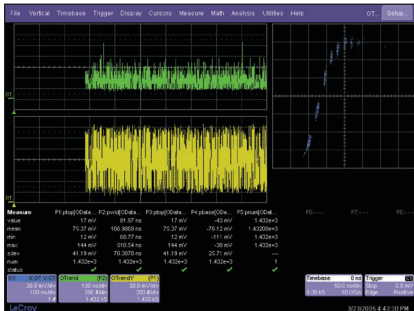
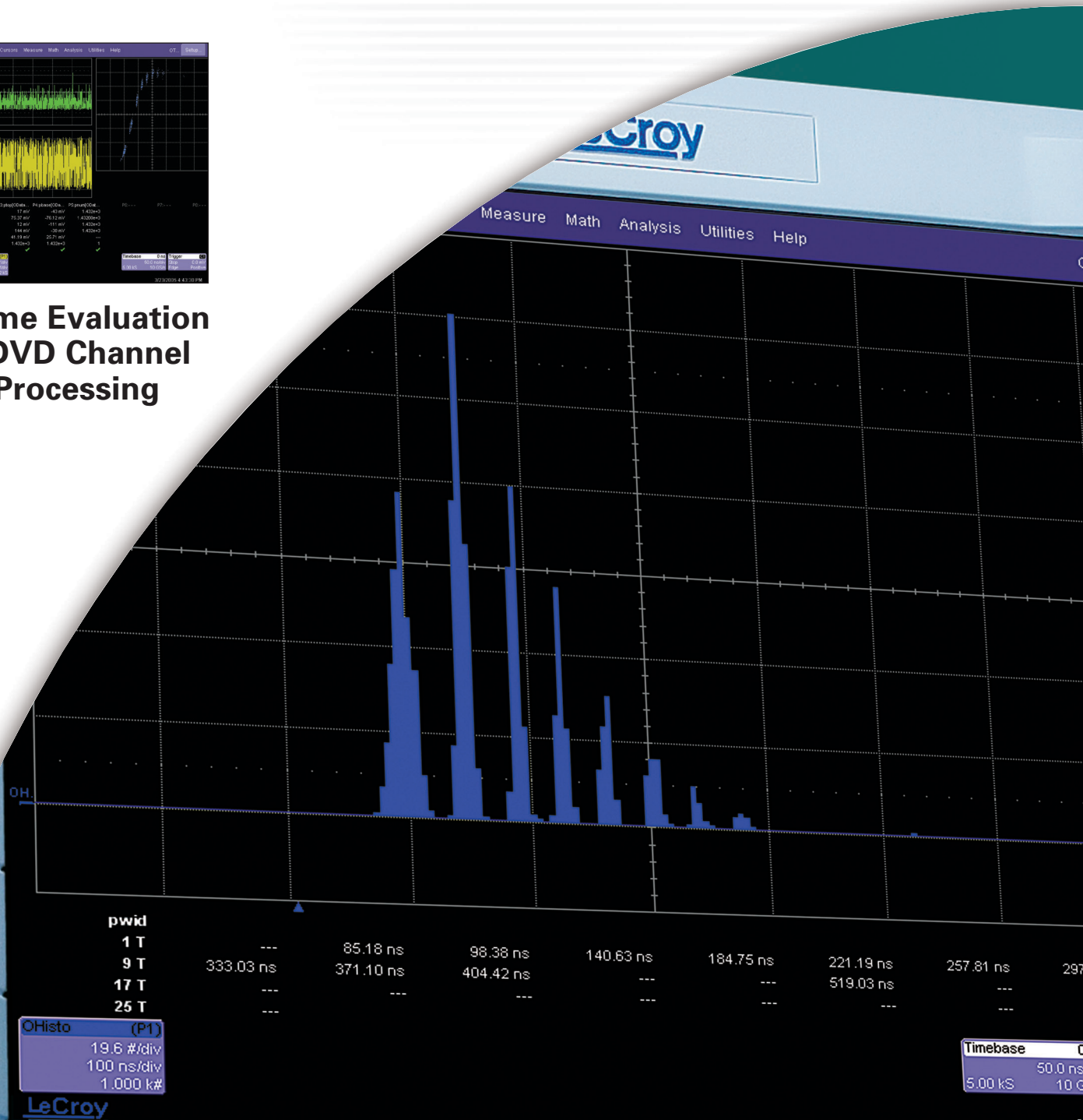


