



## NDT SILVER

Ultrasonic Instrument Control and Inspection Software

- **Multiple Instrument Control** — Controls up to 14 XU-2468 ultrasonic instruments.
- **Time based strip charts** — Up to 4 dual trace strip charts.
- **Run Page** — Test part list, with current part, part description, operator name, and Calibration setup.
- **Instrument Setup** — Full feature instrument setup panels with waveform display.
- **Data Bins** — Configure data combinations and output from the instrument and in NDT Silver.
- **Security Login** — Two level security login feature for standard or key operators.

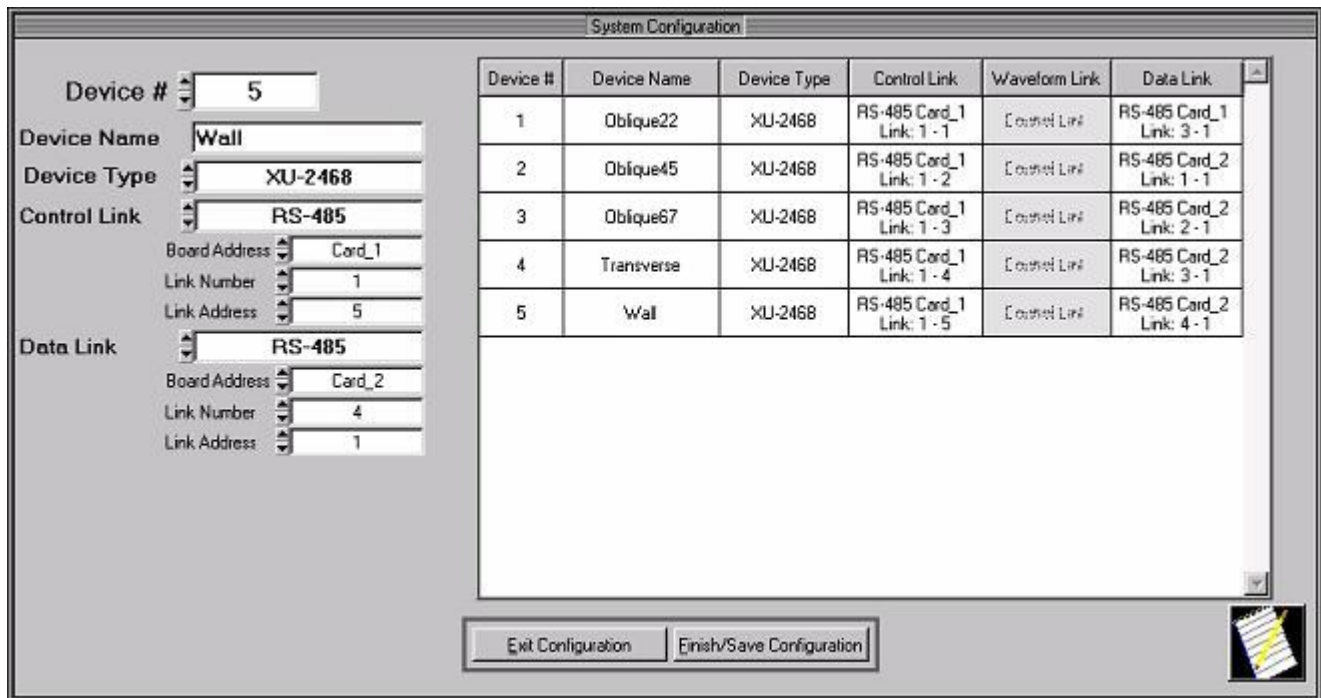


Figure 1: System Configuration Panel (5 Instruments)

NDT Silver is capable of controlling, configuring and acquiring data from up to 14 Xactex XU-2468 ultrasonic flaw detectors. With 8 channels per XU-2468, this results in the possibility of 112 channels of inspection. Available control links include RS-485, RS-232, or USB and data acquisition is done via RS-485.

Silver features four, 600 point, time based strip charts. Each of these charts may have one or two traces of individually selectable colors. In addition to this there is a "Draw to Baseline" and a "Difference" option for the traces. When one of these options is enabled it allows either the area between the trace and the baseline or the area between two traces to be filled in. The difference trace is very handy for creating a wall thickness variance chart. Alarm levels may be set for each trace allowing for alarm conditions to be marked on the chart. With an adjustable time base between 50 milliseconds and 2 seconds, the data density and amount of data that is displayed can be adjusted.

The charts also contain header information including the operator's ID and test part information which, is saved and recalled with the chart information. Figure 2 shows an example scan using 4 dual trace charts. Notice that the fourth chart is a difference chart.

