATH4"<br/>  "REF1"   "REF2"   "REF3"   "REF4" }</code></p> <p>The <code>&lt;string&gt;</code> argument specifies the source:</p> <ul style="list-style-type: none"> <li>■ "CH1" to "CH4" selects the input channel 1 to 4, respectively (default: CH1)</li> <li>■ "MATH1" to "MATH4" selects the math waveform 1 to 4, respectively</li> <li>■ "REF1" to "REF4" selects the reference waveform 1 to 4, respectively</li> </ul> |
| <b>Examples</b>  | <pre>SENSE:SIGNALVU:ACQUISITION:CHANNEL:RF "CH1" selects the input channel 1 to be used for processing an RF signal.  SENSE:SIGNALVU:ACQUISITION:CHANNEL "CH1" selects the input channel 1 to be used for processing an RF signal.  SENSE:SIGNALVU:ACQUISITION:CHANNEL:QPLUS "CH3" selects the input channel 3 to be used for processing a Q+ signal.</pre>  |

## [SENSe]:SIGNAlvu:ACQuisition:CONTRol:HORizontal

Determines whether to set the oscilloscope horizontal settings automatically or manually including:

- Record length
- Acquisition sampling mode (automatically set to RT (Real-Time))
- Single shot mode (automatically set off)
- Horizontal mode (automatically set to Manual)
- Fast Acq (automatically set off)
- Acquisition Mode (automatically set to Sample)

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSe]:SIGNAlvu:ACQuisition:CONTRol:HORizontal { OFF | ON  
| 0 | 1 }  
[SENSe]:SIGNAlvu:ACQuisition:CONTRol:HORizontal?

**Arguments** OFF or 0 disables the SignalVu software to control the oscilloscope horizontal settings. You can set the horizontal settings manually.  
ON or 1 enables the SignalVu software to control the oscilloscope horizontal settings (default). The horizontal settings are automatically set.

**Examples** SENSE: SIGNALVU: ACQUISITION: CONTROL: HORIZONTAL ON enables the SignalVu software to control the oscilloscope horizontal settings.

## [SENSe]:SIGNAlvu:ACQuisition:CONTRol:SAMPle:RATE

Determines whether to set the oscilloscope sample rate automatically or manually. The sample rate is set to maximum automatically, to minimize the possibility of signal above the Nyquist rate causing errors. However, it may be desirable to reduce the sample rate if the maximum frequency of an input signal is known, allowing longer acquisitions and faster measurements.

**Conditions** Measurement views: All

|                  |   |
|------------------|---|
| <b>Group</b>     | Sense commands  |
| <b>Syntax</b>    | <code>[SENSe]:SIGNAlvu:ACQuisition:CONTRol:SAMPle:RATE { OFF   ON   0   1 }</code><br><code>[SENSe]:SIGNAlvu:ACQuisition:CONTRol:SAMPle:RATE?</code>  |
| <b>Arguments</b> | <p>OFF or 0 prevents the SignalVu software from controlling the oscilloscope sample rate. You can set the sample rate manually.</p> <p>ON or 1 causes the SignalVu software to control the oscilloscope sample rate (default). The sample rate is automatically set to the maximum value if Auto is enabled. If Auto is disabled, the sample rate is set to the manually entered value.</p> |
| <b>Examples</b>  | <code>SENSe:SIGNAlvu:ACQuisition:CONTRol:SAMPle:RATE ON</code> enables the SignalVu software to control the oscilloscope sample rate.   |

## **[SENSe]:SIGNAlvu:ACQuisition:CONTRol:VERTical**

Determines whether to set the oscilloscope vertical settings automatically or manually for the selected channel including:

- Digital Filters (DSP) (automatically set on)
- Bandwidth (automatically set to Maximum)
- Vertical scale of the selected channel
- Termination of the selected channel
- Enabled channels (only those selected)

|                   |  |
|-------------------|--|
| <b>Conditions</b> | Measurement views: All   |
| <b>Group</b>      | Sense commands   |
| <b>Syntax</b>     | <code>[SENSe]:SIGNAlvu:ACQuisition:CONTRol:VERTical { OFF   ON   0   1 }</code><br><code>[SENSe]:SIGNAlvu:ACQuisition:CONTRol:VERTical?</code> |
| <b>Arguments</b>  | OFF or 0 disables the SignalVu software to control the oscilloscope vertical settings. You can set the vertical settings manually.             |

ON or 1 enables the SignalVu software to control the oscilloscope vertical settings (default). The vertical settings are automatically set.

