

Glaser
Negative ion
generators

Mini-Micro World

INTERNATIONAL

HUSAT conference examines CRT health problems

The static electricity charge on a CRT reduces the level of negative ions in the air breathed by the operator and can thereby aggravate the adverse effects of negative-ion depletion, including headaches, nausea and dizziness. That's one finding of research groups in Europe studying work-station ergonomics and the health hazards of CRTs.

These were among the topics discussed last month at a conference in England organized by the HUSAT Research Group. HUSAT, for human sciences and advanced technology, is an independent organization set up by members of the department of Human Sciences at Loughborough University of Technology, the conference venue and one of Europe's leading centers of ergonomic research.

The work on negative ions is being carried out in England at the department of human biology and health at the University of Surrey. Dr. Leslie H. Hawkins explained that the level of both positively and negatively charged ions is a lot lower in polluted city air than in a rural atmosphere and that the concentration of ions in air-condi-

tioned offices was drastically lower, whether the office is in a rural district or a city. The destruction of natural ions in the air by air conditioning reduces their level from around 100 per cubic cm. to as low as 50 per cubic cm. As a result, workers complain of lethargy, nausea, dizziness and headaches. Why negative-ion depletion has these effects is not yet known. Positive-ion depletion, on the other hand, appears to have little adverse effect.

The problems caused by air conditioning can be solved by using a corona-discharge ionizer generating a constant stream of negative ions.

The problem for CRT operators is worse, said Hawkins, because the positive static charge on a CRT screen drastically reduces negative-ion levels in the "micro atmosphere" surrounding the CRT. Hawkins said a negative ionizer is an inexpensive addition to a CRT console that could improve job efficiency.

Experiments at Surrey University using a CRT in a specially constructed booth have shown that negative-ion levels affect the execu-

tion of relatively complex tasks more seriously than they do the performance of simple jobs. Females tend to suffer more from ion depletion and to respond more favorably to an ion-enriched environment than do males. Increasing the negative-ion concentration has less effect as ambient temperature and relative humidity rise. Further, two-thirds to three-quarters of all people are affected in some way by negative-ion concentrations.

Hawkins described an experiment with 54 individuals, many of whom work with CRTs in their jobs, at a computer site.

Two negative-ion generators were installed at the site, but, unknown to the operators, were not switched on for the first four weeks. The negative-ion level remained at around 550 per cubic cm. The ionizers were then switched on, boosting the negative-ion concentration to 3500 per cubic cm. for the eight remaining weeks of the experiment. Results showed a dramatic decrease in complaints of headaches, nausea and dizziness when the ionizers were on.

For additional information contact

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THE AIR YOU BREATHE
IS AFFECTED BY
THE COMPUTERS

CAUSES OF NEGATIVE AIR ION DEPLETION

- AIR CONDITIONING
- HEATING SYSTEMS
- POLYESTER FURNISHINGS
- CATHODE RAY TUBES
- TELEVISION SCREENS
- METAL APPLIANCES/STRUCTURES
- WIRING

EFFECT ON PERSONNEL

- HEADACHES
- ERRORS
- CRANKINESS
- LETHARGY
- CONCENTRATION LOSS
- LOW PRODUCTIVITY

DRAMATIC IMPROVEMENTS IN PERSONNEL PRODUCTIVITY IN OFFICE AND COMPUTER ENVIRONMENTS IS PRODUCED BY RESTORING THE NATURAL AIR ELECTRICAL BALANCE.

OTHER BENEFITS:

- SMOKE KNOCKDOWN
- DUST KNOCKDOWN
- POLLEN KNOCKDOWN

SEND ORDER TO:

JIM MASSEY COMMUNICATIONS
7005 BACKLICK COURT
SPRINGFIELD, VA 22151

OR GREGORY ASSOCIATES
4000 MASS. AVE., N.W., #229
WASHINGTON, D.C. 20016

ATTN: JIM MASSEY (703) 276-9575

ATTN: TOM GREGORY (202) 363-9696

ION GENERATOR ORDER FORM

<u>NUMBER OF UNITS</u>	<u>TYPE OF IONIZER</u>	<u>AMOUNT PER UNIT</u>	<u>TOTAL AMOUNT</u>
	PARADISE I (400 SQ. FT.)	\$142	
	PARADISE II (600 SQ. FT.)	\$195	
	COMMERCIAL IONIZER (1,800 SQ. FT.)	\$395	

SUBTOTAL:

SHIPPING: \$5 PER UNIT

TOTAL ENCLOSED: \$ _____

NAME: _____
 TITLE: _____
 ORGANIZATION: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____