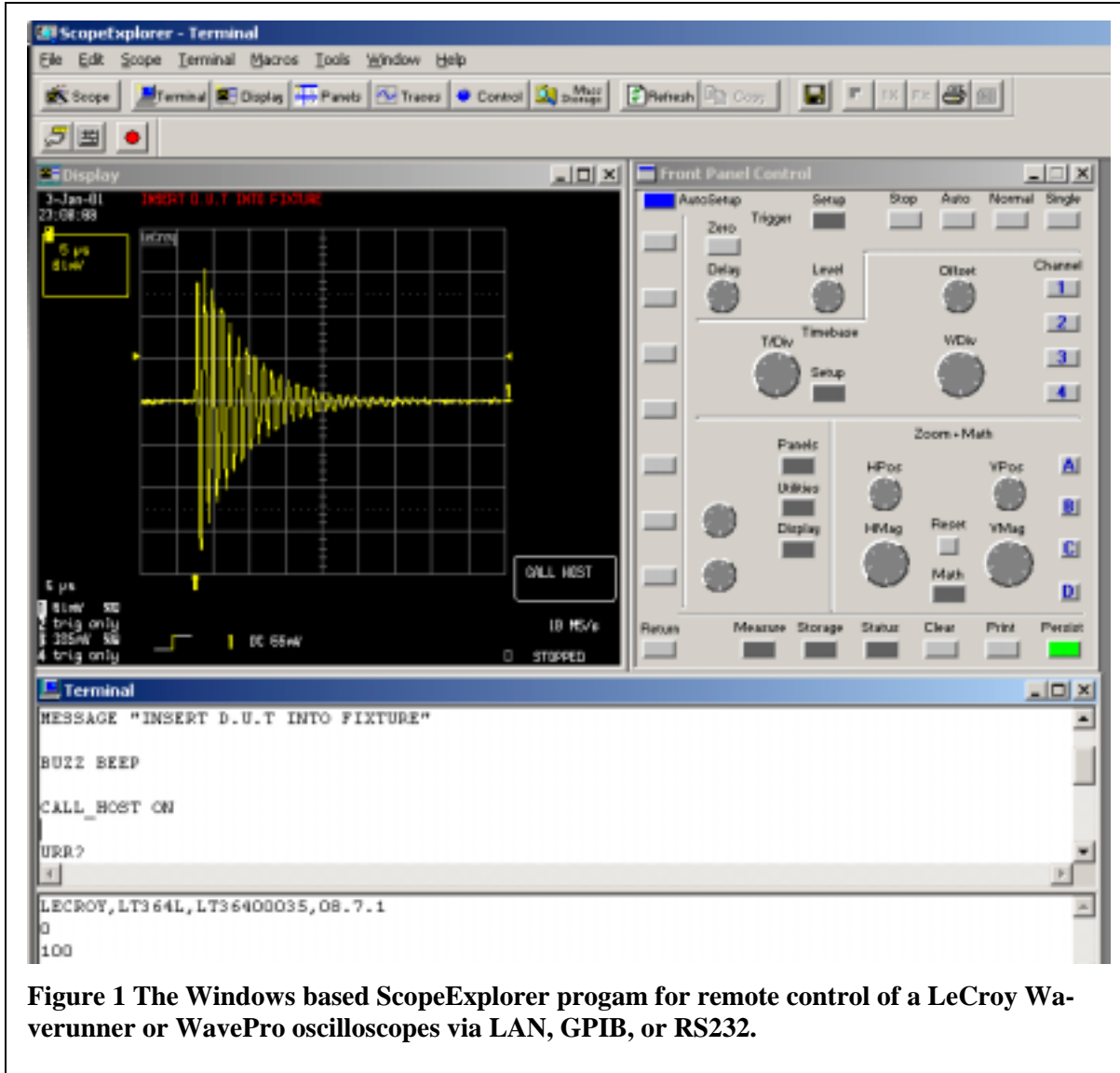# 1 If By LAN, 2 If By GPIB…

Full Remote Control Via LAN, GPIB, or RS232

Figure 1 The Windows based ScopeExplorer progam for remote control of a LeCroy Waverunner or WavePro oscilloscopes via LAN, GPIB, or RS232.

One of the great strengths of LeCroy oscilloscopes is the ability to control them remotely by LAN (ethernet), GPIB, or RS232. This unique feature offers system integrators several advantages in configuring test system designs. The 10BaseT ethernet connection offers the greatest potential for fast and flexible remote operation. LAN

connections provide the highest data rates, and the longest potential control paths in a single remote interface. LeCroy also provides tools for setting up and evaluating the operation of their scopes over all of these interfaces. Figure 1 shows the Windows based user interface of LeCroy's ScopeExplorer.

