

VocalLink™ Software Provides Voice Control For Your Tektronix Oscilloscope



► VocalLink Voice Control Software for Tektronix Oscilloscopes

Keeps you focused on what's important – making the measurement.

Keeping Your Focus

When making critical measurements, your full attention needs to be focused on what you are measuring. Sometimes you need both hands to hold the probes or manipulate the device-under-test. A simple distraction such as adjusting oscilloscope settings or looking away from the device to check an on-screen reading may mean the difference between success and failure.

VocalLink Voice Control Software Puts You In Control

Have you ever had to make a critical measurement on closely spaced, fine-pitched parts while holding two or more probes? And just when you have everything positioned correctly, you have to reach out and change an oscilloscope setting and reposition the probes all over again. Or maybe you would just like to be able to control your oscilloscope while you concentrate on the measurement results without distraction.

All this and more is now possible with VocalLink voice control software for Tektronix oscilloscopes. VocalLink software puts you in full control of your measurements with simple, spoken commands. But that is not all – VocalLink software completes the link by providing audible feedback of your commands, confirming that they have been implemented as spoken. In addition, you get audible results of measurements without looking at the display screen or pushing any buttons.

Simple To Set Up, Easy To Use

VocalLink software setup is simple and easy. This software is compatible with a wide variety of Tektronix oscilloscopes (see **Compatible Oscilloscopes**). If you have a TDS7000 Series oscilloscope, just install the VocalLink software from the oscilloscope's CD-ROM, plug in the headset and you will be ready to start making voice-controlled measurements in a matter of minutes.

For use with other compatible oscilloscopes, the computer-to-oscilloscope control link must first be established (see **Minimum System Requirements** for computer specifications to use VocalLink software) before installing VocalLink software. Then, install the software, plug in the headset and start making measurements.

VocalLink Software for Tektronix Oscilloscopes

► Application Note

VocalLink software puts you in complete control. Put on the headset and speak a simple phrase into the microphone (as prompted on the oscilloscope screen); this allows VocalLink software to set the correct voice level. That is all there is to it.

VocalLink software recognizes and immediately implements over 60 standard oscilloscope commands. This allows you to make most common oscilloscope measurements on spoken command.

Compatible Oscilloscopes

VocalLink software works with the following Tektronix oscilloscope families:

- TDS7000 Series
- TDS500/600/700 Series
- TDS3000 Series

Minimum System Requirements

VocalLink software will run on the following systems:

- TDS7000 Series Oscilloscopes – no additional peripherals or accessories required
- Windows-compatible PC with following configuration:
 - Windows 95/98/NT4.0/2000 Operating System
 - Pentium 166 MHz Processor (233 MHz recommended)
 - 32 MB RAM (64 MB recommended)
 - 20 MB free hard disk space
 - Sound card
 - CD-ROM drive
 - GPIB controller card and cable, or
 - Tektronix AD007 GPIB-to-LAN Adapter

I Can Hear You Clearly...

The recognition capability of VocalLink software is very robust. After the one-phrase voice-level setup, you can control your measurement system with ease and clarity – even in noisy environments such as the manufacturing floor or in close proximity to process equipment. VocalLink software can accommodate multiple users, often without any adjustment. VocalLink software easily accommodates variations in tonal inflections, enunciation and accent of the user. And since you get audible feedback, you can always be sure that your command has been correctly received and implemented.

VocalLink is also multi-linguistic. You can load multiple languages at initial setup. Switching between available languages is a simple menu selection. If you need an additional language at a later time, simply run the VocalLink software setup from the CD-ROM to choose the additional language. VocalLink software supports nine spoken languages – English, German, French, Italian, Japanese, Korean, Portuguese, Castilian Spanish and Mandarin Chinese (on-screen menus are available in both simplified and traditional Chinese character sets).

All feedback is provided in the selected language – both audible feedback and on-screen displays. And all the VocalLink software features already described are available in the selected language.

