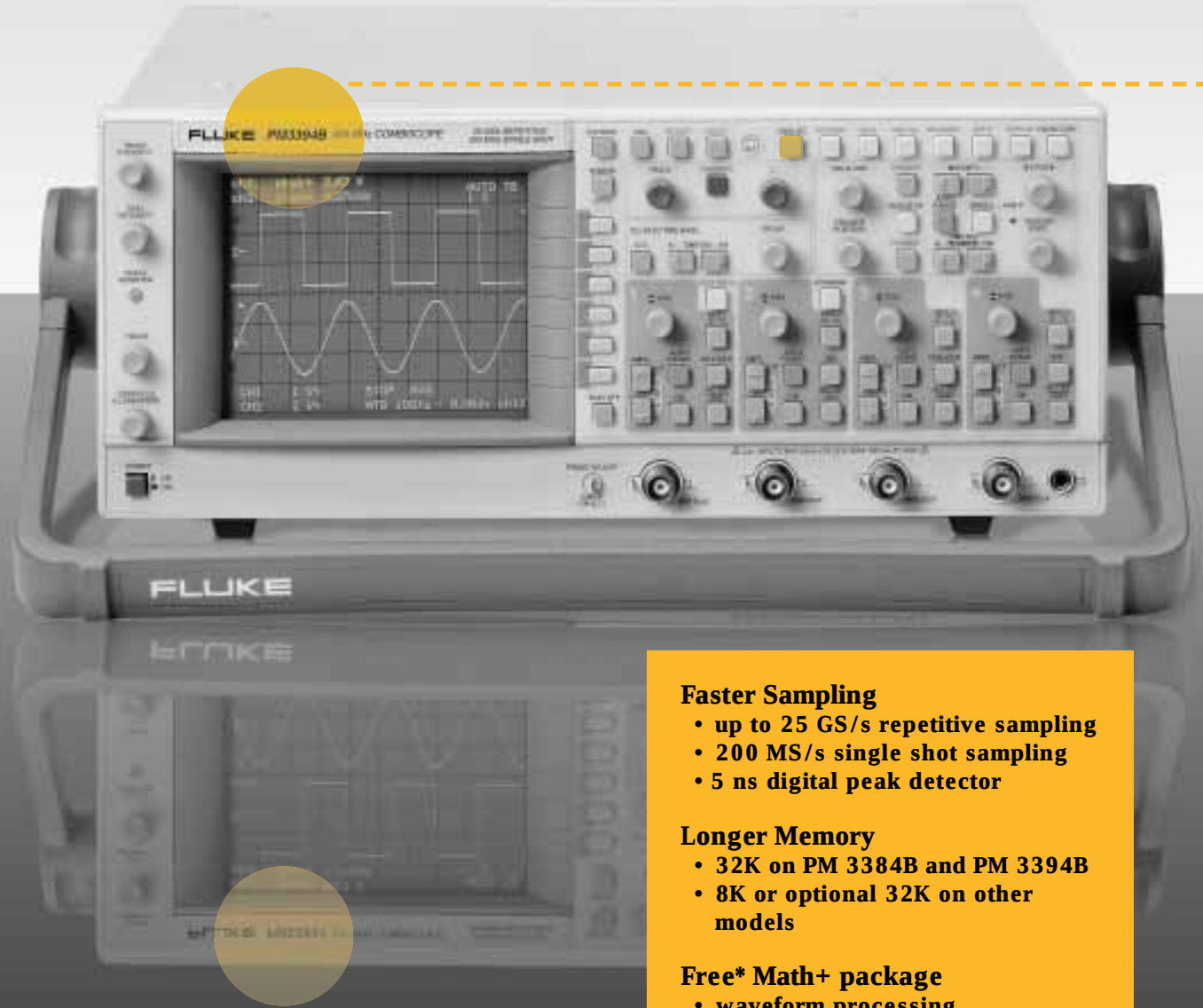
FLUKE®

The Best of both worlds just got Better...

Fluke CombiScope™ B-Series



Faster Sampling
- up to 25 GS/s repetitive sampling
- 200 MS/s single shot sampling
- 5 ns digital peak detector

Longer Memory
- 32K on PM 3384B and PM 3394B
- 8K or optional 32K on other models

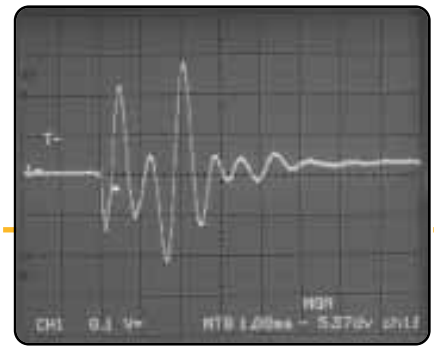
Free* Math+ package
- waveform processing
- additional analytical capabilities

* Valid until February 28, 1997.