**Examples**     `SENSE:SIGNALVU:ACQUISITION:CONTROL:VERTICAL ON` enables the SignalVu software to control the oscilloscope vertical settings.

## **[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE[?]**

Sets or queries the oscilloscope digitizer sample rate.

**Conditions**     Measurement views: All

**Group**     Sense commands

**Syntax**     `[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE <value>`  
`[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE?`

**Arguments**     `<value>::=<NR3>` specifies the sample rate. Note that the value requested may be quantized to a value supported by the oscilloscope. The quantization of the requested value, if necessary, does not occur immediately. Therefore, if a query of the value is sent immediately after setting the value, the quantized value may not be returned.

**Examples**     `SENSE:SIGNALVU:ACQUISITION:DIGitizer:SAMPle:RATE 3.25E9` sets sample rate to 3.25 GS/s.

## **[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE:AUTO[?]**

Sets or queries the Digitizer Sample Rate auto state.

**Conditions**     Measurement views: All

**Group**     Sense commands

**Syntax**     `[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE:AUTO {`  
`OFF | ON | 0 | 1 }`  
`[SENSe]:SIGNAlvu:ACQuisition:DIGitizer:SAMPle:RATE:AUTO?`

- Arguments** Off or 0 disables Auto sample rate configuration.  
On or 1 enables Auto sample rate configuration.
- Examples** `SENSE: SIGNALVU: ACQUISITION: DIGitizer: SAMPle: RATE: AUTO 1`  
enables the Auto sample rate function.

## **[SENSE]:SIGNALvu:ACQuisition:FFRame:ACTual?**

Query the actual number of frames expected. This may be less than `FFRame:LIMit` because of memory limitations on the oscilloscope.

- Conditions** Measurement views: All
- Group** Sense commands
- Syntax** `[SENSE]:SIGNALvu:ACQuisition:ACTual?`
- Arguments** None
- Returns** `<NR1>` : The actual number of frames expected in the latest FastFrame acquisition.
- Examples** `SENSE: SIGNALVU: ACQUISITION: ACTUAL?` might return 178, indicating that the actual number of frames acquired was 178.

## **[SENSE]:SIGNALvu:ACQuisition:FFRame:LIMit**

Sets or queries the limit on the number of frames acquired in FastFrame acquisition mode.

- Conditions** Measurement views: All
- Group** Sense commands
- Syntax** `[SENSE]:SIGNALvu:ACQuisition:FFRame:LIMit <value>`  
`[SENSE]:SIGNALvu:ACQuisition:FFRame:LIMit?`



**Arguments** <value>::=<NR1> specifies the limit on the number of frames that can be acquired. Range: 1 to 65535.

**Examples** SENSE:SIGNALVU:ACQUISITION:FFRAME:LIMIT 500 sets the frame limit to 500.

## [SENSE]:SIGNALVU:ACQUISITION:FFRAME:STATE

Specifies whether to enable or disable FastFrame acquisition.

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSE]:SIGNALVU:ACQUISITION:FFRAME:STATE { OFF | ON | 0 | 1 }  
[SENSE]:SIGNALVU:ACQUISITION:FFRAME:STATE?

**Arguments** Off or 0 disables FastFrame acquisition.  
On or 1 enables FastFrame acquisition.

**Examples** SENSE:SIGNALVU:ACQUISITION:FFRAME:STATE ON enables FastFrame acquisition.

## [SENSE]:SIGNALVU:ACQUISITION:IQ:CALIBRATE

Initiates an IQ calibration, if INPUT:TYPE is set to IQ or Diff IQ. If INPUT:TYPE is RF, an error is returned. This is an overlapped command, so it can be followed up with \*OPC? command.

