



**Pulse Plug-in Application  
Programmer Manual**







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# Getting started

## Introduction

This programmer manual provides information on using the commands for remotely controlling the Pulse plug-in application.

You can install the Pulse plug-in either in the SourceXpress software application or in an AWG5200 Series Arbitrary Waveform Generator.

Using a single VISA or raw socket session, it is possible to communicate the plug-in with both SourceXpress programmatic interface and AWG5200 Series instruments.

For information on the Remote Control, GPIB Parameters, LAN Parameters, Connecting to the Instrument using GPIB, and Setting up GPIB Communication, refer to the *AWG5200 Series Arbitrary Waveform Generators Programmer Manual*.





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# Syntax and commands

## Command syntax

For information on the Syntax Overview, Command and Query Structure, Clearing the Instrument, Command Entry, Parameter Types, SCPI Commands, and Queries, refer to the *AWG5200 Series Arbitrary Waveform Generators Programmer Manual*.

## Parameter types

Every parameter in the command and query descriptions is of a specified type. The parameters are enclosed in brackets, such as <value>. The parameter type is listed after the parameter and is enclosed in parentheses, for example, (boolean). Some parameter types are defined specifically for the RSA Series command set and some are defined by ANSI/IEEE 488.2-1987 as defined in the table below.

Parameter type	Description	Example
arbitrary block <sup>1</sup>	A specified length of arbitrary data	#512234xxxx . . . where 5 indicates that the following 5 digits (12234) specify the length of the data in bytes; xxxx ... indicates the data
boolean	Boolean numbers or values	ON or 1; OFF or 0
binary	Binary numbers	#B0110
octal	Octal numbers	#Q57, #Q3
hexadecimal <sup>1</sup>	Hexadecimal numbers (0-9, A, B, C, D, E, F)	#HAA, #H1
NR1 <sup>1</sup> numeric	Integers	0, 1, 15, -1
NR2 <sup>1 2</sup> numeric	Decimal numbers	1.2, 3.141516, -6.5
NR3 <sup>1</sup> numeric	Floating point numbers	3.1415E-9, -16.1E5
NRf <sup>1</sup> numeric	Flexible decimal number that may be type NR1, NR2 or NR3	See NR1, NR2, and NR3 examples
string <sup>3</sup>	Alphanumeric characters (must be within quotation marks)	"Testing 1, 2, 3"

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<sup>1</sup> Defined in ANSI/IEEE 488.2 as "Definite Length Arbitrary Block Response Data."

<sup>2</sup> Some commands and queries will accept an octal or hexadecimal value even though the parameter type is defined as NR1.

<sup>3</sup> Defined in ANSI/IEEE 488.2 as "String Response Data."

## Command groups

### Control commands

**Table 1: Control commands and their descriptions**

Command	Description
<a href="#">WPLugin:ACTive</a> on page 19	Sets or queries the active waveform creation plug-in.
<a href="#">PULSe:RESet (No Query Form)</a> on page 18	Resets the Pulse plug-in by setting all the controls to its default value/state.

### Compile commands

**Table 2: Compile commands and their descriptions**

Command	Description
<a href="#">PULSe:COMPILE (No Query Form)</a> on page 6	Compiles and generates waveforms/sequences based on the Pulse setup.
<a href="#">PULSe:COMPILE:CANCEL (No Query Form)</a> on page 7	Cancels the compilation.
<a href="#">PULSe:COMPILE:OVERwrite</a> on page 8	Sets or queries the overwrite existing waveforms/sequences state (enabled or disabled) while compiling.
<a href="#">PULSe:COMPILE:SEQUence</a> on page 9	Sets or queries the state (enabled or disabled) of create sequence at the end of the compile. If the sequence status is off, then each pulse train is created as one single waveform.
<a href="#">PULSe:COMPILE:CASSign</a> on page 7	Sets or queries the type of compilation.
<a href="#">PULSe:COMPILE:PLAY</a> on page 8	Sets or queries the play after assign state (enabled or disabled) for the compile settings.
<a href="#">PULSe:COMPILE:SRATe</a> on page 9	Sets or queries the sampling rate.
<a href="#">PULSe:COMPILE:OSAMpling</a> on page 7	Sets and queries the oversampling rate which is used to determine the sampling rate of the compiled signal.
<a href="#">PULSe:COMPILE:SRATe:AUTO</a> on page 10	Sets or queries the sampling rate auto calculation status.

