Zoom Command Group

Zoom Overview

Zoom commands let you expand and position the waveform display horizontally and vertically without changing the time base or vertical settings.

Zoom Commands

Command	Description
ZOOm?	Returns the current vertical and horizontal positioning and scaling of the display
ZOOm	Sets the zoom transforms to default values for either live traces or all traces
ZOOm:MODE?	Returns the current zoom mode
ZOOm:MODE	Turns zoom mode on or off
ZOOm:HORIzontal:LOCk?	Returns the waveforms that the horizontal zoom parameters affect
ZOOm:HORIzontal:LOCK	Sets the waveforms that the horizontal zoom parameters affect
ZOOm:<wfm>:HORIzontal:POSition?	Returns the zoom horizontal position of the specified waveform
ZOOm:<wfm>:HORIzontal:POSition	Sets the zoom horizontal position of the specified waveform
ZOOm:<wfm>:HORIzontal:SCAle?	Returns the zoom horizontal scale factor of the specified waveform
ZOOm:<wfm>:HORIzontal:SCAle	Sets the zoom horizontal scale factor of the specified waveform
ZOOm:<wfm>:VERTical:POSition?	Returns the zoom vertical position of the specified waveform
ZOOm:<wfm>:VERTical:POSition	Sets the zoom vertical position of the specified waveform
ZOOm:<wfm>:VERTical:SCAle?	Returns the zoom vertical scale of the specified waveform
ZOOm:<wfm>:VERTical:SCAle	Sets the zoom vertical scale of the specified waveform

ZOOm

Description

This command resets the zoom transforms to default values for all traces or live traces. The ZOOm query returns the current vertical and horizontal positioning and scaling of the display.

Group

Zoom

Syntax 1

```
ZOOm {RESET|RESETLive}
```

Syntax 2

```
ZOOm?
```

Arguments

- `RESET`

  This resets the zoom transforms to default values for all traces.

- `RESETLive`

  This resets the zoom transforms to default values for live traces.

Example 1

```
ZOOm?
```

This query might return :

```
:ZOOM:MODE 0;GRATICULE:SIZE 50;:ZOOM:HORIZONTAL:LOCK ALL;
:ZOOM:CH1:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:CH1:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:CH2:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:CH2:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:CH3:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:CH3:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:CH4:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:CH4:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:MATH1:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:MATH1:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:MATH2:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:MATH2:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:MATH3:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:MATH3:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:MATH4:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:MATH4:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:REF1:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:REF1:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:REF2:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:REF2:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:REF3:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:REF3:VERTICAL:POSITION 0.0000;SCALE 1.0000;
:ZOOM:REF4:HORIZONTAL:POSITION 50.0000;SCALE 2;
:ZOOM:REF4:VERTICAL:POSITION 0.0000;SCALE 1.0000
```

Example 2

```
ZOOm RESET
```

This command resets the zoom transforms to default values for all traces.

ZOOm:MODe

Description

This command turns Zoom mode on or off. The Zoom query returns the current state of Zoom mode. This command is equivalent to pressing the **ZOOM** button located on the front panel.

Group

Zoom

Syntax 1

```
ZOOm:MODe {ON|OFF|<NR1>}
```

Syntax 2

```
ZOOm:MODe
```

Arguments

- `ON`

  This turns on Zoom mode.

- `OFF`

  This turns off Zoom mode.

- `<NR1>`

  A 0 turns off Zoom mode; any other value turns on Zoom mode.

Example 1

```
ZOOm:MODe?
```

This query might return `:WFMOUTPRE:ZOOM:MODE 1`, indicating that Zoom mode is currently turned on.

Example 2

```
ZOOm:MODe OFF
```

This command turns off Zoom mode.

ZOOm:HORizontal:LOCk

Description

This command sets or queries the waveforms that the horizontal zoom parameter affects. This is equivalent to setting **Horizontal Lock** in the Zoom side menu.

Group

Zoom

Syntax 1

```
ZOOm:HORizontal:LOCk {ALL|LIVe|NONe}
```

Syntax 2

```
ZOOm:HORizontal:LOCk?
```

Arguments

- `ALL`

  This specifies that all the (CH<x>, Ref<x>, Math<x>) waveforms will be horizontally positioned and scaled together.

