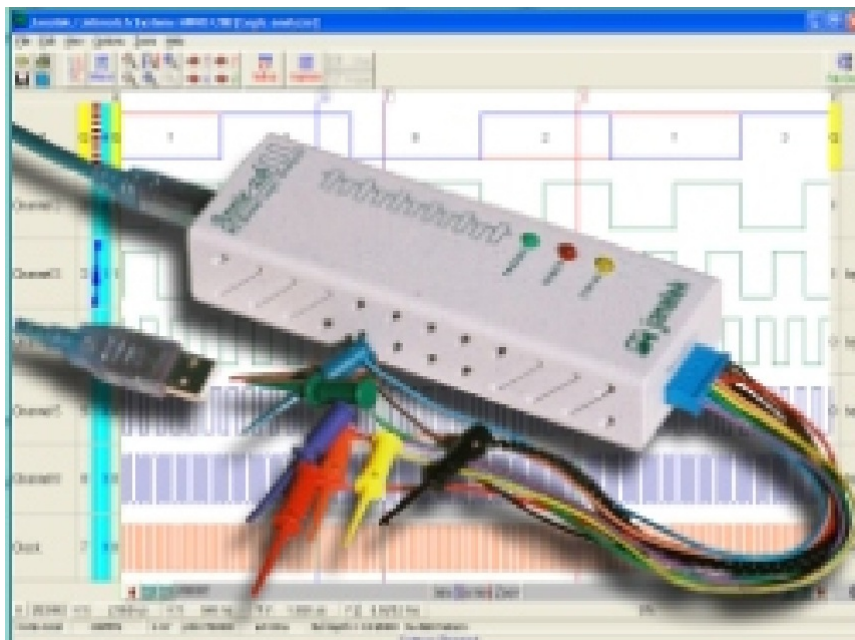


## PC Based Logic Analyzer



### Affordable quality

As with all Janatek instruments, the main design goal in the development of the Annie-USB was to produce a high quality product, at an affordable price. Much care was taken to ensure that accurate measurements can be taken with the very best signal integrity. This ensures that the user can have full confidence in measurements while debugging digital hardware. The 500MHz maximum sampling rate provides a sampling resolution of 2 ns between data samples, allowing analysis of small time differences between signals. The huge 1 Meg samples per channel buffer depth enables the user to capture lower frequency signals at high sampling rates, without the loss of sampling resolution on higher frequency signals that are present. The Annie-USB connects to the PC via USB2 in its high speed mode ensuring that the large amounts of captured data can be moved quickly to the PC for rapid display updates. Slow varying signals may be captured using the digital

logger. The Annie-USB can change its functionality from a logic analyzer to become an 8-channel pattern generator. In this case it can, for example, be used to produce signals to simulate serial data

streams or general control sequences to debug communications ports. The software is mature and presents the wide spectrum of features in an intuitive way, making it extremely easy to use. Setting a trigger condition, capturing data and navigating through it, is a pleasure. The data may be viewed, saved and printed in various useful formats.

### Key features

- ▶ 8 Channels
- ▶ 500 MHz maximum sampling rate
- ▶ 1 Meg Samples/channel data buffer maximum
- ▶ 8-bit pattern generator
- ▶ Variable input threshold
- ▶ Digital logger
- ▶ Flexible trigger options - including glitch capture
- ▶ External clock input
- ▶ Post trigger delay function
- ▶ Connects to PC via USB port
- ▶ High speed (USB2) data transfer rate
- ▶ Quality SMD grabber test clips
- ▶ No external power supply required
- ▶ User-friendly software
- ▶ Runs on Windows 98/ME/2000/XP/...
- ▶ CE compliant

A logic analyzer is an essential debugging tool during the development of digital circuits. The Annie-USB offers high performance, excellent value for money and ease of use