## Pulse train commands

Table 3: Pulse train commands and their descriptions

Command	Description
<a href="#">PULSe:PTRain:ADD [No Query Form] on page 16</a>	Creates and adds the pulse train name to the pulse train list.
<a href="#">PULSe:PTRain:DELeTe (No Query Form) on page 17</a>	Deletes the specified pulse train from the pulse train list.
<a href="#">PULSe:PTRain:COUnT on page 17</a>	Returns the number of pulse train definitions in the pulse train list.
<a href="#">PULSe:PTRain:SELEct on page 18</a>	Sets or queries the name of the currently selected pulse train.
<a href="#">PULSe:PTRain:REName (NO Query Form) on page 18</a>	Renames an existing pulse train name.
<a href="#">PULSe:PTRain:AMPLitude on page 16</a>	Sets or queries the peak to peak amplitude of the selected pulse train.
<a href="#">PULSe:PTRain:CHANnel on page 17</a>	Sets the channel number for the waveform/sequence of currently selected pulse train.

## Pulse setup commands

Table 4: Pulse setup commands and their descriptions

Command	Description
<a href="#">PULSe:FRAMe:ADD on page 10</a>	Adds a new frame to the current selected pulse train.
<a href="#">PULSe:FRAMe:DELeTe on page 11</a>	Deletes the pulse definition at index <n> of the current selected pulse train.
<a href="#">PULSe:FRAMe:COUnT on page 10</a>	Returns the number of pulse definition in the current selected pulse train.
<a href="#">PULSe:FRAMe:SELEct on page 12</a>	Sets or queries the index of the currently selected pulse definition in the currently selected pulse train.
<a href="#">PULSe:FRAMe:DTIME on page 11</a>	Sets or queries the dead time of the current selected frame definition.
<a href="#">PULSe:FRAMe:NPULSe on page 11</a>	Sets or queries the number of pulses in the current selected frame definition.
<a href="#">PULSe:FRAMe:PSETup:SHAPe on page 15</a>	Sets or queries the shape of the pulse for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:RTIME:VALue on page 14</a>	Sets or queries the rise time value of the pulse for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:RTIME:PERCentage on page 14</a>	Sets or queries the percentage at which the rise time is applied for the pulse shape.
<a href="#">PULSe:FRAMe:PSETup:FTIME:VALue on page 12</a>	Sets or queries the fall time value of the pulse for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:FTIME:PERCentage on page 12</a>	Sets or queries the percentage at which the fall time is applied for the pulse shape.

Command	Description
<a href="#">PULSe:FRAMe:PSETup:WIDTh:VALue</a> on page 16	Sets or queries the width of the pulse for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:WIDTh:PERCentage</a> on page 15	Sets or queries the percentage at which the pulse width value is applied for the pulse shape.
<a href="#">PULSe:FRAMe:PSETup:PRI</a> on page 14	Sets or queries the value of pulse repeat interval for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:PRF</a> on page 13	Sets or queries the value of pulse repeat frequency for the selected frame.
<a href="#">PULSe:FRAMe:PSETup:OTIMe</a> on page 13	Sets or queries the off time value for the selected frame.

## Commands in alphabetical order

This section contains all the available commands which are represented in alphabetical order.

Use the Command Groups section to simplify navigating to specific groups of commands.

### **PULSe:COMPile (No Query Form)**

This command compiles and generates waveforms\sequences based on the pulse setup.

This is an overlapping command.