Enhance Your Measurements With Macros

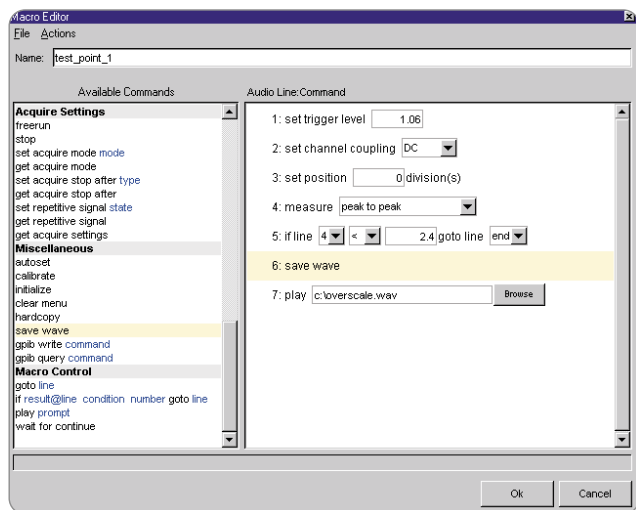
VocalLink macros allow you to record complex measurement sequences and implement them with a single voice command. Macros can contain just a few simple steps to help you make routine, repetitive measurements with ease, or they can consist of many detailed steps to ensure that the correct sequence is followed when making complex measurements. The choice is yours; the power is built-in and ready to use at your command.

Creating a macro is easy. Select from a list of “get” and “set” actions provided in the macro editor to build the measurement sequence, assign a name and the macro is ready to implement on your voice command. Figure 1 illustrates the development of a measurement macro for automated pass/fail testing.

Macro capability is available with VocalLink Pro software, which also delivers over 60 simple voice commands. VocalLink Basic software is available with more than 50 voice commands for applications in which the primary need is for voice control of basic oscilloscope measurements without the macro capability.

Making Voice-controlled Measurements

The best test of VocalLink software is to put it to work on your measurements. Here are two examples which will help you see the possibilities that this software offers.

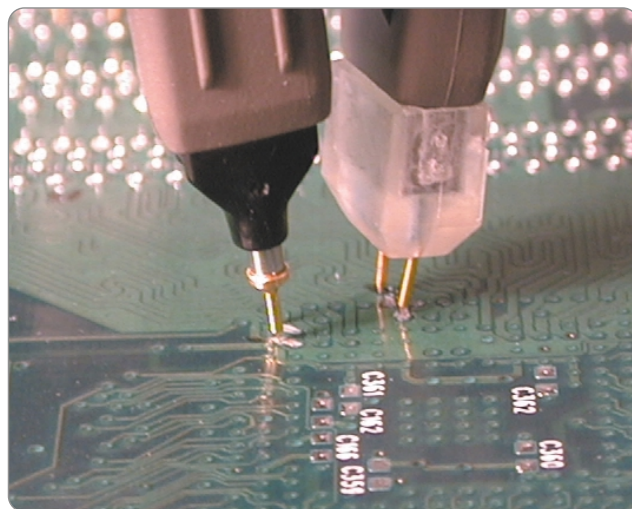


► **Figure 1.** Performing repetitive measurements can prove tedious and fault-prone without the help of VocalLink software's macros.

Making Critical Measurements On Fine-pitch Parts:

The Need – A design engineer needs to simultaneously probe multiple measurement points on fine-pitch parts (see Figure 2). Sometimes this means juggling two or more probes and positioning them carefully in critical areas where a slip of the probe tip may mean an incorrect measurement at best, or a damaged component at worst. Once the probes are positioned correctly, it is difficult, if not impossible, to adjust even a minor oscilloscope setting without starting all over again. And even having to look away from the focus of your measurement to read the results on-screen may affect the outcome. Probe positioning jigs could be used, but these are expensive, time consuming to set up and not easy to position in confined areas. Or you could ask a fellow engineer to adjust the oscilloscope settings while you maintain probe contact, but this is not a cost-effective or time-efficient solution. What you need is a way to change the oscilloscope settings with spoken commands and to receive audible results of the measurement.