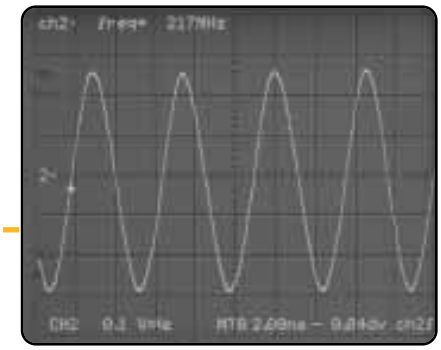
New CombiScope™ B-Series

Added value, added power
Fluke CombiScope instruments are a powerful combination of a genuine analog oscilloscope and a powerful digital oscilloscope in one instrument. There are five models in the CombiScope B series: three 2-channel models with bandwidths of 60, 100 or 200 MHz, and two 4-channel models with 100 or 200 MHz bandwidth. Instruments now have 25 GS/s Sampling Rate for repetitive signals, and 200 MS/s sampling of single-shot events. You'll find 32K deep memory standard on the PM 3394B and PM 3384B models, and 8K on other models. And even there 32K is optional. But we've added even more for your convenience: the Fluke CombiScope B series now comes with a free Math+ firmware package — a powerful capability not normally found in this class of instruments.

Deep memory
The long acquisition memory allows you to scroll through time windows up to 64 screens wide, for convenient viewing of single shot events. Alternatively, you can have a higher time axis resolution across a single screen. This allows you to zoom in and study a particular part of the waveform, e.g. to analyze glitches that might otherwise have escaped your attention.



Fast Sampling Rate
For repetitive signals, the CombiScope PM 3390B and the PM 3394B have a Sampling Rate of no less than 25 GS/s. Repetitive sampling produces very high time resolution by reconstructing the waveform from different cycles. In this way, you can view repetitive signals at a much higher resolution than would be possible with traditional sampling techniques.



	PM 3370B	PM 3380B	PM 3384B	PM 3390B	PM 3394B
Number of channels	2	2	4	2	4
Bandwidth	60 MHz	100 MHz	100 MHz	200 MHz	200 MHz
Repetitive sampling rate	10 GS/s	10 GS/s	10 GS/s	25 GS/s	25 GS/s
Single-shot sampling rate	200 MS/s	200 MS/s	200 MS/s	200 MS/s	200 MS/s
Digital peak detector	5 ns	5 ns	5 ns	5 ns	5 ns
Maximum acquisition Length per channel	8K, 32K optional	8K, 32K optional	32K	8K, 32K optional	32K

Memory PM 3370B, PM 3380B and PM 3390B				
	standard memory			
Acquisition length	1 ch. x 8K	2 ch. x 4K	2 ch. x 2K	2 ch. + Trig. View x 512
Max. trace storage	3 traces	6 traces	9 traces	27 traces
	extended memory (optional)			
Acquisition length	1ch. x 32K	2 ch. x 16K	2 ch. + Trig. View x 8K	2 ch. + Trig. View x 512
Max. trace storage	3 traces	6 traces	9 traces	153 traces
Memory PM 3384B and PM 3394B				
	aquisition memory is 32K			
Acquisition length	1 ch. x 32K	2 ch. x 16K	2 ch. x 8K	4 ch. x 512
Max. trace storage	3 traces	6 traces	12 traces	204 traces

The Math+ package

All CombiScope instruments can add, subtract and multiply waveforms, and apply digital filtering. The Math+ DSP (Digital Signal Processor) adds advanced mathematical processing of waveforms, as well as a range of other practical features, such as pass/fail testing, amplitude qualified cursors and much more powerful, high-end capabilities.

Waveform processing

Waveform processing as found in the Math+ package means substantial time saving and additional analytical capabilities. The built-in DSP can run two mathematical operations at any time, on any waveform. Resulting in a screen update-rate that is close to real-time. Using your CombiScope B with Math+ package you can make measurements that would have been impossible with an ordinary scope, such as dissipation analysis, or calculating the momentary power waveform from a digitally filtered input signal.

Fast Fourier Transformation

Fast Fourier Transformation (FFT) converts the conventional amplitude versus time display into the frequency spectrum of the waveform. This information is vital for, e.g., analysing cross talk or measuring distortion. And the integrated FFT capabilities of your CombiScope Math+ package make postprocessing of scope data in a PC obsolete.