**Syntax.** PULSe:COMPile

**Group.** Pulse Compile

**Arguments.** NA

**Returns.** NA

**Example.** PULSe:COMPile, compiles the waveform\sequences based on the pulse settings.

<b>PULSe:COMPile:CANCel</b> (No Query Form)	<p>This command cancels the compilation.</p> <p><b>Syntax.</b> PULSe:COMPile:CANCel</p> <p><b>Group.</b> Pulse Compile</p> <p><b>Arguments.</b> NA</p> <p><b>Returns.</b> NA</p> <p><b>Example.</b> PULSe:COMPile:CANCel, cancels the current compilation which is in progress.</p>
<b>PULSe:COMPile:CASSign</b>	<p>This command sets or queries the type of compilation.</p> <p><b>Syntax.</b> PULSe:COMPile:CASSign {0   1   OFF   ON} PULSe:COMPile:CASSign?</p> <p><b>Group.</b> Pulse Compile</p> <p><b>Arguments.</b> 0 or OFF compile the waveform. 1 or ON compile and assign the waveform to a channel.</p> <p><b>Returns.</b> A single &lt;Boolean&gt; value.</p> <p><b>Example.</b> PULSe:COMP:CASSign 1, compiles and assigns the function.</p> <p>PULSe:COMP:CASSign? may return 0, which indicates the compilation of waveform.</p>
<b>PULSe:COMPile:OSAMpling</b>	<p>This command sets and queries the oversampling rate which is used to determine the sampling rate of the compiled signal.</p> <p>The query will return the current value.</p> <p><b>Syntax.</b> PULSe:COMPile:OSAMpling &lt;oversampling&gt; PULSe:COMPile:OSAMpling?</p> <p><b>Group.</b> Pulse Compile</p> <p><b>Arguments.</b> &lt;oversampling&gt;::=&lt;NR1&gt; where the values of &lt;NR1&gt; varies 1 to 1000.</p> <p><b>Returns.</b> &lt;NR1&gt;</p> <p><b>Example.</b> PULSe:COMPile:OSAMpling 6, sets the oversampling rate to 6.</p> <p>PULSe:COMPile:OSAMpling? might return 4, which indicates the oversampling rate is 4.</p>

**PULSe:COMPile:OVERwrite** This command sets or queries the overwrite existing waveforms/sequences state (enabled or disabled) while compiling. When enabled, new waveforms/sequences overwrite existing waveforms and sequences of the same name. When disabled, new waveforms are generated with an additional numeric suffix added at the end of each name.

**Syntax.** PULSe:COMPile:OVERwrite {0 | 1 | OFF | ON}

PULSe:COMPile:OVERwrite?

**Group.** Pulse Compile

**Arguments.** ON or 1 enables waveforms/sequences state.

OFF or 0 disables waveforms/sequences state.

**Returns.** A single <Boolean> value.

**Example.** PULSe:COMP:OVERwrite 1, enables overwriting waveforms/sequences state.

PULSe:COMP:OVERwrite? might return 0, which indicates the overwriting waveforms/sequences state is disabled.

**PULSe:COMPile:PLAY** This command sets or queries the play after assign state (enabled or disabled) for the compile settings.

Play after assign is active only when Compile and assign is enabled.

**Syntax.** PULSe:COMPile:PLAY {0 | 1 | OFF | ON}

PULSe:COMPile:PLAY?

**Group.** Pulse Compile

**Arguments.** OFF or 0 disables play after assign setting.

ON or 1 enables play after assign setting.

**Returns.** A single <Boolean> value.

**Example.** PULSe:COMP:PLAY 1, enables play after assign setting.

PULSe:COMP:PLAY? might return 0, which indicates the play after assign setting is disabled.

**PULSe:COMPile:SEQuence** This command sets or queries the state (enabled or disabled) of create sequence at the end of the compile. If the sequence status is off, then each pulse train is created as one single waveform.

**Conditions.** The instrument must have sequencing available to enable creating sequences.

**Group.** Pulse Compile

**Syntax.** PULSe:COMPile:SEQuence {0 | 1 | OFF | ON}  
PULSe:COMPile:SEQuence?

**Group.** Pulse Compile

**Arguments .** ON or 1 enables create sequence state.  
OFF or 0 disables create sequence state.

**Returns.** A single <Boolean> value.

**Example.** PULSe:COMP:SEQuence 1, enables create sequence state.

PULSe:COMP:SEQuence? might return 0, which indicates the create sequence state is disabled.

**PULSe:COMPile:SRATe** This command sets or queries the sampling rate in the compile settings. The query returns the current sampling rate value.

