

New books & media **FREE**

Melinda Baldwin



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CrossMark



**Measure Ready™**  
**M81-SSM Synchronous Source Measure System**

**A new innovative architecture for low-level electrical measurements of materials or devices**

The M81-SSM system with MeasureSync™ sampling technology synchronizes source and measure timing across all channels in real time, removing the synchronization burden from the user.

Combining the absolute precision of DC with the detection sensitivity of an AC lock-in, the system provides measurements from DC to 100 kHz with sensitivity down to a noise floor of 3.2 nV/√Hz at 1 kHz. It features a flexible remote signal amplifier module architecture (1 to 6 channels) and is simpler to set up and operate than separate source and measure instruments.

See the video at [www.lakeshore.com/M81](http://www.lakeshore.com/M81)



614.891.2243  
[www.lakeshore.com](http://www.lakeshore.com)

## From Amptek Digital Multichannel Analyzer



The MCA8000D is a full-featured digital multichannel analyzer intended to be used with a wide variety of detector systems.

The easy to use 'Pocket MCA' can fit in a shirt pocket.

### FEATURES OF THE MCA8000D

- Compatible with traditional analog pulse shaping
- High speed ADC (100 MHz, 16 bit) with digital pulse height measurement
- 8k data channels
- Minimum pulse peaking time 500 ns
- Conversion time 10 ns
- Sliding-scale linearization
- Differential nonlinearity  $<\pm 0.6\%$
- Integral nonlinearity  $<\pm 0.02\%$
- Two peak detection modes for nuclear spectroscopy or particle counter calibration in clean rooms.
- Two TTL compatible gates for coincidence and anticoincidence
- USB, RS-232, and Ethernet communication interfaces
- USB powered
- Dimensions: 5 x 2.8 x 0.8 in
- Weight: <165 g

### Free Software

Free Software Development Kit (SDK). Complete protocol and example code for custom software applications.

Free Display and Acquisition software.



## NEW BOOKS & MEDIA

### Mars

National Geographic Channel  
Imagine Entertainment, RadicalMedia, and Zak  
Productions, 2018 (2nd season)

Ron Howard (*Apollo 13*, *From the Earth to the Moon*) is back in the producer's chair for the second season of *Mars*, an innovative combination of fiction and fact. The series tells the story of scientists sent to Mars in the 2030s with the goal of creating functioning human colonies. The second season opens with the arrival of the Lukrum Corporation, a mining company whose profit-first approach quickly aggravates the scientists. The fictional scenes are interspersed with real news footage and interviews in which figures such as NASA scientist Tom Wagner offer their perspectives on issues like the long-term effects of life in space. The documentary material is thought provoking and well edited, but it tends to disrupt the fictional narrative—and the story lines too often rely on miscommunications and quotidian personal drama rather than on more interesting challenges of life on Mars. However, science fiction fans interested in space colonization will find much to appreciate in this exploration of what the first Martian colony might be like. The second season premieres on 12 November 2018 at 9:00pm EST. —MB



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### Salam

The First \*\*\*\*\* Nobel Laureate

Anand Kamalakar  
Kailoola Productions, 2017

This new documentary from director Anand Kamalakar and producers Omar Vandal and Zakir Thaver tells the powerful story of Pakistani physicist Abdus Salam (1926–96), who shared the 1979 Nobel Prize in Physics for his work on electroweak unification. On his gravestone in Rabwah, Salam, a member of the minority Ahmadi sect, was initially honored as “the first Muslim Nobel laureate,” but a local magistrate had “Muslim” painted over—a stark reminder that a Pakistani law declared the Ahmadi heretical in 1974. Salam found that law personally devastating and spent the remainder of his life in exile in the UK. The film combines historical footage with recent interviews to tell Salam’s story. It honors his brilliant science and the struggles he faced as an Ahmadi, but it also does not shy away from his flaws, including his impatient personality. *Salam* promises to call more attention to a remarkable historical figure. For more information, visit [www.salamthefilm.com](http://www.salamthefilm.com). —MB

### Baby Loves Gravity!

Ruth Spiro, Irene Chan (illustrator)  
Charlesbridge Publishing, 2018. \$8.99

This colorful board book, the latest in the Baby Loves Science series, opens with a baby dropping food from his tray. From there, author Ruth Spiro and illustrator Irene Chan show how gravity’s pull affects Earth’s movement around the Sun and a ride on a slide at the park. The simple text and engaging art are perfect for toddlers and early readers. —MB