Integrate and differentiate

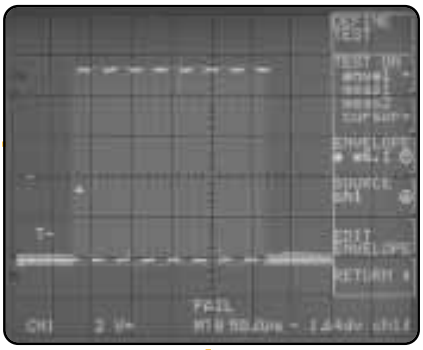
What you measure is not always what you want to know, since many transducers produce an output that is proportional to the change of the input signal. Integrating the output signal of an accelerometer, for example, will produce displacement over time on the oscilloscope screen. Another example is converting the instantaneous power curve {U(t) * I(t)} into the dissipation curve. Differentiation of input waveforms will reveal the amount of change in the input signal. This can be used, for example, to predict the effect of AC coupling and crosstalk in electronic circuits.

Multiple single shot mode

The CombiScope B-Series offer a unique multiple single shot mode. Now you can capture a series of single shot recordings of a waveform and store them for later analysis or comparison. This is a most valuable feature, for example to find all malfunctions that occurred during long-term monitoring without you constantly having to watch the screen.

Pass/fail testing

You can test waveforms against pre-defined reference templates - increasingly used in in-line testing - and take go/no-go decisions. You can create the templates on-screen or download them from a PC. A dedicated output indicates faulty waveforms, which allows the CombiScope to be integrated within an automated test environment. The instrument can also perform pass/fail tests on a wide range of standard measurements, including amplitude peak-to-peak, DC value, RMS value, rise time and frequency.



Clever cursors

The Math+ package includes 'amplitude qualified cursors', a handy toolbox to generate customer specified test set-ups. You can now define the 0% and 100% reference levels on a waveform for both cursors independently. Then you have them search the waveform for any level you specify, in the range -50% up to +150% with respect to the reference levels. The scope will place the cursors automatically at the specified level crossing, independent of the actual waveform amplitude, and read the time distance. This way you can perform fully automatic testing of even the most complicated waveform parameters, such as diode reverse recovery time.

Ordering Information

Fluke PM 3370B This cost effective entry-level instrument is the obvious choice for two channel applications up to 60 MHz bandwidth. Sample Rate 10 GS/s for repetitive signals, 200 MS/s single shot. Acquisition memory 8 K, optional 32 K.

Fluke PM 3380B The industry standard 100 MHz, 2 channel PM 3380B is the perfect balance between bandwith, sample speed and memory depth of 8 K, 32 K optional. Sample Rate 10 GS/s for repetitive signals, 200 MS/s single shot.

Fluke PM 3384B This is the model of choice for 100 MHz, 4 channel applications. Acquisition memory 32 K. Sample Rate 10 GS/s for repetitive signals, 200 MS/s single shot.

Fluke PM 3390B This model gives you 200 MHz bandwidth when 2 channels are sufficient; Sample Rate 25 GS/s for repetitive signals, 200 MS/s single shot.

Fluke PM 3394B The flagship model PM 3394B is the ultimate trouble shooting oscilloscope. With 200 MHz bandwidth, a Sample Rate of 25 GS/s for repetitive signals, 200 MS/s single shot, full 4 channel operation and 32 K acquisition memory you will get the most versatile scope on the market today.

This document supersedes the information for CombiScope A Series instruments.

Optional configurations

When orderering, select the basic typenumber and add one of the following option numbers as a suffix.

For PM 3370B, PM 3380B and PM 3390B

/02n basic version, including Math+
/08n basic version, including Math+ and Extended Memory
/42n including Math+ and IEEE-488 (GPIB/IEEE-488.2 interface with SCPI)
/48n including Math+, IEEE and Extended Memory
/93n including Math+, IEEE and Auxiliary Outputs
/99n including Math+, IEEE, Extended Memory and Auxiliary Outputs

Auxiliary Outputs option comprises: CH1 Y-out, MTB Gate, DTB Gate.

For PM 3384B and PM 3394B

/08n basic version, including Math+ and Extended Memory
/48n including Math+, IEEE and Extended Memory
/99n including Math+, IEEE, Extended Memory and Auxiliary Outputs

Auxiliary Outputs option comprises: CH1 Y-out, MTB Gate, DTB Gate, External Trigger input.
All options are factory installed only.

Fluke Corporation
PO Box 9090, Everett, WA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD Eindhoven, The Netherlands

For more information call:
In the U.S.A.: (800) 443-5853 or Fax: (206) 356-5116
In Europe: +(3140) 644200 or Fax: +(3140) 644222
In Canada: (905) 890-7600 or Fax: (905) 890-6866
From other countries: (206) 356-5500