A Run Page supplies a method of entering header and test part information. It allows the entry of a test group name and number plus a test item description and item list. In addition to this, a calibration setup feature gives an entry list for calibration part numbers and a calibration due counter/timer feature. The calibration due feature allows for a calibration due indication to occur for a number of items tested, an elapsed time between items, a total elapsed time, or any combination of the three.

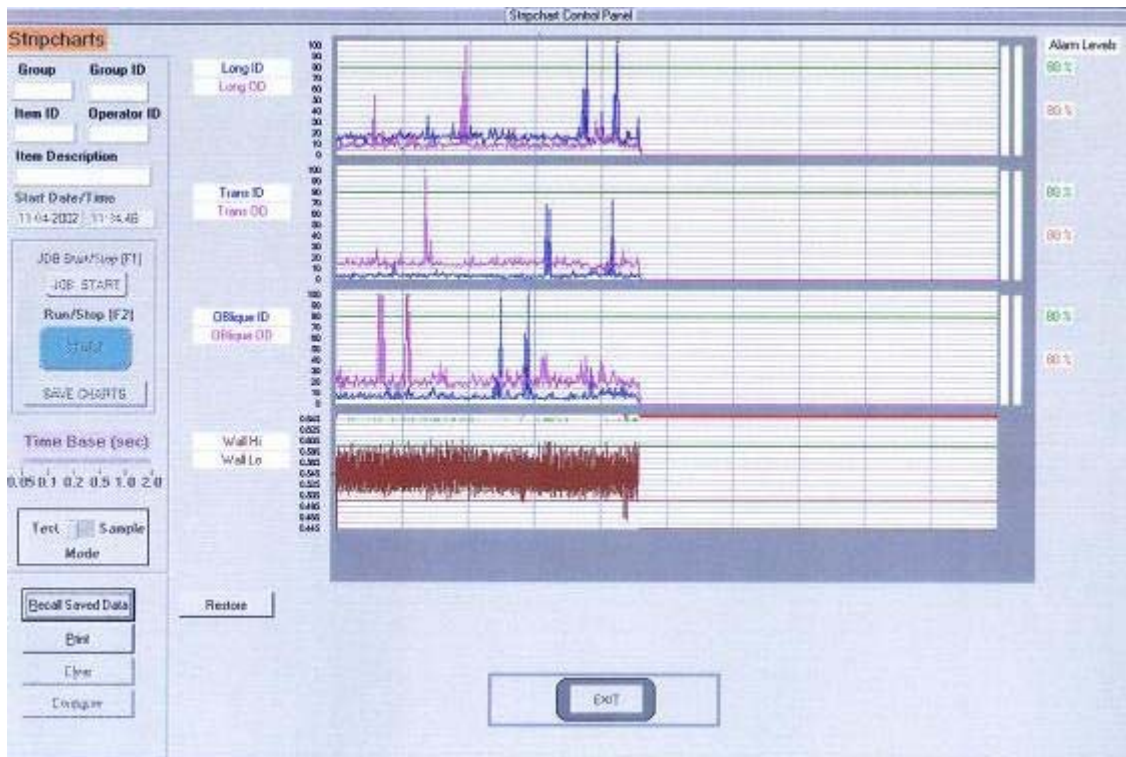


Figure 2: Strip Charts

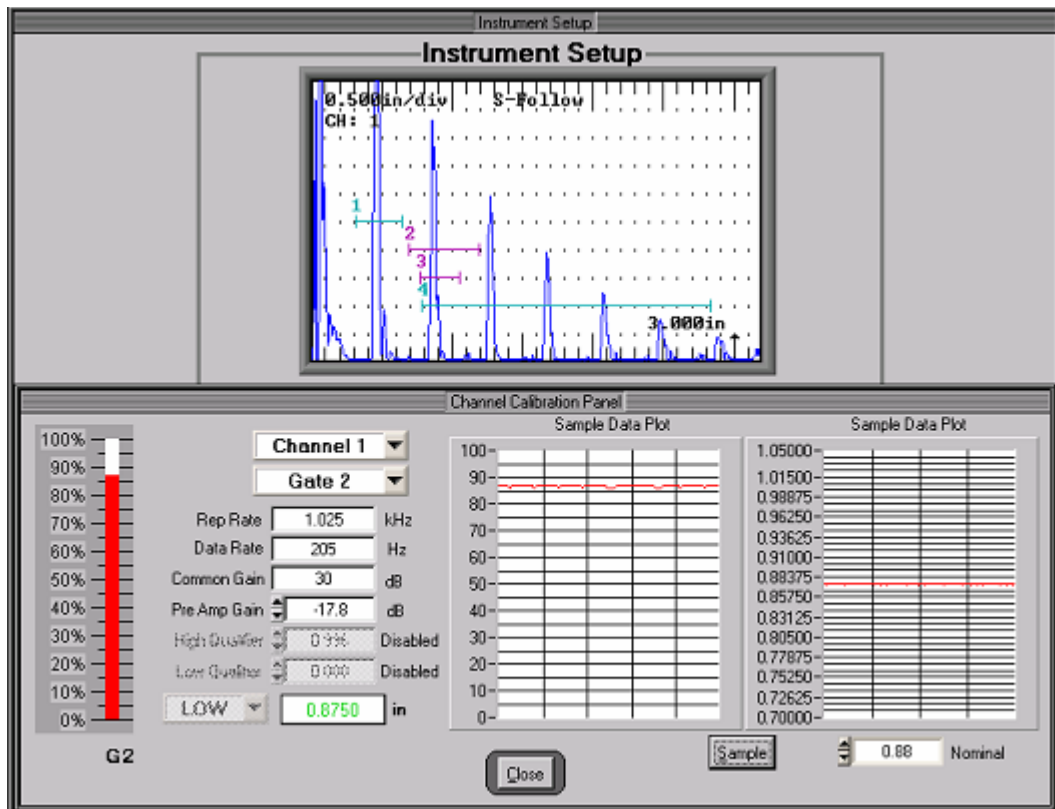


Figure 3: Instrument Setup

A full feature instrument setup, which includes a waveform display, gives the ability to configure and control the instruments remotely. The full color waveform display replicates the waveform on the front panel of the instrument to allow for easier setup and monitoring of the instruments. A number of setup panels give access to the various setup parameters allowing quick and easy adjustments.

In addition, a channel/gate calibration feature is available so that each gate may be checked and an individual gate calibration report can be generated. Figure 3 shows the instrument setup with waveform display and gate calibration panel.