**Syntax.** PULSe:COMPile:SRATe <sample\_rate>  
PULSe:COMPile:SRATe?

**Group.** Pulse Compile

**Arguments.** <sample\_rate>::=<NRf> Where <NRf> is the maximum sampling rate is dependent on the instrument and instrument options.

**Returns.** <NRf>

**Example.** PULSe:COMP:SRAT 1e9, sets the sampling rate to 1 GS/s in the compile settings.

PULSe:COMP:SRAT? might return 2.25e9, which indicates the sampling rate is 2.25 GS/s.

<b>PULSe:COMPile:SRATe:AUTO</b>	<p>This command sets or queries the sampling rate auto calculation status.</p> <p><b>Syntax.</b> PULSe:COMPile:SRATe:AUTO { 0   1   OFF   ON }</p> <p>PULSe:COMPile:SRATe:AUTO?</p> <p><b>Group.</b> Pulse Compile</p> <p><b>Arguments.</b> OFF or 0 disables the sampling rate auto calculation. ON or 1 enables the auto calculation.</p> <p><b>Returns.</b> A single &lt;Boolean&gt; value.</p> <p><b>Example.</b> PULSe:COMP:SRAT:AUTO 1, enables the signal's sampling rate auto calculation.</p> <p>PULSe:COMP:SRAT:AUTO? might return 0, which indicates signal's sampling rate auto calculation is disabled.</p>
<b>PULSe:FRAMe:ADD</b>	<p>This command adds a new frame to the current selected pulse train.</p> <p><b>Syntax.</b> PULSe:FRAMe:ADD</p> <p><b>Group.</b> Pulse Frame</p> <p><b>Arguments.</b> NA</p> <p><b>Returns.</b> NA</p> <p><b>Example.</b> PULSe:FRAMe:ADD, adds a single frame definition at the end of the frame list to the current selected pulse train.</p>
<b>PULSe:FRAMe:COUNT</b>	<p>This query returns the number of pulse definition in the current selected pulse train.</p> <p><b>Syntax.</b> PULSe:FRAMe:COUNT?</p> <p><b>Group.</b> Pulse Frame</p> <p><b>Arguments.</b> NA</p> <p><b>Returns.</b> &lt;NR1&gt; where the values of &lt;NR1&gt; varies from 1 to 100.</p> <p><b>Example.</b> PULSe:FRAMe:COUNT? might returns 10, which indicates there are 10 pulse definitions in the pulse list of the current selected train.</p>



- PULSe:FRAMe:DELeTe** This command deletes the pulse definition at index <n> of the current selected pulse train.
- Syntax.** PULSe:FRAMe:DELeTe <n>
- Group.** Pulse Frame
- Arguments.** <n> := <NR1> where the values of <NR1> varies from 1 to 100.
- Returns.** NA
- Example.** PULSe:FRAMe:DELeTe 3, deletes the pulse at index 3 of the pulse list in the currently selected pulse train.
- 
- PULSe:FRAMe:DTIME** This command sets or queries the dead time of the current selected frame definition.
- Syntax.** PULSe:FRAMe:DTIME <dead\_time>  
PULSe:FRAMe:DTIME?
- Group.** Pulse Frame
- Arguments.** <dead\_time> := <NRf> Where the values of <NRf> varies from 0 to 1.
- Returns.** <NRf>
- Example.** PULSe:FRAMe:DTIME 12e-6, sets the dead time of the current selected frame definition to 12 us.
- PULSe:FRAMe:DTIME? might return 15e-6, which indicates the dead time of the currently selected frame definition is 15 us.
- 
- PULSe:FRAMe:NPULSe** This command sets or queries the number of pulses in the current selected frame definition.
- Syntax.** PULSe:FRAMe:NPULSe <number\_pulses>  
PULSe:FRAMe:NPULSe?
- Group.** Pulse Frame
- Arguments.** <number\_pulses> := <NR1> Where the values of <NR1> varies from 1 to 10000.
- Returns.** <NR1>
- Example.** PULSe:FRAMe:NPULSe 10, sets the number of pulses in the current selected frame to 10.
- PULSe:PULSe:NPULSe? might return 100, which indicates the number of pulses in the current selected frame is 100.