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSE]:SIGNALVU:ACQUISITION:IQ:CALIBRATE

**Arguments** None

**Examples** [SENSe]:SIGNAlvu:ACQuisition:IQ:CALibrate initiates an IQ calibration function. \*OPC? is returned when the calibration has been completed.

## [SENSe]:SIGNAlvu:ACQuisition:RESet (No Query Form)

Restores default settings to the oscilloscope and then sets the oscilloscope controls that the SignalVu software is enabled to control (refer to the [SENSe]:SIGNAlvu:ACQuisition:CONTRol:HORizontal, :SAMPLerate, and :VERTical commands).

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSe]:SIGNAlvu:ACQuisition:RESet

**Related Commands** [SENSe]:SIGNAlvu:ACQuisition:CONTRol:HORizontal,  
[SENSe]:SIGNAlvu:ACQuisition:CONTRol:SAMPLerate,  
[SENSe]:SIGNAlvu:ACQuisition:CONTRol:VERTical

**Arguments** None

**Examples** SENSE: SIGNALVU: ACQUISITION: RESET restores default settings to the oscilloscope and then sets the oscilloscope controls that the SignalVu software is enabled to control.

## [SENSe]:SIGNAlvu:ACQuisition:TRANSfer

This causes the latest waveform in the scope to be downconverted to IQ data again, using current SignalVu settings. This is an overlapped command.

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSe]:SIGNAlvu:ACQuisition:TRANSfer:ENABled?

**Related Commands** [SENSe]:SIGNAlvu:ACQuisition:TRANSfer:ENABled

**Arguments** None

**Examples** [SENSe]:SIGNALVU:ACQUISITION:TRANSFER initiates a Transfer Again function.

[SENSe]:SIGNALVU:ACQUISITION:TRANSFER;\*OPC? initiates a Transfer Again function and returns an operation complete message when the function completes.

## [SENSe]:SIGNALvu:ACQuisition:TRANSfer:ENABLEd?

Queries whether the Transfer Again function is enabled. Transfer Again is not enabled when SignalVu is running or after if an abort command has been issued.

**Conditions** Measurement views: All

**Group** Sense commands

**Syntax** [SENSe]:SIGNALvu:ACQuisition:TRANSfer:ENABLEd?

**Related Commands** [SENSe]:SIGNALvu:ACQuisition:TRANSfer

**Arguments** None

**Returns** { 0 } Indicates the Transfer Again function is not enabled.  
 { 1 } Indicates the Transfer Again function is enabled.

**Examples** [SENSe]:SIGNALVU:ACQUISITION:TRANSFER:ENABLED? might return 0, which indicates that Transfer Again is not enabled (which could be because SignalVu is acquiring signals).

## Error Messages and Codes

This section lists the device error messages and codes that are unique to the SignalVu software. For details on the oscilloscope error messages and codes, refer to the *DPO7000, DPO70000/B, DSA70000/B, and MSO70000 Series Digital Oscilloscopes Programmer Manual*.

Event codes and messages can be obtained by using the queries `SYSTEM:ERROR?` and `SYSTEM:ERROR:ALL?` These are returned in the following format:

```
<event_code>,"<event_message>"
```

### Device Errors

These error codes are unique to the SignalVu software. They are classified into three groups: global, measurement, and source conditions, as shown in the following tables.

#### Device errors, global condition

| Error code | Error message   |
|------------|---|
| 2900       | Setup error   |
| 2901       | Disabled: data is from swept acquisition                                |
| 2902       | Disabled: swept settings; Acquire data while display is selected        |
| 2903       | Acquisition bandwidth too small for current setup                       |
| 2904       | Can't get acquisition data record                                       |
| 2905       | Can't open the requested display  |
| 2906       | Analysis failure  |
| 2907       | Trigger position not supported  |
| 2908       | Analysis length too small for current setup                             |
| 2909       | No math trace: unmatched trace lengths                                  |
| 2910       | Analysis time was adjusted  |
| 2911       | Not enough samples for current setup                                    |
| 2912       | Can't replay. Data is from swept acquisition.                           |
| 2913       | Can't replay. Live data needed for swept settings.                      |
| 2914       | Recall error: setup not completely restored                             |
| 2915       | Recall failure: problem with file or file contents                      |
| 2916       | Save failure: file not saved  |
| 2917       | Unexpected software error. Please cycle power and try again.            |
| 2918       | Export failure: file not saved  |
| 2919       | Export failure: unable to open results file for export. File not saved. |
| 2920       | Search condition for this result is already defined.                    |