LeCroy

AORM



Real Time Evaluation of CD/DVD Channel Signal Processing



waveMASTER™ 8620A

6 GHz Oscilloscope

Quad 20 GS/s

A Precise, Accurate Characterization Tool

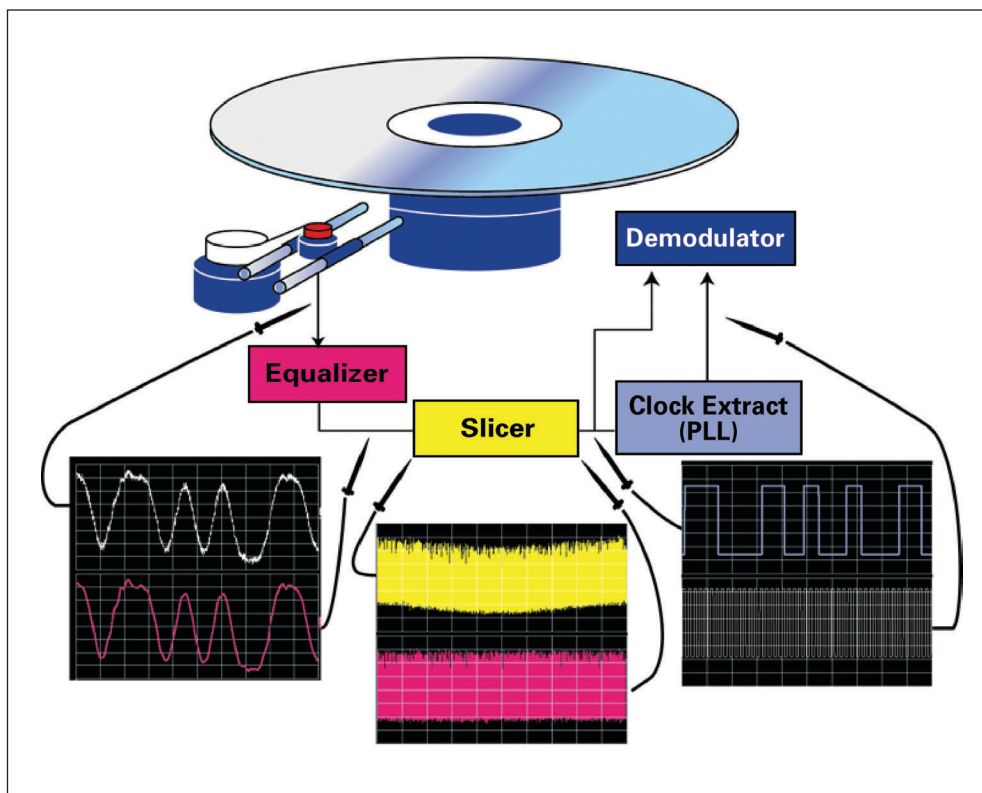
The AORM software package is now available in the new-generation high performance DSOs (WaveMaster®, WavePro®, SDA, and DDA Series). In addition to all the ORM/AORM features supplied in legacy scopes for nearly ten years, the AORM option in our new-generation X-Stream DSO environment provides a completely

updated user interface and improved debug tools written to support ever-increasing read/write data rates and larger media capacity required for the latest CD and DVD implementations. Typical applications include game box technology and high-capacity DVD Read/Write.

The unique combination of deep acquisition memory available in LeCroy DSOs and the flexibility of AORM in adapting to optical recording standards provides the user with ultimate measurement accuracy and 2-dimensional correlation of recording parameters.

CD and DVD Channel Emulation

In AORM, channel emulation enables real-time signal processing in software. Responding to innovations in optical disk drive technology, LeCroy DSOs feature a software package designed to interface with existing CLV (constant linear velocity) type systems as well as new CAV (constant angular velocity) type systems used for hard disk drive and high-speed CD-ROM applications. AORM is also compatible with ZCLV (zoned constant linear velocity) systems used in DVD drives.



This figure depicts a block diagram of signal processing in optical disk drive. AORM software extracts baseline fluctuation and slices the RF signal to generate a binary signal. Then the software PLL extracts clock content from the incoming binary signal, and the decoder decodes from binary signal timing referred to the clock.

Histogram, Trend, and XY Parametric Views

As hardware designers are quick to recognize, measurement results often need to be summarized and tabulated for quick interpretation. DSO technology further enhances AORM functionality:

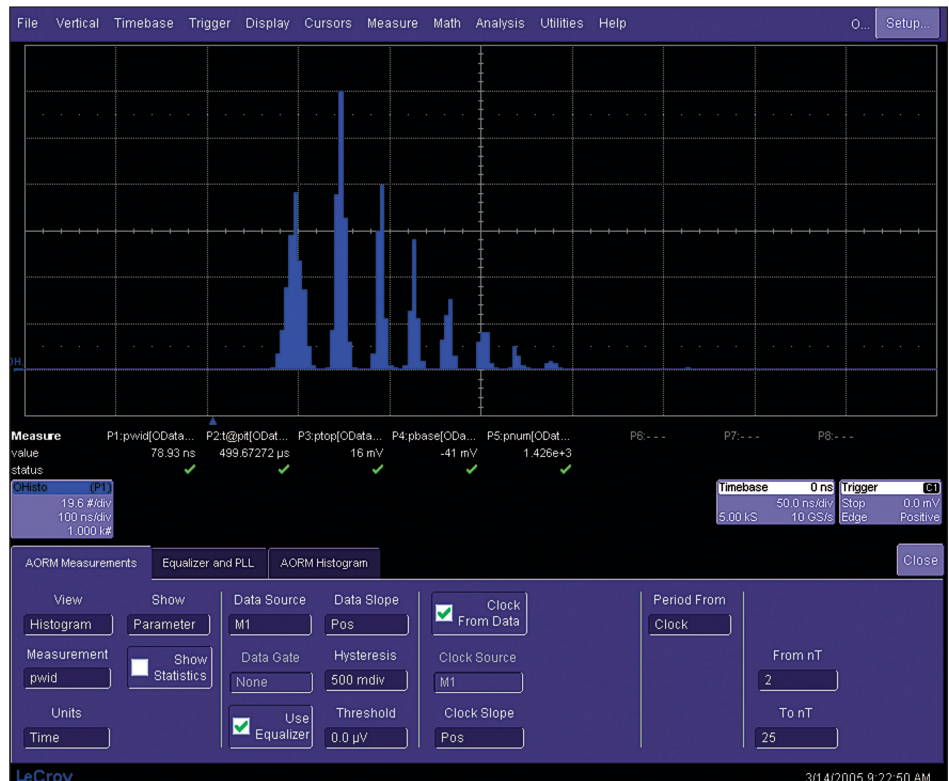
- Long memory records
- Multi-zoom
- SMART Trigger® (interval and width)
- Parameter statistics
- Signal processing views (Histogram/Trend/XY Trend)



XY Plot displays the X-Y relationship between any two parameter trends (In this case, ptop and pwid)

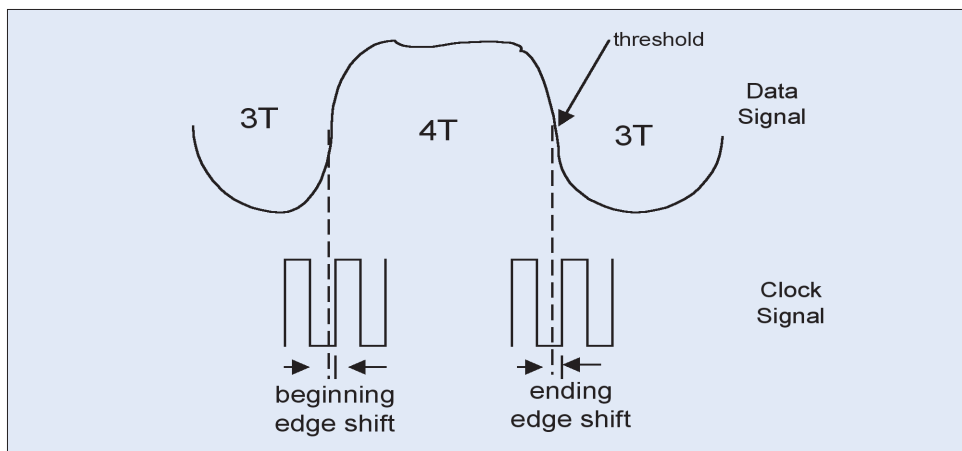
View Options

- **Parameter** – the source trace(s) will be displayed along with the custom parameters.
- **nT Table** – the source trace(s) will be displayed along with the nT Table display.
- **Histogram** – the histogram of the selected parameter is shown.
- **Trend** – the trend of the selected parameter is shown.
- **XY Plot** – plots the trend of the selected measurement vs. either the trend of t@pit or pwid, as appropriate.



User-defined histogram bins display the distribution of pwid parameter in distinct population groups.

Specifications and Ordering Information



Characterization of ISI

Characterization of ISI using edge shift parametric measurements vs. pit or space pair was once a tedious, time-consuming process until the introduction of ORM about ten years ago. AORM brings to X-Stream DSOs all the functionality of ORM, long regarded as the standard for optical disk recording software.

PARAMETER DEFINITION TABLE

Timing Analysis Parameters		Amplitude Analysis Parameters	
deltap2c	Data edge shift referred to clock	paa	Average amplitude of RF signal
deltap2cs	Standard deviation of deltap2c	pasym	Asymmetry of RF signal
edgsh	Pit or space width difference from ideal value	pbase	Base of pit or space
period	Period of each cycle of clock	pmax	Maximum of pit or space
pnum	Number of pit or space pair	pmidl	Middle voltage of pit or space
pwid	Width of pit or space pairs	pmin	Minimum of pit or space
t@pit	Delay of pit or space from trigger	pmoda	Modulation of RF signal
timj	Standard deviation of edgsh	pres	Resolution of RF signal
		ptop	Top of pit or space

Ordering Information

Product Code

Advanced Optical Recording Measurement Package

AORM*

Retrofit Kit for AORM Measurements Package for existing ORM customers

RK-AORM

* For WavePro 7200/7300, WaveMaster, SDA, and DDA Series oscilloscopes.

LeCroy

1-800-5-LeCroy
www.lecroy.com

Local sales offices are located throughout the world.
To find the most convenient one visit www.lecroy.com