**PULSe:FRAMe:SElect** This command sets or queries the index of the current selected pulse definition in the selected pulse train.

**Syntax.** PULSe:FRAMe:SElect <n>

PULSe:FRAMe:SElect?

**Group.** Pulse Frame

**Arguments.** <n> := <NR1> where the values of <NR1> varies from 1 to 100.

**Returns.** <NR1>

**Example.** PULSe:FRAMe:SElect 5, selects the fifth pulse definition for further editing in the current selected pulse train.

PULSe:FRAMe:SElect? might return 2, which indicates the current selected pulse definition is 2.

**PULSe:FRAMe:PSETup:FTIME:PERCentage** This command sets or queries the percentage at which the fall time is applied for the pulse shape.

**Syntax.** PULSe:FRAMe:PSETup:FTIME:PERCentage <fall\_time\_type>

PULSe:FRAMe:PSETup:FTIME:PERCentage?

**Group.** Pulse Frame

**Arguments.** <fall\_time\_type> = {TNINety | TEIGhty | ZHUNDred}

**Returns.** TNINety | TEIGhty | ZHUNDred

**Example.** PULSe:FRAMe:PSETup:FTIME:PERCentage TNINety, sets the fall time value at 10 to 90 % of the total fall time.

PULSe:FRAMe:PSETup:FTIME:PERCentage? might return TEIG, which indicates the fall time value is applied at 20 to 80 % of the total fall time.

**PULSe:FRAMe:PSETup:FTIME:VALue** This command sets or queries the fall time value of the pulse for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:FTIME:VALue <fall\_time>

PULSe:FRAMe:PSETup:FTIME:VALue?

**Group.** Pulse Frame

**Arguments.** <fall\_time> = {NRf}

where {NRf} minimum value is dependent on the instrument maximum sampling rate.

{NRf} maximum value is 100.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:FTIME:VALue 200e-9, sets the fall time to 200 ns.

PULSe:FRAMe:PSETup:FTIME:VALue? might return 300e-9, which indicates the fall time value is 300 ns.

### PULSe:FRAMe:PSETup:O TIME

This command sets or queries the off time value for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:OTIME <off\_time>

PULSe:FRAMe:PSETup:OTIME?

**Group.** Pulse Frame

**Arguments.** <off\_time> = {NRf} where the value of {NRf} varies from 0 to 1.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:OTIME 10e-6, sets the off time value to 10 usec.

PULSe:FRAMe:PSETup:OTIME? might return 10e-6, which indicates the off time value is set to 10 usec.

### PULSe:FRAMe:PSETup:P RF

This command sets or queries the value of pulse repeat frequency for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:PRF <prf>

PULSe:FRAMe:PSETup:PRF?

**Group.** Pulse Frame

**Arguments.** <prf> = {NRf} where the values of {NRf} range and default values are dependent on the pulse envelop parameters and pulse shape.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:PRF 10e3, sets the PRF value to 10 kHz.

PULSe:FRAMe:PSETup:PRF? might return 10e3, which indicates the PRF value is set to 10 kHz.

**PULSe:FRAMe:PSETup:PRI**

This command sets or queries the value of pulse repeat interval for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:PRI <pri>

PULSe:FRAMe:PSETup:PRI?

**Group.** Pulse Frame

**Arguments.** <pri> = {NRf} where the {NRf} range and default values are dependent on the pulse envelop parameters and pulse shape.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:PRI 100e-6, sets the PRI value to 100 usec.

PULSe:FRAMe:PSETup:PRI? might return 300e-6, which indicates the PRI value is set to 300 usec.

**PULSe:FRAMe:PSETup:RTIME:PERcentage**

This command sets or queries the percentage at which the rise time is applied for the pulse shape.

**Syntax.** PULSe:FRAMe:PSETup:RTIME:PERcentage <rise\_time\_type>

PULSe:FRAMe:PSETup:RTIME:PERcentage?

**Group.** Pulse Frame

**Arguments.** <rise\_time\_type> = {TNINety | TEIGhty | ZHUNdred}

**Returns.** TNIN | TEIG | ZHUN

**Example.** PULSe:FRAMe:PSETup:RTIME:PERcentage TNINety, sets the rise time value at 10 to 90 % of the total rise time.

PULSe:FRAMe:PSETup:RTIME:PERcentage? might return TEIG, which indicates the rise time value is applied at 20 to 80 % of the total rise time.

