

**SourceXpress®**  
**Waveform Creation Application**  
**Programmer Manual**



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**Tektronix**



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# Getting Started





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# Introduction

This programmer manual provides information on how to use commands for remotely controlling the SourceXpress software.

The SourceXpress programmatic interface works seamlessly with the AWG70000A series instrument's programmatic interface. Using a single VISA or raw socket session, it is possible to communicate with both SourceXpress and AWG70000A 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 *AWG70000A series Arbitrary Waveform Generators Programmer Manual*.

## Documentation

In addition to this SourceXpress Programmer Guide, the following documentation is included with this application:

- SourceXpress Help. The help provides in-depth operation and user interface help.
- SourceXpress User Manual (PDF). This is adapted from the SourceXpress help system.

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# Syntax and Commands



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# 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 *AWG70000A Series Arbitrary Waveform Generators Programmer Manual*.



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# Command Groups

## Connectivity group commands

Table 2-1: Connectivity group commands and their descriptions

Command	Description
<a href="#">CONNectivity:ACTive</a>	Sets or returns the active generator using the connected generator's name.
<a href="#">CONNectivity:CONNect</a>	Connects SourceXpress to a remote generator using the generator's hostname or IP address.
<a href="#">CONNectivity:DISConnect</a>	Disconnects the named remote generator from SourceXpress.
<a href="#">CONNectivity:STATus?</a>	Returns the connection status of the named generator.

## Waveform plug-in group commands

Table 2-2: Waveform plug-in group commands and their descriptions

Command	Description
<a href="#">WPLugin:ACTive</a>	Sets or returns the active waveform creation plug-in.
<a href="#">WPLugin:PLUGins?</a>	Returns all the available waveform creation plug-ins.





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# Command Descriptions

## CONNectivity:ACTive

This command sets or returns the active generator using the connected generator's name. The active generator is the target of instrument operations. Only a single generator can be active at once.

The set version of this command must use the actual generator name as listed in the Connected Generators list (in the SourceXpress application).

**Conditions** The generator must be connected before it can become active.

**Group** Connectivity

**Syntax** `CONNectivity:ACTive {<name>|<IPaddress>}`  
`CONNectivity:ACTive?`

**Arguments** `<name>::=<string>`  
`<IPaddress>::=<string>`

**Returns** `<name>::=` the name of the active generator.  
`<IPaddress>::=` the name of the active generator.

**Examples** `CONNECTIVITY:ACTIVE "MyGenerator"` makes the generator named "MyGenerator" the active generator.

`CONNECTIVITY:ACTIVE?` might return "194.66.82.11", indicating that the generator named with this IP address is the active generator.

## CONNectivity:CONNect (No Query Form)

This command connects SourceXpress to a remote generator using the generator's hostname or IP address, making the remote generator available for use by SourceXpress.

**Group** Connectivity

**Syntax** `CONNectivity:CONNect {<hostname>|<IPaddress>}`

**Arguments** <hostname>::=<string>  
<IPAddress>::=<string>

**Examples** CONNECTIVITY:CONNECT "MyGenerator" remotely connects to the instrument named "MyGenerator".

## CONNectivity:DISConnect (No Query Form)

This command disconnects the named generator from SourceXpress.

**Conditions** You must use the name of the generator as listed in the Connected Generators list in SourceXpress.

**Group** Connectivity

**Syntax** CONNectivity:DISConnect {<name>|<IPAddress>}

**Arguments** <name>::=<string>  
<IPAddress>::=<string>

**Examples** CONNECTIVITY:DISCONNECT "MyGenerator" disconnects the remote generator named "MyGenerator".

## CONNectivity:STATus? (Query Only)

This command returns the connection status of the named generator.

**Conditions** You must use the name of the generator as listed in the Connected Generators list in SourceXpress.

**Group** Connectivity

**Syntax** CONNectivity:STATus? {<name>|<IPAddress>}

**Arguments** <name>::=<string>  
<IPAddress>::=<string>

**Returns** A single <Boolean> value, 0 or 1.  
0 indicates the named generator is not connected.  
1 indicates the named generator is connected.

**Examples** CONNECTIVITY:STATUS? "MyGenerator" might return 1, indicating it is connected and available.

## WPLugin:ACTive

This command sets or returns the active waveform creation plug-in.

**Conditions** This is an overlapping command.  
Overlapping commands run concurrently with other commands, allowing additional commands to start before the overlapping command has finished.

**Group** Waveform plug-in

**Syntax** WPLugin:ACTive <plugin\_name>

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

**Returns** A single string representing the active waveform creation plug-in.

**Examples** WPLUGIN:ACTIVE "Multitone" sets Multitone plug-in as the active plug-in.  
WPLUGIN:ACTIVE? might return "Multitone", indicating the Multitone plug-in is currently active.

## WPLugin:PLUGins? (Query Only)

This command returns all the available waveform creation plug-ins installed. The response returns a comma separated string with all the plug-in names.

**Group** Waveform plug-in

**Syntax** WPLugin:PLUGins?

**Returns** <string> ::= <plugin\_name>, <plugin\_name> ....

Plugin\_name is the waveform module name(s).

**Examples** WPLUGIN:PLUGINS? might return "Basic waveform, Multitone" indicating that the Basic Waveform and Multitone plug-ins are installed.

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# Status and Events



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## Status and Events

There is no status and event information.

## Error messages and codes

The following error codes are unique to the SourceXpress application.

**Table 3-1: Device errors**

<b>Error code</b>	<b>Error message</b>
2100	Unable to connect. Connection requires instrument firmware version {0} or greater.
2101	Unable to connect. Connection requires SourceXpress software version {0} or greater.
2102	Failed to connect. Failed to connect to generator.
2103	Generator not found. Generator not found in the Connected Generator list.
2104	Set to active failure. Failed to set a generator to be the active generator.
2105	Connection lost. Lost connection to the active generator.
2106	Name in use. Name already in use by another virtual generator.
2107	Invalid name. Unable to find virtual generator with the specified name.
2108	Disconnect failed. Cannot disconnect from the default virtual generator.
2109	Remove failed. Cannot remove the default virtual generator.



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