

CHARGE SENSITIVE PREAMPLIFIER

A250

RUN SILENT — RUN FAST!!!

FEATURES

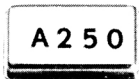
Low Noise
Low Power
Small Size (Hybrids)
High Reliability
Radiation Hardened
One Year Warranty

APPLICATIONS

Aerospace
Portable Instrumentation
Nuclear Plant Monitoring
Imaging
Research Experiments
Medical and Nuclear Electronics
Electro-Optical Systems

Get the best performance with Solid State Detectors, Proportional Counters, Photodiodes, PM tubes, CEMS or MCPs by using **AMPTTEK CHARGE SENSITIVE PREAMPLIFIERS**

STATE-OF-THE-ART



EXTERNAL FET

FET CAN BE COOLED

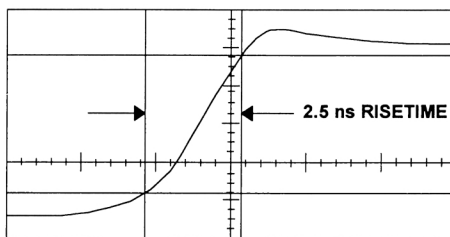
NOISE: $< 100 \text{ e}^- \text{ RMS}$ (Room Temp.)

$< 20 \text{ e}^- \text{ RMS}$ (Cooled FET)

GAIN-BANDWIDTH $f_T > 1.5 \text{ GHz}$

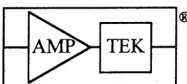
POWER: 19 mW typical

SLEW RATE: $> 475 \text{ V}/\mu\text{s}$



Horizontal = 2 ns/div. Vertical = 500 mV/div.

WORLD-WIDE SALES DIRECT FROM THE FACTORY



AMPTTEK INC.

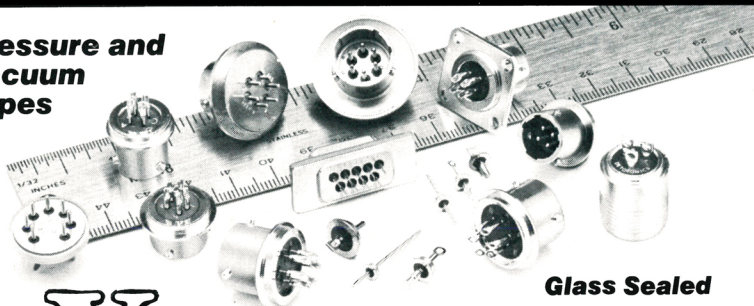
6 De ANGELO DRIVE, BEDFORD, MA 01730 U.S.A.

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KLEPPNER REPLIES: I was so impressed by the quality of Ted Hänsch's interferogram that I carried out a two-dimensional Fourier transform of it in an attempt to recover the original images. The cats reappeared with such astounding fidelity that the live cat actually started to walk away. To my dismay, it dropped dead after taking a few steps, and the dead cat jumped up and ran off. Apparently I somehow got the phase wrong. Whatever the cause, the moral is clear: Messing around with quantum measurement theory is dangerous.

DANIEL KLEPPNER

Massachusetts Institute of Technology
Cambridge, Massachusetts

Model Needed for West Coast Freeway Traffic Doing the Wave

I enjoyed the "Physics Update" piece on a model for the dynamics of a flock of birds, a school of fish etc. (December 1996, page 9). If it hasn't been done already, such a model should be put together for traffic on the California freeways, particularly those of the San Francisco-Oakland and Greater Los Angeles areas.

Traffic travels like a wave, with the slow parts being just a function of traffic, not of a specific cause (such as an accident). Think of how cars can be traveling along at the speed limit and then, suddenly, for no apparent reason, have to slow down—but later get back up to full speed again. A model would help us to better understand the wave patterns.

MICHAEL C. THUSEN
Cotati, California

Corrections

March 1997, page 107—Stephen L. Adler's correct e-mail address is adler@sns.edu.

September 1996, page 122—Owing to an editorial oversight, C. E. Mandeville's letter to the editor about Ernest Lawrence and W. F. G. Swann told of their shelving the idea of creating a particle accelerator but failed to mention that Lawrence unshelved the idea "after the advent of efficient diffusion pumps."

January 1996, page 71—A listed book, *The Structure and Bonding in Condensed Matter* by Carol S. Nichols, has been recalled from publication and declared out of print by the publisher, Cambridge University Press.