Example

```
N/A
```

3.13 :LA Commands

:LA (logic analyzer) commands are used to perform relevant operations on the digital channels.

The oscilloscope compares the voltages acquired in each sample with the preset logic threshold. If the voltage of the sample point is above the threshold, it will be stored as logic 1; otherwise, it will be store as logic 0. The oscilloscope displays the logic levels (1s and 0s) in a graphic way for you to easily detect and analyze the errors in circuit design (hardware design and software design).

NOTE

The DHO800 series oscilloscope does not support this command.

3.13.1 :LA:ENABle

Syntax

:LA:ENABle <*bool*>

:LA:ENABle?

Description

Enables or disables LA; or queries the LA on/off status.

Parameter

Name	Type	Range	Default
<bool>	Bool	{{1|ON}|{0|OFF}}	0|OFF

Remarks

N/A

Return Format

The query returns 1 or 0.

Examples

```
:LA:ENABle ON /*Enables the LA function.*/
:LA:ENABle? /*The query returns 1.*/
```

3.13.2   :LA:ACTive

Syntax

`:LA:ACTive` <*digital*>

`:LA:ACTive?`

Description

Sets or queries the current active channel.

Parameter

Name	Type	Range	Default
<digital>	Discrete	{D0|D1|D2|D3|D4|D5|D6|D7|D8|D9|D10|D11|D12|D13|D14|D15|NONE}	D0

Remarks

- The parameter <digital> can be any of the digital channels (D0-D15). The channel label and waveform of the selected channel are displayed in red.

- When you send the parameter NONE, it means that no channel is selected.

- Only the currently enabled digital channel can be selected. Please refer to :LA:DIGital:DISPlay to enable the desired channel.

Return Format

The query returns D0, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, or NONE.

Example

```
:LA:ACTive D3 /*Sets the current active channel to D3.*/
:LA:ACTive? /*The query returns D3.*/
```

3.13.3   :LA:AUTosort

Syntax

`:LA:AUTosort` <*val*>

`:LA:AUTosort?`

Description

Sets the auto sorting mode for the waveforms of the enabled channels.

Parameter

Name	Type	Range	Default
<val>	Discrete	{D0D15|D15D0}	D15D0

Remarks

- **D0D15:** the waveforms on the display are D0-D15 in sequence from top to bottom.

- **D15D0:** the waveforms on the display are D15-D0 in sequence from top to bottom.

Return Format

The query returns D0D15 or D15D0.

Example

```
:LA:AUTosort D0D15 /*Sets the auto sorting mode to D0D15.*/
:LA:AUTosort? /*The query returns D0D15.*/
```

3.13.4   :LA:DELete

Syntax

:LA:DELete <*group*>

Description

Cancels the group settings for the channel groups (GROup1-GROup4).

Parameter

Name	Type	Range	Default
<group>	Discrete	{GROup1|GROup2|GROup3| GROup4}	-

Remarks

This command only performs the canceling operation for digital channels or user-defined channel group that have been group set.

Return Format

N/A

Example

```
N/A
```

3.13.5   :LA:DIGital:ENABle

Syntax

:LA:DIGital:ENABle <*digital*>,<*bool*>

:LA:DIGital:ENABle? <*digital*>

Description

Enables or disables the specified digital channel; or queries the on/off status of the specified digital channel.

Parameter

Name	Type	Range	Default
<digital>	Discrete	{D0|D1|D2|D3|D4|D5|D6|D7|D8| D9|D10|D11|D12|D13|D14|D15}	-
<bool>	Bool	{{1|ON}|{0|OFF}}	0|OFF

Remarks

You can use *:LA:ACTive* to select the currently enabled channels.

Return Format

The query returns 1 or 0.

Examples

```
:LA:DIGital:ENABle D3,ON /*Enables D3.*/
:LA:DIGital:ENABle? D3 /*The query returns 1.*/
```

3.13.6   :LA:DIGital:LABel

Syntax

:LA:DIGital:LABel <*digital*>,<*label*>

:LA:DIGital:LABel? <*digital*>

Description

Sets or queries the label of the specified digital channel.

Parameter

Name	Type	Range	Default
<digital>	Discrete	{D0|D1|D2|D3|D4|D5|D6|D7| D8| D9|D10|D11|D12|D13|D14|D15}	-

Name	Type	Range	Default
<label>	ASCII String	It can contain English letters and numbers, and also some symbols.	-

Remarks

N/A

Return Format

The query returns the label of the specified digital channel in ASCII strings.

Example

```
:LA:DIGital:LABel D0,ACK    /*Sets the label of D0 to ACK.*/
:LA:DIGital:LABel? D0       /*The query returns ACK.*/
```

3.13.7   :LA:POD<n>:DISPlay

Syntax

:LA:POD<*n*>:DISPlay <*bool*>

:LA:POD<*n*>:DISPlay?

Description

Enables or disables the specified default channel group, or queries the on/off status of the specified default channel group.

Parameter

Name	Type	Range	Default
<n>	Integer	1 to 2	-
<bool>	Bool	{{1|ON}|{0|OFF}}	0|OFF

Remarks

2 default channel groups: POD1 (D0 to D7) and POD2 (D8 to D15).

Return Format

The query returns 1 or 0.

Example

```
:LA:POD1:DISPlay 1    /*Enables POD1 (D0 to D7).*/
:LA:POD1:DISPlay?     /*The query returns 1.*/
```

3.13.8 :LA:POD\<n>:THReshold

Syntax

`:LA:POD<n>:THReshold <thre>`

`:LA:POD<n>:THReshold?`

Description

Sets or queries the threshold of the specified default channel group. The default unit is V.

Parameter

Name	Type	Range	Default
\<n>	Integer	1 to 2	-
\<thre>	Real	-20.0 V to +20.0 V	1.40 V

Remarks

2 default channel groups: POD1 (D0 to D7) and POD2 (D8 to D15).

Return Format

The query returns the current threshold of the specified channel group in scientific notation.

Example

```
:LA:POD1:THReshold 3.3    /*Sets the threshold of POD1 (D0 to D7)
to 3.3 V.*/
:LA:POD1:THReshold?       /*The query returns 3.300000E0.*/
```

3.13.9 :LA:SIZE

Syntax

`:LA:SIZE <size>`

`:LA:SIZE?`

Description

Sets or queries the size of the waveforms of the enabled channel on the screen.

Parameter

Name	Type	Range	Default
\<size>	Discrete	{SMALl|LARGe|MEDium}	MEDium