The NDT Silver software also has interfaces for configuring data bins in the instrument and in the computer. These bins are called “Instrument Bins” and “PC Bins”, respectively. An instrument bin is a configuration that tells the instrument what sources that are to be combined, how to combine them, and where to output them. For example, if Gate 1 was enabled as a positive polarity flow gate on all channels, an instrument bin could be configured to output the largest amplitude measurement taken from all those gates to the data link so that it may be acquired by Silver. A PC Bin is a similar bin that resides in the external computer/controller. Its inputs are instrument bins such as the one described above. It takes the outputted instrument bin data and can be used to further combine the data.

For example, if there were 14 instruments in the system and they all had an instrument bin as described above then those 14 bins could be combined to find the highest reading of any Gate 1 in the system. That’s the highest of 112 readings. If all gates on all channels were positive polarity flow gates and all were combined then it would be the single highest reading

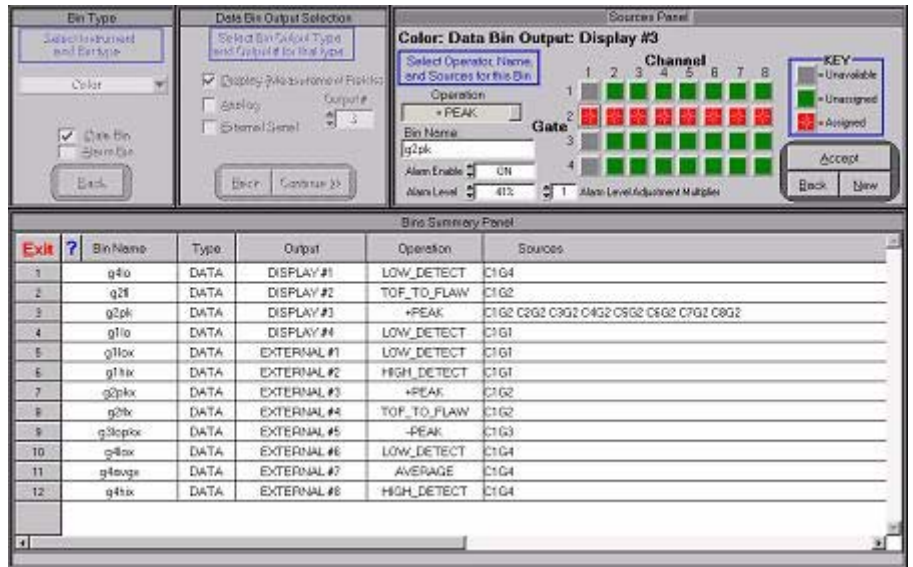


Figure 4: Instrument Bin Setup

from 448 gates. The same can be done for thickness gates allowing the thickest and thinnest measurement to be output as a single value. With this kind of versatility in configuring the sources, these bins can be setup to output nearly any desired combination of gate measurements. If uncombined data is desired, all it takes to get a single gate’s measurement is to assign it as the only source for a bin.