The VocalLink Software Solution – VocalLink software provides the answer. You can tell your oscilloscope to change settings, change measurement parameters and more – all with simple, spoken commands. Audible feedback will assure you that the command has been implemented correctly. In addition, VocalLink software provides audible feedback of the measurement results. This allows you to continue your measurements uninterrupted by the need to change settings, read the on-screen results, or even look away from the test setup. Since VocalLink software uses a special microphone that filters out background noise, you can make your measurements even in noisy environments. And to keep from adding to the “noise pollution” and disturbing other engineers, feedback is provided via a comfortable earpiece in the headset. VocalLink software is the answer for true hands-free oscilloscope operation.



► **Figure 2.** Measurements on fine-pitch parts that require multiple probes can prove difficult when you need to change settings or read the on-screen results.

Making Repetitive Tests In a Manufacturing Environment:

The Need – A test engineer needs to make the same routine, but complex, measurement on hundreds of parts (see Figure 2). Each measurement can involve dozens of individual control settings which is not only tedious, but can lead to error if a sequence is not performed correctly. An automated test system could be used, but this solution is both costly to implement and requires hours or weeks to program and implement correctly. A quick and easy way is needed to develop and implement a measurement macro that will perform the required measurements in the prescribed order.

The VocalLink Software Solution – VocalLink Pro software provides the answer. Its macro function allows you to build measurement macros quickly and easily, including program branching and results reporting. Its looping capability allows you to create powerful yet simple routines. Regardless of how simple or complex the macro is, you can create the macro quickly and implement it immediately with a single, spoken command.

VocalLink software's macros are convenient to implement for a one-of-a-kind repetitive test or they can be used to develop and implement test routines for a manufacturing test line. On the manufacturing test line, all of the features of VocalLink software make it the solution of choice – easy setup, robust voice recognition, audible feedback and multiple language support.

VocalLink Software for Tektronix Oscilloscopes

► Application Note

Conclusion

VocalLink voice control software can change the way you make measurements. You no longer need to keep one hand free to change oscilloscope settings, or continuously look away from the focus of your measurement to get your results. For a demonstration of VocalLink software, contact your local Tektronix representative today.

► Whether you are working with semiconductors, computers, communications or other applications, Tektronix offers an oscilloscope ideal for every development, testing or debugging need.



► TDS7404.



► TDS694C.



► TDS3054.

For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology.

Please visit "Resources For You" on our Web site at www.tektronix.com

Contact Tektronix:

ASEAN Countries (65) 356-3900
Australia & New Zealand 61 (2) 9888-0100
Austria, Central Eastern Europe,
Greece, Turkey, Malta & Cyprus +43 2236 8092 0
Belgium +32 (2) 715 89 70
Brazil and South America 55 (11) 3741-8360
Canada 1 (800) 661-5625
Denmark +45 (44) 850 700
Finland +358 (9) 4783 400
France & North Africa +33 1 69 86 81 81
Germany + 49 (221) 94 77 400
Hong Kong (852) 2585-6688
India (91) 80-2275577
Italy +39 (2) 25086 501
Japan (Sony/Tektronix Corporation) 81 (3) 3448-3111
Mexico, Central America, & Caribbean 52 (5) 666-6333
The Netherlands +31 23 56 95555
Norway +47 22 07 07 00
People's Republic of China 86 (10) 6235 1230
Poland (48) 22 521 5340
Republic of Korea 82 (2) 528-5299
South Africa (27 11) 651-5222
Spain & Portugal +34 91 372 6000
Sweden +46 8 477 65 00
Switzerland +41 (41) 729 36 40
Taiwan 886 (2) 2722-9622
United Kingdom & Eire +44 (0)1344 392000
USA 1 (800) 426-2200

For other areas, contact: Tektronix, Inc.
Export Sales, P.O. Box 500, M/S 50-255,
Beaverton, Oregon 97077-0001, USA 1 (503) 627-1916



Copyright © 2000, Tektronix, Inc. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.
09/00 HB/PG 60W-14242-0