instruNet World Plus
Data Acquisition and Control Software
for Use With instruNet Data Acquisition Systems

iNET-iWPLUS

$199

Basic Unit

MADE IN USA

✔ **Upgrade Standard instruNet World Software**
✔ **Process Control Capability**
✔ **Real-Time Data Acquisition and Display**
✔ **Custom Instrument Panels**
✔ **Includes Direct to Excel Program**
✔ **Compatible with instruNet Hardware**

instruNet World Plus is a reasonably priced yet powerful and easy-to-use data acquisition software program for Windows 95/98/NT/2000/XP (not Macintosh). It enables one to digitize, plot, control, analyze, and save to disk A/D, D/A, and digital I/O data from instruNet hardware. Additionally, it enables one to define their own instrument front panel with buttons, popup menus, edit fields, dynamic text, text editor regions, and waveform graphs, as illustrated in Figure 1 on this page.

instruNet World Plus is programmed with a simple script language that can define tasks such as control loops. For example, one can type "Dac1 = OnOff (Ain1, 3)" to define D/A #1 as a function of A/D #1.

instruNet World Plus software adds valuable features to the standard instruNet World (not Plus) software which is included with instruNet hardware.

Generate Analog and Digital Output Waveforms
Define an analog or digital output channel mathematically (e.g. sine wave, square wave, pulse train, etc) that updates in real-time (e.g. every 100 ms).

Custom Instrument Front Panel - Figure 1
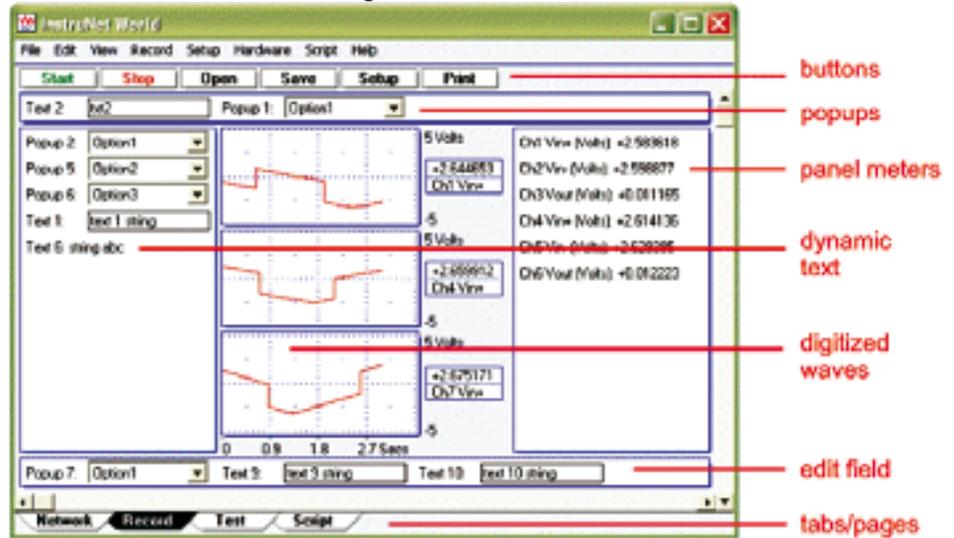
Run Feedback/Control Loops
Define an analog or digital output channel as a real-time function of analog and/or digital input channels (e.g. PID control, on/off control, etc).

Create a Custom Instrument
Create buttons, popup menus, edit fields, dynamic text fields, text edit regions, and pages to build a custom application program.

Powerful Script Programming Language
instruNet World Plus is programmed with a simple BASIC-like script language that provides many feedback/control, waveform generation, math, file, hardware, and user interface functions as summarized below:

add, subtract, multiply, divide, Modulo, cos, sin, tan, acos, atan, atan2, cosh, sinh, tanh, bAnd, bOr, bEor, shift left, shift right, 1's complement, getbit, setbit, clearbit, And, Or, Not, <, >, <=, >=, ==, !=, absolute value, e'th power, natural log, log10, reciprocal, square, square root, x to y'th power, integer, round down, round up, fractional part, minimum, maximum, average,
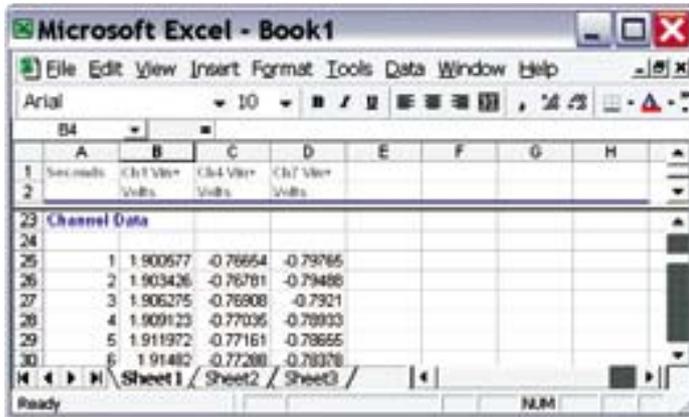
string length, string compare, string search, string to ascii, Sinewave, TriangleWave, SquareWave, PID, PIDL, OnOff, Limit, Alarm, For Next, Goto, If/Elseif/Endif, If...then, Loop, Synchronize, While, Close, Create, Flush, Open, SetMasterDir, SetPointer, SetSize, Write, Read, Debug, End, Execute, Calibrate Hardware, Calibrate Gages, Calibrate Bridges, Calibrate VDividers, Calibrate Vinit, Calibrate Init, Read Channel, Digitize, SetChannel, SetChannelBit, SetField, SetTrigger, Table, Append, Copy, Clear, Define, Delete, Alert, Beep, Delay, Erase, Print, Question, NewPage, NewButton, Press, Select, Show/Hide page, Show/Hide button, CtoF, FtoC, CtoK, FtoK, KtoF

instruNet World Plus Includes Digitize Direct To Excel Software
instruNet World Plus includes the Digitize Direct To Excel program, which populates an Excel (Version >= 8.0, Office >= 97) spreadsheet, (as shown in Figure 2) while digitizing.

Direct to Excel - Figure 2

Create Popup Menus

Front panel popup menus allow the selection of one of several choices in a list, as illustrated in Figure 3. One line of script code reads or sets the position of the popup (i.e. 1 refers to the upper-most item, 2 the one below it, etc). The position, label, and list options are easily set.

Popup Menu - Figure 3

Create Edit Fields

Front panel edit fields allow one to select, view and edit segments of text, as shown in Figure 4. One line of script code reads or sets the text in the same way one would read or write to a string variable. The position, label, and initial text are easily set.

Edit Field - Figure 4

Create Dynamic Text Fields

Front panel dynamic text fields allow one to view non-editable segments of text, as shown in Figure 5. One line of script code sets the text in the same way one would write to a string variable. The position, label, and initial text are easily set.

Dynamic Text Field - Figure 5
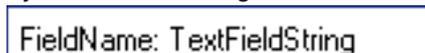
Create Buttons

One can easily create buttons that execute script code when pressed (e.g. "Button 1" shown in Figure 6.) The position, label, and script text are easily set.

Create Buttons - Figure 6

Create Text Editor Pages

In instruNet World Plus, a "page" is similar to a "sheet" in Microsoft Excel. One clicks on a tab at the bottom of the window (note the tabs in Figure 7) to show a different set of front panel items (e.g. popup menus, text editor, edit fields, etc). For example, in a simple case, one might create a page called "Help" that when selected, displays documentation on how to use the instrument. Figure 7 shows 2 user defined pages, labeled "Page 1" and "Page 2", where Page 1 is currently selected and contains a text editor region that shows the text "One can type text here…".

Test Editor Page - Figure 7
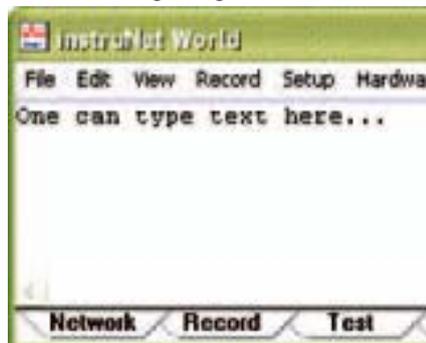
Save Waves to Excel

instruNet World Plus provides a menu command called "Save Waveforms To Excel" that saves all waves into one large text file that can be loaded by Microsoft Excel, post-acquisition, where each wave is given its own column.