**PULSe:FRAMe:PSETup:RTIME:VALue**

This command sets or queries the rise time value of the pulse for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:RTIME:VALue <rise\_time>

PULSe:FRAMe:PSETup:RTIME:VALue?

**Group.** Pulse Frame

**Arguments.** <rise\_time> = {NRf}

where {NRf} minimum value is dependent on the instrument maximum sampling rate.

{NRf} maximum value is 100.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:RTIME:VALue 200e-9, sets the rise time value to 200 ns.

PULSe:FRAMe:PSETup:RTIME:VALue? might return 300e-9, which indicates the rise time value is 300 ns.

**PULSe:FRAMe:PSETup:SHAPE**

This command sets or queries the shape of the pulse for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:SHAPE <pulse\_shape>

PULSe:FRAMe:PSETup:SHAPE?

**Group.** Pulse Frame

**Arguments.** <pulse\_shape> = {RECTangular | TRAPezoidal}

**Returns.** RECT | TRAP

**Example.** PULSe:FRAMe:PSETup:SHAPE RECT, sets the pulse shape to Rectangular.

PULSe:FRAMe:PSETup:SHAPE? might return TRAP, which indicates the pulse shape is Trapezoidal.

**PULSe:FRAMe:PSETup:WIDTH:PERCENTAGE**

This command sets or queries the percentage at which the pulse width is applied for the pulse shape.

**Syntax.** PULSe:FRAMe:PSETup:WIDTH:PERCENTAGE <pulse\_width\_type>

PULSe:FRAMe:PSETup:WIDTH:PERCENTAGE?

**Group.** Pulse Frame

**Arguments.** <pulse\_width\_type> = {FIFTy | HUNDred}

**Returns.** FIFT | HUND

**Example.** PULSe:FRAMe:PSETup:WIDTH:PERCENTAGE FIFTy, sets the pulse width value to 50 % of the total pulse width.

PULSe:FRAMe:PSETup:WIDTH:PERCENTAGE? might return HUND, which indicates the pulse width value is applied at 100 % of the total pulse width.

**PULSe:FRAMe:PSETup:WIDTh:VALue**

This command sets or queries the width of the pulse for the selected frame.

**Syntax.** PULSe:FRAMe:PSETup:WIDTh:VALue <pulse\_width>

PULSe:FRAMe:PSETup:WIDTh:VALue?

**Group.** Pulse Frame

**Arguments.** <pulse\_width> = {NRf} where the values of {NRf} varies from 200e-12 to 1.

**Returns.** {NRf}

**Example.** PULSe:FRAMe:PSETup:WIDTh:VALue 1e-6, sets the pulse width to 1 usec.

PULSe:FRAMe:PSETup:WIDTh:VALue? might return 2e-6, which indicates the pulse width is 2 usec.

**PULSe:PTRain:ADD [No Query Form]**

This command creates and adds the pulse train name to the pulse train list. The pulse train is created by using the default settings and is added at the end of the existing list of pulse trains. The pulse train list contains a maximum of 10 pulse train definitions.

**Syntax.** PULSe:PTRain:ADD [<pulse\_train\_name>]

**Group.** Pulse Train

**Arguments.** <pulse\_train\_name> := <string>

**Returns.** NA

**Example.** PULSe:PTRain:ADD Sim\_1, adds a new pulse train name Sim\_1 to the pulse train list.

**PULSe:PTRain:AMPLitude**

This command sets or queries the peak to peak amplitude of the selected pulse train.

**Syntax.** PULSe:PTRain:AMPLitude <peaktoPeakVoltage>

PULSe:PTRain:AMPLitude?

**Group.** Pulse Train

**Arguments.** <peaktoPeakVoltage> ::= <NRf> where the values of {NRf} varies from 25e-3 to 1.5.

**Returns.** <NRf>

**Example.** PULSe:PTRain:AMPLitude 300e-3, sets the peak to peak amplitude value to 300 mVpp.

PULSe:PTRain:AMPLitude? might return 250e-3, which indicates the peak to peak amplitude value is 250 mVpp.

