Measuring Mass

A perfect combination for a physics or EE lab experiment.
Columns

08 Q&A
Reader Questions Answered Here
Topics discussed this time:
• Humming an Unpleasant Tune
• Computer Mind Tricks

12 The Ham's Wireless Workbench
Practical Technology from the Ham World
Filter Design Software
To continue our discussion from last month on filters, this
time we’ll look at the time-tested and free student version
of ELISE: design software for passive filters. By stepping
through a sample design, you’ll get a feel for how to turn
specifications like we discussed in the last column into a
real filter design.

Filters are one of the most important and widely-used
circuits in all of radio at any frequency. Understanding
how they are specified and used will make you a better
electronics designer, whether you build your own or
simply buy them from a vendor.

85 Open Communication
The Latest in Networking and Wireless Technologies
How Phased Array Antennas Work
Phased arrays have been used for years in military radars
for long range detection of missiles. They’re also widely
used in military and commercial aircraft radars and
some satellites. These phased arrays are expensive, but
today thanks to new technology and higher frequencies,
phased arrays are smaller and more affordable making
them practical for new wireless devices. This article is an
introductory tutorial on this special antenna type you need
to know about.

90 Near Space
Approaching the Final Frontier
Raspberry Pi Zero Flight Computer — Part 3
My final challenge in designing the RaspPi flight computer
(after collecting and storing sensor data) was to add a
camera and store its images. After some hair pulling, I
finally have the RaspPi based near space flight computer
recording both sensor data and pictures on its SD card.