

XID Home

Device Properties

Timing Features

Supported Protocols

Accessory Connector ▶

Voice Key

Test Procedures

Misc. Commands ▶

XID Voice Key Features

A microphone voice key device is intended to measure a participant's vocal reaction time. It monitors the volume level on a microphone, and when that volume rises over a certain **threshold** and stays over that threshold for a certain amount of time (a **rise delay** or **sensitivity**), it reports or stores the participant's reaction time.

An XID voice key device also monitors how long the volume remains above the threshold and then reports the **duration**. The duration is subject to a **drop delay** parameter, i.e. how long the volume must stay below the threshold before we conclude that the participant's response has ended. It is the inverse of a rise delay.

XID Voice Key Commands

The following XID voice key commands are available:

Command	Send Bytes	What Happens:
Set Voice Key Threshold	b1 + value	Sets the voice key threshold. The parameter is a single byte value and should range between "Threshold Pot Minimum Value" (command b6) and "Threshold Pot Maximum Value" (command b7). Locking Level 1 must be set for this command to work.
Set Rise Delay	b2 + value	Sets the voice key rise delay value in milliseconds. The parameter is a single byte and should range between "Delay Pot Minimum Value" (command b4) and "Delay Pot Maximum Value" (command b5). Locking Level 1 must be set for this command to work.
Set Drop Delay	b3 + value	Sets the voice key drop delay value in milliseconds. The parameter is a single byte.
Set Delay (Sensitivity) Pot Minimum Value	b4 + value	Sets the minimum value, in milliseconds, of the delay potentiometer. The parameter is a single byte. Factory default is 0.
Set Delay Pot Maximum Value	b5 + value	Sets the maximum value, in milliseconds, of the delay potentiometer. The parameter is a single byte. Factory default is 100.
Set Threshold Pot Minimum Value	b6 + value	Sets the minimum value of the threshold potentiometer. The parameter is a single byte. Factory default is 0.
Set Threshold Pot Maximum Value	b7 + value	Sets the maximum value of the threshold potentiometer. The parameter is a single byte.

Turn Microphone Vu Meter Mode	b8 + value	Factory default is 255. An ASCII value of 1 causes SV-1 to send the value of the microphone every 30 or 40 milliseconds. A value of 0 stops it.
Get Current Microphone Value	b9	The XID device returns the current microphone value (1 byte?).

Corresponding Inquiry Commands

Most of the commands in the table above have a corresponding inquiry command to retrieve the voice key settings:

Command	Send Bytes	What Happens:
Get Voice Key Threshold	_b1	Returns voice key threshold value
Get Rise Delay	_b2	Returns the voice key rise delay value in milliseconds
Get Drop Delay	_b3	Returns the voice key drop delay value in milliseconds
Get Delay Pot Minimum Value	_b4	Returns the minimum value, in milliseconds, of the delay potentiometer
Get Delay Pot Maximum Value	_b5	Returns the maximum value, in milliseconds, of the delay potentiometer
Get Threshold Pot Minimum Value	_b6	Returns the minimum value of the threshold potentiometer
Get Threshold Pot Maximum Value	_b7	Returns the maximum value of the threshold potentiometer
Get Vu Meter Mode	_b8	Returns whether vu meter mode is on or off