<b>PULSe:PTRain:CHANnel</b>	<p>This command sets or queries the channel number for the waveform/sequence of currently selected pulse train.</p> <p>The query returns the channel number of the currently selected pulse train.</p> <p><b>Syntax.</b> PULSe:PTRain:CHANnel {Channel}</p> <p>PULSe:PTRain:CHANnel?</p> <p><b>Group.</b> Pulse Train</p> <p><b>Arguments.</b> &lt;channel&gt;::=&lt;NR1&gt; where NR1 is a Valid Channel Number 1, 2, ... etc.</p> <p><b>Returns.</b> &lt;channel&gt;::=&lt;NR1&gt;</p> <p><b>Example.</b> PULSe:PTRain:CHANnel 2, sets the waveform/sequence to channel 2 after compilation.</p> <p>PULSe:PTRain:CHANnel? might return 1, which indicates the waveform/sequence to channel 1 after successful compilation.</p>
<b>PULSe:PTRain:COUNT</b>	<p>This query command returns the number of pulse train definitions in the pulse train list.</p> <p><b>Syntax.</b> PULSe:PTRain:COUNT?</p> <p><b>Group.</b> Pulse Train</p> <p><b>Arguments.</b> NA</p> <p><b>Returns.</b> A single &lt;NR1&gt; value varies from 1 to 10.</p> <p><b>Example.</b> PULSe:PTRain:COUNT? might return 2, which indicates the pulse train list has two pulse train.</p>
<b>PULSe:PTRain:DELEte (No Query Form)</b>	<p>This command deletes the specified pulse train from the pulse train list. The pulse train list must contain at least one pulse train definition.</p> <p><b>Syntax.</b> PULSe:PTRain:DELEte &lt;pulse_train_name&gt;</p> <p><b>Group.</b> Pulse Train</p> <p><b>Arguments.</b> &lt;pulse_train_name&gt; := &lt;string&gt;</p> <p><b>Returns.</b> NA</p> <p><b>Example.</b> PULSe:PTRain:DELEte PulseTrain_1, deletes the pulse train PulseTrain_1.</p>

**PULSe:PTRain:REName  
(NO Query Form)**

This command renames an existing pulse train name.

**Syntax.** PULSe:PTRain:REName <new\_pulse\_train\_name>

**Group.** Pulse Train

**Arguments.** <new\_pulse\_train\_name> := <string>

**Returns.** NA

**Example.** PULSe:PTRain:REName PulseTrain\_1, renames the current selected pulse train as PulseTrain\_1.

**PULSe:PTRain:SElect**

This command sets or queries the name of the currently selected pulse train.

**Syntax.** PULSe:PTRain:SElect <pulse\_train\_name>

PULSe:PTRain:SElect?

**Group.** Pulse Train

**Arguments.** <pulse\_train\_name> := <string>

**Returns.** A single <pulse\_train\_name> string.

**Example.** PULSe:PTRain:SElect PulseTrain\_1, selects PulseTrain\_1 as the current pulse train.

PULSe:PTRain:SElect? might return PulseTrain\_2, indicating that the PulseTrain\_2 is the currently selected pulse train.

**PULSe:RESet (No Query  
Form)**

This command resets the pulse plug-in by setting all the controls to its default value/state.

**Syntax.** PULSe:RESet

**Group.** Control

**Arguments.** NA

**Returns.** NA

**Example.** PULSe:RESet, resets the pulse plug-in and all the controls to it's default value/state.



**WPLugin:ACTive** This command sets or queries the active waveform creation plug-in.

To use the pulse plug-in commands in this document, the active waveform plug-in must be set to Pulse.

**Syntax.** WPLugin:ACTive <plug-in\_name>

WPLugin:ACTive?

**Group.** Control

**Arguments.** <plugin\_name>::=<string>

A single string representing the waveform plug-in name.

"Pulse" is the proper string to activate the pulse signal plug-in

**Returns.** <string>

**Example.** WPLugin:ACTive Pulse, sets Pulse plug-in as an active plug-in.

WPLugin:ACTive? might return Pulse, which indicates the Pulse is an active waveform plug-in.



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