A two stage security login is built into the software to create a separation between a standard user and a key operator. This allows a foreman type person (key operator) to configure the system for the standard operators who have restricted access to the configuration areas of the software.

The software may be set so that a login is not required to access the standard level features. If required however the operators login name is automatically included on the Run Page and strip charts. A key operator login is always required to gain full access.

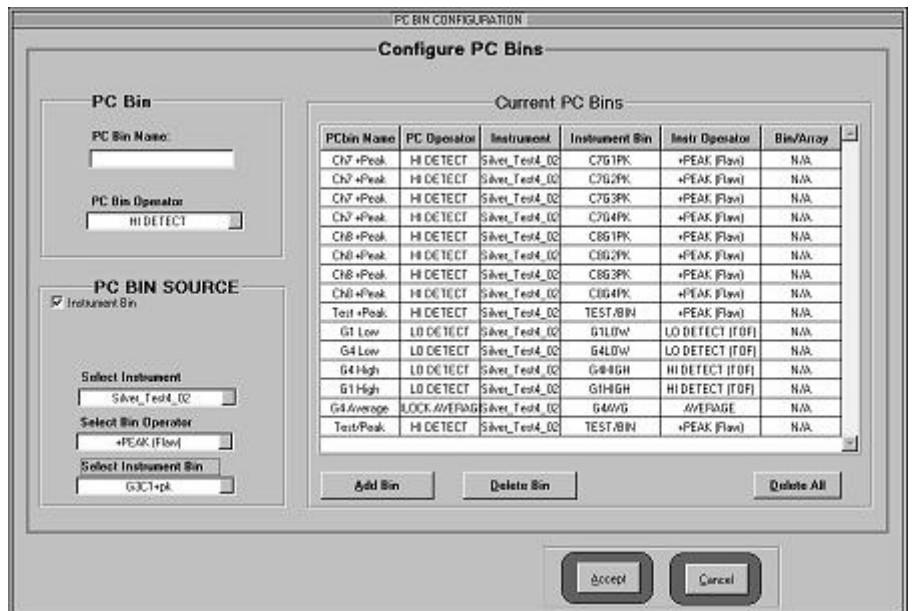


Figure 5: PC Bin Setup

# **NDT Silver**

## **Key Features and Specifications**

### **Communications Specifications**

There is a maximum limit of 14 total instruments for the NDT Silver software. Below is a description of the available connections.

Command Link(s):

- USB 1.1: 10 instruments.
- RS-232: 14 instruments at 9.6K Baud.
- RS-485: 14 Instruments at 500K Baud.

Data Link:

- RS-485: 14 instruments at 500K Baud.

Up to 14 instruments may be connected using any of the above available connections. These connection configurations may be saved and recalled allowing multiple setups to be available for recall depending on the current test.

### **Security Specifications**

Two level security login: Level 1. Standard User, Level 2. Key Operator. Security feature may be set so that no login is required for Standard Users.

Number of Configurable Logins:

- Standard User: 30
- Key Operator: 10

### **Login Log**

The Login Log displays the login name for the operator who is currently logged on and the last operator who was logged on.

### **Instrument Setup**

Full function instrument setup which includes waveform display and multiple panels for setting and adjusting the various parameters of the instrument.

### **Instrument Bin Configuration**

Configuration panel for setting up instrument bins which dictate how gate measurements are combined and output in the instrument.

### **PC Bin Configuration**

Configuration panel for setting up PC bins which dictate how Instrument Bin data is combined in the computer/controller.

### **RunPage**

Configuration panel and display for setting test/header information and test item list. Includes calibration setup

### **Strip Charts**

Configuration panel and display for up to 4 dual trace time based strip charts with individually settable trace colors. Charts include bar graph indicators for each trace and header information as well as chart alarms and the ability to save and recall.

### **File Save/Load**

Instrument setups and system setups may be saved and recalled. This allows multiple test setups or instrument setups to be saved so that they may be recalled for review or for addition testing with the same settings.

### **Minimum System Requirements**

- An IBM® or compatible PC
- Microsoft Windows 2000/XP
- 1GHz PIII/Celeron processor or equivalent 2GHz+ P4 recommended
- 128 MB RAM memory for Windows 2000, 256 MB for Windows XP. RAM of 512 or higher is recommended
- 5 MB of available disk space, not including storage memory
- SVGA or better color monitor with 1024 x 768 screen resolution.

*For more information contact our sales department: (509)545-6364 Ext. 105 or [sales@xactex.com](mailto:sales@xactex.com)*

