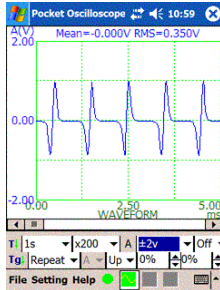


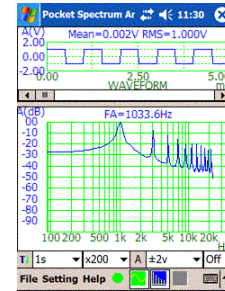
Pocket Multi-Instrument 1.0

Turn a Pocket PC into Multiple Virtual Instruments!

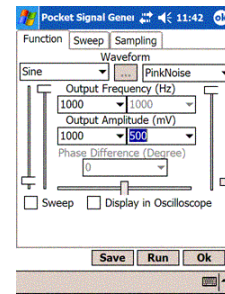
Oscilloscope



Spectrum Analyzer



Signal Generator



Specification

Scan Time	100μs~500s
Sampling Rate*	Max. 96kHz
Bandwidth*	20Hz~48kHz
Bit Depth*	8, 16
Voltage Range*	-1V~1V
Input Channel*	Ch.A, Ch.B
Output Channel	Ch.A, Ch.B
Trigger Mode	Auto, Normal Single
Trigger Edge	Rising, Falling
Trigger Delay	Pre, Post
Trigger Source*	Ch.A, Ch.B
FFT Size	128~32768
Window Func.	5 types

* sound card dependent

Introduction

Pocket Multi-Instrument is a powerful Pocket PC based multi-function virtual instrument software. It consists of an oscilloscope, a spectrum analyzer and a signal generator, all of which can run simultaneously and in real time.

It has been widely used in education, scientific research, audio engineering, electronic engineering, medical diagnosis, musical instrument inspection, etc.

Oscilloscope

View Type

- Waveform for Ch.A and Ch.B
- Waveform for Ch.A + Ch.B
- Waveform for Ch.A – Ch.B
- Lissajous Plot

Statistical Data Display

Max, Min, Mean, and RMS values of each data frame will be displayed in the oscilloscope.

Spectrum Analyzer

View Type

- Amplitude/Power Spectrum
- Phase Spectrum
- Auto Correlation Function
- Cross Correlation Function

FFT Size vs Record Length

If the FFT size is greater than the record length of a data frame, then zeros will be padded at the end of the data frame during FFT computation.

If the FFT size is less than the record length of a data frame, then the data frame will be split into different segments with the size of each segment equal to the FFT size. The last segment of data will be

dropped if its size is not equal to the FFT size. The final result will be obtained by averaging the FFT results from all segments.

X Scaling

- Linear
- Log

Y Scaling

Relative Mode

- Linear
- dBr

Absolute Mode

- Vrms
- dBV

Signal Generator

Waveform

- Sine
- Rectangle
- Triangle
- Saw Tooth
- White Noise
- Pink Noise
- Multi-Tones
- Arbitrary waveform

Frequency Sweep

- Linear
- Log

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Loopback Mode

Loopback is generally used to feed the signal output by the signal generator to the input of the oscilloscope, so that the output signal can be displayed and analyzed in real time.

Hardwired Loopback

It is established via an external cable, to loopback the output signal to the input of the oscilloscope.

Software Level Loopback

- No Loopback
- Display in Oscilloscope
The signal from the output Ch.A is fed into the input Ch.A and the signal from the output Ch.B is fed into the input Ch.B.

General Functions

Calibration

The software supports the calibration of input and output channels so that absolute values in engineering units can be used for display, analysis or export.

Graph Operation

Zooming and Scrolling is supported in all graphs, allowing you to investigate the fine details of the data. This is very important when a large amount of data are displayed in one screen.

Two markers are provided in each graph to get the x and y readings at the points of the mouse clicks.

The colors of the graph are configurable. Options are provided to either display all data points (slow) or only display one data points per vertical raster line (fast).

File Import and Export

The collected frame of data can be saved as a wave file (*.wav)

or exported as a text file (*.txt). All analysis results can be exported as text files (*.txt).

Wave files with PCM format can be imported for analysis.

The signal generated by the signal generator can be saved as a wave file or a text file for a given duration of up to 1000 seconds.

Save and Load Panel Setting

You can save your preferred instrument panel setting either as default or as a customized panel setting for later use.

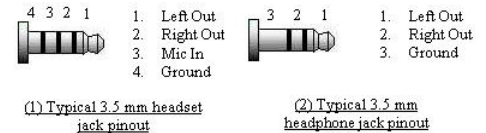
Controls/Options Enabling and Disabling

Graphical User Interface items such as menu items, button, combo box, edit box, radio box, check box are enabled/disabled based on context, so as to void any mis-understanding and mis-operation.

System Requirement

Pocket PC with Windows Mobile 2003 or above. Screen resolution is recommended to be 320 x 240 or 640 x 480 pixels.

The software accepts input from either the built-in microphone or external device connected via the external microphone pin in the headset jack. Almost all Pocket PCs have a built in microphone. But only some Pocket PCs support external microphone. Pocket PCs that support external microphone are: Dell Axim X50, X51 series, HP iPAQ 4700, 5400, 5500, 6300, 2700, 100, 200 series.....The typical pin assignment for a 4-pin headset jack and a 3-pin headphone jack is shown as follows.



P601PPC Probe Kit

- Maximum Allowable Input Voltage: **±24 V**
- Built-in input protection circuit ensures its output to be less than 3V at all time, provided the input voltage is within the allowable range.
- Three switchable attenuation positions: 1, 2, 3, with input impedance equal to 1kΩ + Zsc, 201kΩ + Zsc, 10.001MΩ + Zsc, respectively. Note that Zsc is the sound chip input impedance which ranges from 600Ω to 50kΩ typically.
- Its back end is a RCA plug and can be connected to a 3.5 mm headset / headphone jack via a HeadsetJack-to-3RCA converter as shown in the figure below.



Reasons to buy

- Unique software trigger algorithm to ensure no trigger event is missed
- Unique algorithm to ensure super stable waveform display for periodic signals
- Super fast screen refresh rate.
- Super flexible in DSP algorithm configuration
- Most ergonomically designed GUI
- FREE upgrade in the same software class for life.

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