Print Waves and Text on Hard Copy Printer

Print text and waveforms directly to a printer.

Display Time of Day Under Waves

Display waveforms relative to the Date and Time of Day. For example, in Figure 8, the first grid corresponds to June 11, 2003, 6:12pm + 31 seconds. Without instruNet World Plus waves are always displayed relative to the start of digitization.

Time of Day Under Waves - Figure 8

Adjust Horizontal Scale While Digitizing

A front panel popup menu (refer to Figure 9) adjusts the displayed horizontal scale (i.e. time per plotted horizontal division) while digitizing. In the standard version of the instruNet World software (not Plus), this is set automatically, or via the Record Setup dialog.

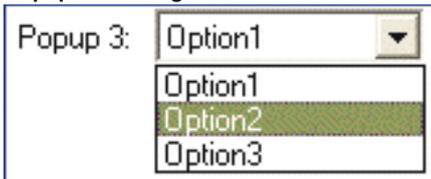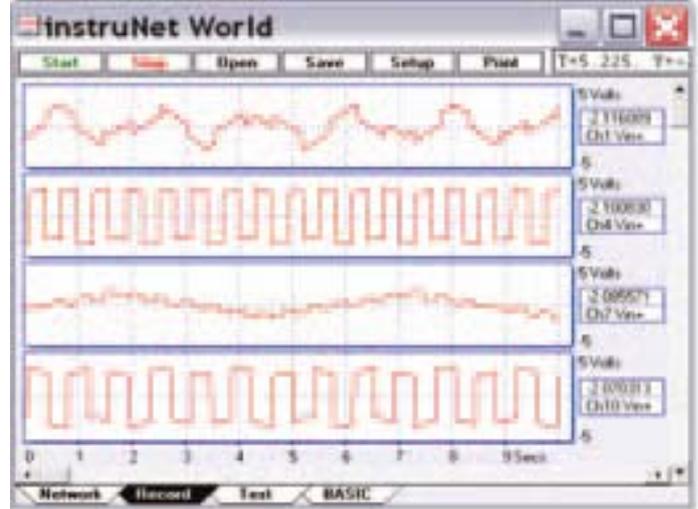**Adjust Time of Day While Digitizing - Figure 9**

Copy the Setup of One Channel to Many Channels

Setting up many channels manually can be somewhat laborious. instruNet World Plus automates this with a command that copies the setup of one channel (e.g. to a thermocouple, strain gage, etc) to multiple other channels.

Network Page

Record Page

Test Page

Script Page

Digitize in Background While Working in Other Programs

Digitize and implement feedback/control loops in instruNet World while working in other application programs (requires Windows 2000/XP). For example, one can type in a Microsoft Word window while instruNet World Plus digitizes and controls outputs. Also, one can minimize the instruNet World Plus window (i.e. click on window title bar upper right corner "_" icon to place minimized instruNet World Plus window on desktop application bar) while it operates in the background.

Examine Wave With Cursor - Figure 10
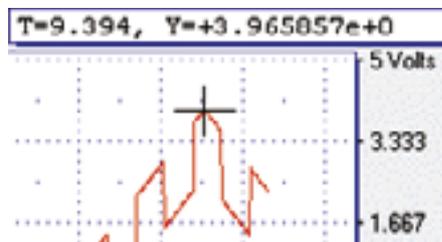
Examine Waveform Values With a Cursor

Use the mouse to move a waveform cursor while numerically viewing the time and waveform value at that cursor position, as illustrated in Figure 10.

Available for Fast Delivery!

To Order *(Specify Model Number)*

Model Number	Price	Description
iNET-iWPLUS	$199	instruNet World Plus software license for one instruNet controller card (includes CD and license certificate)

Ordering Example: iNET-iWPLUS instruNet World plus data acquisition and control software, $199.

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