- `LIVe`

  This specifies that all live (CH<x>) waveforms will be horizontally positioned and scaled together.

- `NONe`

  This specifies that only the selected waveform is positioned and scaled using the horizontal zoom parameters.

Example 1

```
ZOOm:HORizontal:LOCk?
```

This query might return `:ZOOM:HORIZONTAL:LOCK ALL`, indicating that all waveforms are positioned and scaled together.

Example 2

```
ZOOm:HORizontal:LOCk LIVE
```

This command horizontally positions and scales all live waveforms.

ZOOm:<wfm>:HORizontal:POSition

Description

This command sets or queries the horizontal position of specified waveform. The setting of the ZOOm:HORizontal:LOCk command determines the waveforms that are affected. For example, if ZOOm:HORizontal:LOCk is set to LIVe, then only live (as opposed to reference) waveforms are affected.

Group

Zoom

Syntax 1

```
ZOOm:<wfm>:HORizontal:POSition <NR3>
```

Syntax 2

```
ZOOm:<wfm>:HORizontal:POSition?
```

Argument

- `<NR3>`

  This is a value from 0 to 100 and is the percent of the waveform that is to the left of screen center, when the zoom factor is 1x or greater.

Example 1

```
ZOOm:CH1:HORizontal:POSition?
```

This query might return `:ZOOM:CH1:HORIZONTAL:POSITION 50.0000`, indicating that the Zoom reference pointer for channel 1 is currently set at 50% of acquired waveform.

Example 2

```
ZOOm:CH1:HORizontal:POSition 50
```

This command sets the Zoom reference pointer for channel 1 at 50% of acquired waveform.

ZOOm:<wfm>:HORizontal:SCAle

Description

This command sets or queries the zoom horizontal scale factor of the specified waveform.

Group

Zoom

Syntax 1

```
ZOOm:<wfm>:HORizontal:SCAle <NR3>
```

Syntax 2

```
ZOOm:<wfm>:HORizontal:SCAle?
```

Argument

- `<NR3>`

  This is the amount of expansion in the horizontal direction.

Example 1

```
ZOOm:CH2:HORizontal:SCAle?
```

This query might return `:ZOOM:CH2:HORIZONTAL:SCALE 1`, indicating channel 2 has a horizontal scale factor of 1.

Example 2

```
ZOOm:CH1:HORizontal:SCAle 5
```

This command sets the channel 1 horizontal scale factor to 5.

ZOOm:<wfm>:VERTical:POSition

Description

This command sets or queries the Zoom vertical position of the specified waveform.

Group

Zoom

Syntax 1

`ZOOm:<wfm>:VERTical:POSition <NR3>`

Syntax 2

`ZOOm:<wfm>:VERTical:POSition?`

Argument

- `<NR3>`

  This is the vertical position, expressed in divisions.

Example 1

`ZOOm:CH1:VERTical:POSition?`

This query might return `:ZOOm:CH1:VERTical:POSition 0.0000`, indicating that the zoomed trace is centered at division 0 of the acquire trace.

Example 2

`ZOOm:CH1:VERTical:POSition 2`

This command sets the vertical position to 2, which centers the zoom trace at the second division of the acquire trace.

ZOOm:<wfm>:VERTical:SCAle

Description

This command sets or queries the zoom vertical scale of the specified waveform.

Group

Zoom

Syntax 1

```
ZOOm:<wfm>:VERTical:SCAle <NR3>
```

Syntax 2

```
ZOOm:<wfm>:VERTical:SCAle?
```

Argument

- `<NR3>`

  This is the amount of vertical expansion or compression, which operates on a 1 - 2 - 5 sequence (For example, 1, 2, 5, 10, 20, 50, 100…). Based on the value entered, this command uses the nearest scale factor. Setting the vertical scale to 1 indicates unity (no zoom).

Example 1

```
ZOOm:CH2:VERTical:SCAle?
```

This query might return `:ZOOM:CH2:VERTICAL:SCALE 2.0000`, indicating that the vertical scale is 2x.

Example 2

```
ZOOm:REF1:VERTical:SCAle 4
```

This command sets the vertical scale of REF1 to 5x.