# PC Based Logic Analyzer

## Technical Specifications

Internal sampling rates	: MHz: 500, 200, 100, 50, 25, 10, 5, 2.5, 1; kHz: 500, 250, 100, 50, 25, 10, 5, 2.5, 1.25
Digital inputs	: 8 Inputs, 0 to 7V, 250KW/8pF minimum input impedance, 50 MHz input bandwidth
Data buffer	: 1 Meg samples/channel for 200 MHz sampling rate and below. 3K Samples/channel for 500MHz sampling rate.
Pattern Generator	: [Available on Model AU1M500P]
Pattern source	Pattern editor or user file
Nr of channels	8
Data to output clock	25MHz max
Min. input impedance of load	4k7/100pF
Modes of Operation	Single/Continuous
The output voltage level	Adjustable: 2.5 to 4.6V
Connection to PC	: USB 2.0 High Speed Mode (USB 1.1 Full Speed compatible)
Trigger conditions	
Pattern	"1", "0" and "don't care" conditions selectable on all channels
Edge	On any one channel. Rising edge, falling edge, or change of state
Edge/Pattern combinations	Edge and pattern triggering may be combined for single captures or for conditionally continuous capture. Pattern, rising edge, falling edge, Change-of-state Pattern OR/AND/THEN edge up/down/change-of-state. Edge up/down/change-of-state OR/AND/THEN pattern Pattern < duration (glitch capture)
Continuous	: Unconditionally: Display updates on detecting a trigger condition
Mouse/Keyboard	: A trigger may be forced
Digital logger	: 1 Second to 1 hour sampling rates.
Threshold voltage	: 1.2V to 2.2V in 0.1V steps
Extended capture time	Depending on the sampling rate. At 200MHz: 80 ms max ... 1.25KHz: 1677s max
Pre-/Post trigger buffer setting	: The pre-/post-trigger buffer relation may be changed in 1000 samples steps.
Software Environment	
Windows	: Windows 98/ME/2000/XP ... or later compatible versions. Run the Annie-USB and the Unit Under Test in different Windows simultaneously.
Ease of use	: The software is very easy to use. Most functions are directly selectable via a button bar on the main screen.
Display	:
No. of channels:	: Any number of channels may be displayed.
Channel/group names	: User specified signal/group names. Grouped channel values may be displayed in HEX, decimal or Ascii.
Display order/colours	: User specified
Zooming	: Zoom in/out/previous/all/between cursors
Single capture	: Captures a single set of data
Continuous capture display	: Unconditionally: Continuously captures and displays data at a fixed update period. Conditionally: Updates the display each time a specified edge or pattern trigger condition is met.
Cursors	: Various for time measurements, indicating the trigger point, etc.
Time measurements	: The time differences between any two cursor lines or trigger line may be displayed. Take measurement easily by clicking mouse on first edge and on second edge to get the time difference. The time difference may also be indicated as a frequency.
Edge snapping	: Cursors (X, Y & Z) snap to signal edges for accurate time measurements. Snap indicators
Pattern search	: Any channel conditions may be searched for. 1, 0 and don't care conditions specified. Search from start/cursors, repeated search
Printed output	: The timing diagrams, bitmaps, binary and hex data, may be printed. Landscape and portrait.
Power requirements	: 2.5W Max (Capturing data). The Annie-USB is fused with a 1.6A (or less) resettable fuse.
Power supply	: +5V obtained from USB port.
External clock	: Synchronized capturing into linear/ring buffer. Starting from trigger/immediately. Free running: 25Mhz Max. Synchronised capture: 10 MHz Max. Clock on up, down or up and down clock edges
Unit dimensions/weight	: 150mm x 50mm x 26mm, 125 g

# PC Based Logic Analyzer

## Flexibility

Easily capture the exact data you want to view. Edge triggering may be set to occur on a rising edge, falling edge, or change-of-state on any channel. Pattern (level) conditions are set by specifying a "1", "0" or "X" (don't care) condition on all channels. Combinations such as Edge OR Pattern, Edge AND Pattern, Edge THEN Pattern, Pattern THEN Edge, etc. may be set. Pattern durations may be set to trigger when shorter (glitch capture), or longer than a specified period.

A "post trigger delay" function allows the final data capture to be postponed by an accurate time after trigger detection. During continuous capture, the screen may be updated at regular intervals or when a trigger condition occurs.

An external clock input allows synchronized capture on the clock's rising, falling, or both rising and falling edges into a ring or straight buffer, starting from the first clock pulse or from a trigger condition.

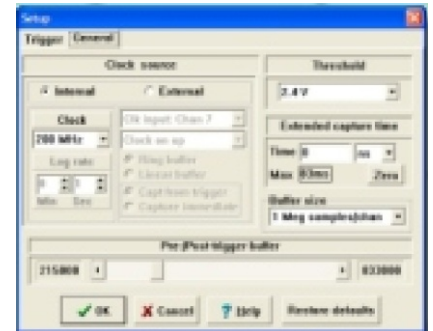
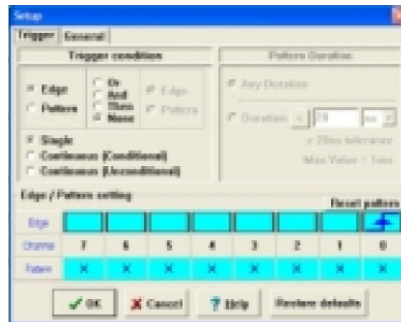
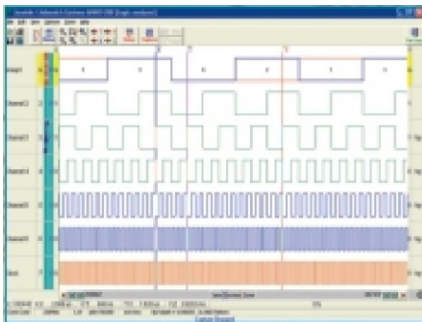
Also Available .....

## PC BASED LOGIC ANALYZER

A logic analyzer is an essential debugging tool during the development of digital circuits. The Annie-USB offers high performance, excellent value for money and ease of use.

### Key features

- 16 Channels
- 200 MHz sampling rate
- 1 Meg Samples/Channel data buffer
- Flexible trigger options - including glitch capture
- External clock input
- Extended capture time function
- Variable input threshold
- Variable pre-/post trigger buffer sizes
- Digital logger
- Plugs to the USB port
- No external power supply
- User-friendly software
- Runs on Windows 98/ME /2000/XP/...
- CE compliant



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