**Device errors, global condition, (cont.)**

| <b>Error code</b> | <b>Error message</b>                            |
|-------------------|---|
| 2921              | Search condition for this result was not found. |
| 2924              | Load failed: <filename>                         |
| 2925              | Store error: file not saved.                    |
| 2926              | No Math trace: unmatched trace X range          |
| 2927              | Not enough memory for measurement               |
| 2928              | Incomplete analysis                             |
| 2929              | Not enough samples for current setup            |
| 2930              | Mask creation error: <reason message>           |

**Device errors, measurement condition**

| <b>Error code</b>   | <b>Error message</b>  |
|---------------------|---|
| 2940                | TDBW actual (TDBW: Time Domain Bandwidth)                     |
| 2941                | Average transmit not available in volts units                 |
| 2942                | RBW increased to  |
| 2943                | RBW limited by acquisition bandwidth to                       |
| 2944                | RBW conflict. Increase span or analysis length                |
| 2945                | Analysis stopped: ambiguous pulse shape                       |
| 2946                | Setup error: Phase measurement location.                      |
| 2947                | No pulses found   |
| 2948                | No FFT (not all pulses have results)                          |
| 2949                | No burst detected   |
| 2951                | Audio disabled: configuration problem                         |
| 2952                | Audio Demod disabled: swept acquisition                       |
| 2953                | Audio Demod disabled: trigger in use                          |
| 2954                | Audio disabled: IF band outside Acq BW                        |
| 2955                | Calibration error. See Windows Event Viewer for error detail. |
| <b>OBW errors</b>   |   |
| 2956                | Analysis failure: $AcqBW < MeasBW + (5 \times RBW)$           |
| 2957                | Analysis failure: AcqBW must be 10 kHz or more                |
| 2958                | $x \text{ dB BW} > \text{Meas BW}$                            |
| <b>Pulse errors</b> |   |
| 2959                | AcqBW too low for current Chirp BW setting                    |
| 2963                | Not enough memory for measurement                             |

**Device errors, measurement condition, (cont.)**

| <b>Error code</b>         | <b>Error message</b>  |
|---------------------------|---|
| <b>Other measurements</b> |   |
| 2964                      | BW actual (limited by Acq BW)   |
| 2965                      | CISPR not available in FastFrame. Uncheck FastFrame in the Acquire panel. |
| 2966                      | Analysis length must be in auto.  |
| 2967                      | Carrier not found   |
| 2969                      | CISPR accuracy limited by acq memory. Adjust RBW or freq range.           |
| 2970                      | CISPR: Acq BW too small for RBW. Try increasing span or freq range.       |
| 2971                      | Insufficient data for CISPR. Acquire while display is selected.           |
| 2972                      | VBW increased - Analysis Length too short                                 |
| 2973                      | VBW does not use full Analysis Length.                                    |

**Device errors, source condition**

| <b>Error code</b> | <b>Error message</b>  |
|-------------------|---|
| 2980              | Freq/AcqBW exceed digitizer nyquist rate  |
| 2981              | Insufficient time samples for current setup   |
| 2982              | The decimation rate needed for downconversion to IQ is too high, and not supported                                  |
| 2983              | Acq BW contains negative frequencies  |
| 2984              | Please enable "Scope Settings> Other acquisition/horizontal settings"   |
| 2985              | Scope Horizontal Position must be from 1 to 99%   |
| 2986              | Digital IF downconverter out of virtual memory  |
| 2987              | Downconversion failure  |
| 2997              | IQ Calibration error. Please run calibration again. If the problem persists, contact your Tektronix Service Center. |