ScopeExplorer operates using either GPIB, LAN, or RS232. The user interface includes a terminal mode for direct control using the English based remote command set. It also provides a virtual front panel which allows users with little or no programming experience to control the scope remotely. In figure 1 both control elements are shown.
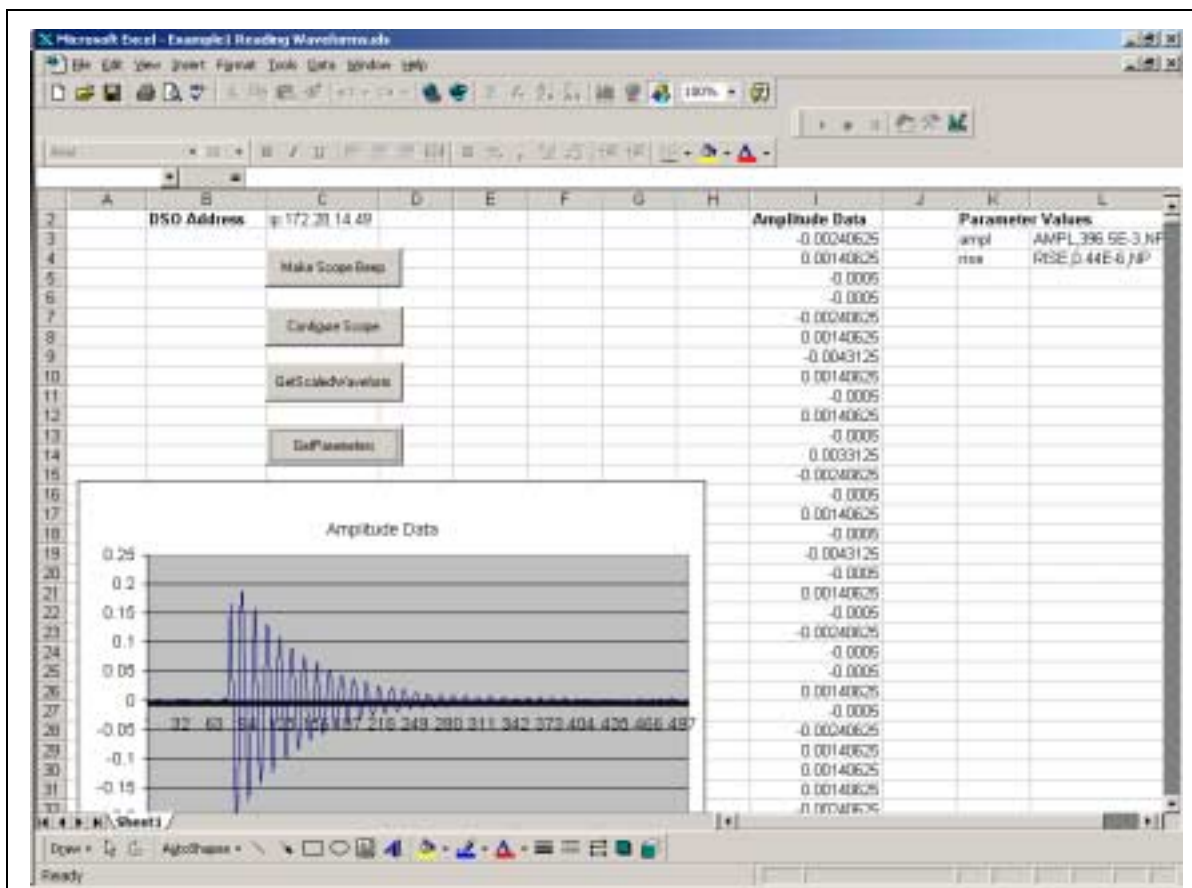
![LeCroy]

Note that, unlike other scopes, all LeCroy scopes are fully controllable by any of the remote interfaces. The remote command set includes features to allow for test operator interactions including messaging and operator response signaling. In figure 1, the terminal mode commands illustrate an operator prompt sequence being sent to the scope. It shows a message followed by a beep command to alert the operator. "Call Host On" enables the operator to signal completion of the requested action by pressing the "Call Host" response button. The response can be read via a service request (SRQ) or by checking a scope status register.

Users who are interested in monitoring and archiving data can employ ActiveDSO, an Active X control supplied by LeCroy to link scopes directly, by any of the available control interfaces, into a Windows application.

Figure 2 shows a simple Excel spreadsheet with an embedded Active X control. The operator need only enter the IP or GPIB address and push a button to update the graphic display and numerical entries within the spreadsheet. In addition to the Windows office applications Active X is supported by Mathcad, Matlab, as well as many other commonly used analysis applications programs.

LeCroy also offers DSO Network Print Gateway, a software utility that facilitates printing to networked printers from an ethernet-equipped DSO. The Network Print Gateway runs on a Windows workstation anywhere on a corporate network and acts as an intermediary between any number of ethernet-equipped LeCroy DSOs and any number of networked printers.

Not only does LeCroy offer the greatest flexibility in remote control, it also provides software tools which make it easy to integrate the scope data directly into user applications.

Figure 2 An Excel spreadsheet with an embedded Active X control (ActiveDSO), supplied by LeCroy, controlling a Waverunner scope via a LAN connection

LeCroy