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# aef/fyi

The Quarterly  
Newsletter  
from  
A.E.F. Sales  
Engineering  
Company

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March 1st, 1993



Our 29th  
Anniversary

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From 300va through 225kva AEF has the solutions.

### Emergency Lighting and Power

Are your Emergency Systems the Best they can be?

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NEW Feature: An ACTUAL EXPERT answers all your questions.

## UPS 'R' AEF

Once upon a time (and not very long ago either), electrical equipment wasn't so sensitive, and short of a black-out or an extended brownout, most equipment was fairly tolerant of power variations.

But it's a scary world for many of today's systems, like computers and phones, as well as the people who depend on them. Spikes, surges, sags, noise, and harmonic distortion can all cause computer processing errors, communication errors, and hardware damage. One second everything is fine and then, all of a sudden, phones go down, data is scrambled, and printed words become difoonable bufo kdlwii422. (See what we mean?)

Clean power--and often uninterruptible power--is vital in many applications today,

and at A.E.F. Sales we have a variety of ways to provide it.

In this issue, we'd like to highlight the products of LorTec Power Systems. In a relatively young industry, LorTec qualifies as an old-timer--1993 marks its 30th year. And the variety of products it offers insures that we can pick the unit that's right for your application.

The ContinuAC series uses delta magnetic regulation that features passive components--transformers and capacitors--for voltage control. This rugged unit is suitable for a variety of harsh environments, and has a *measured* MTBF of 150,000 hours--over 17 years! And for good measure, LorTec offers a moneyback 20 year guarantee on the whole ContinuAC

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## Electrical Equipment and Watermelons: What Works?

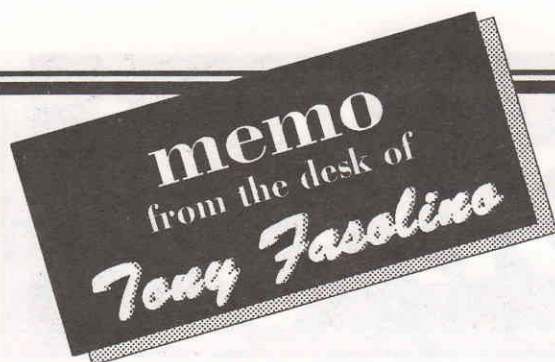
Bruce Bonesteel has been farming and teaching agriculture for over 20 years now. Not too long ago he was asked if there was a secret way to pick out a good watermelon: some that looked great were disappointing in the taste department, some ugly ones were winners, and to the layman there seemed to be no discernible pattern.

Bruce thought for just a second before

he answered. "None that I know of. It's kinda like pickin' out a wife; everybody thinks they know what they're looking for, but you don't really know what you got til you get 'em home."

Life is full of all kinds of decisions that have to be made, all of which entail some promise, and some risk. Some situations offer no real clues, like picking out the sweetest watermelon, or the quickest line

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*Unhappiness is in not knowing what we want, and killing ourselves to get it.*

Don Herold

*There are mighty few people who think what they think they think.*

Robert Henri

*Every man must be swift about hearing, slow about speaking, slow about wrath.*

James 1:19

*You can have everything you want; just don't want so much.*

Dooms Madigan

*An expert is someone who learns more and more about less and less till he knows practically everything about almost nothing.*

Unknown

*I have seen wicked men and fools, a great many of both; and I believe they both get paid in the end; but the fools first.*

Robert Louis Stevenson

The last issue of this newsletter mentioned, in a brief note, the addition of a back office operation to handle purchasing and invoicing of material, and a variety of other functions. Behind that little note is an interesting story that I'd like to share with you.

For twelve years or so back in the seventies and eighties, my son Christopher was an important part of the company. Eventually he left A.E.F. Sales and moved along a different path, a path which ultimately took him and his family to a 140 year old farmhouse in upstate New York, a few miles from the Canadian border. Set in the midst of corn and alfalfa fields, with a dog in the yard and a horse in the barn and a pickup

in the driveway, it doesn't look much different than the other houses scattered along the road.

Inside, in a room adjoining a big kitchen, is our new back office. I'm happy to tell you that my son Chris is back with A.E.F. Sales, linked to our other offices by phone, fax, and modem.

Buying and reselling has become a major part of our business here at A.E.F. Sales in the last few years, with over 500 transactions in 1992. Since October, Chris has been handling these vital functions. He's taken over production of this newsletter, and will be handling a variety of other jobs supporting our salesmen in the field.

Many of Christopher's old customers have asked about him over the years. If you'd like to send him a note, please mail or fax it to the main office here in Mamaroneck and we'll see that it gets to him. Better yet, order some heater cable and put him to work!

## "UPS 'R' US"

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line, from 8 to 80 kva.

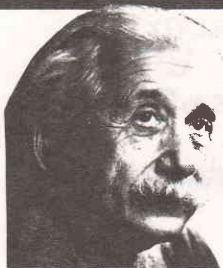
The LE3000 Series features a highly efficient PWM (pulse width modulation) inverter that makes this series compact enough for installation in computer rooms, and light enough to install on raised floors. Since power characteristics can change virtually in an instant, the LE3000 uses a digital signal processor that samples output waveform thousands of times every instant (4000 times per second to be precise). And the standard modem means that your LE3000 can communicate in real time with the experts "back home". Operating conditions and parameters can be adjusted - all over a standard phone line. The three phase LE3000 lineup goes from 15kva all the way up to 225kva.

Finally, the single phase LE1000 offers double conversion UPS technology from

3kva to 15kva. All models feature internal battery packs on roll-out trays for easy inspection and maintenance. Receptacle panels can be provided so that critical loads can be connected quickly and easily. And on some sizes, a line input cord eliminates the need for costly hardwiring. Speaking of hard, the LE1000 series includes environmentally hardened units in both 3 and 5kva sizes. They are fully gasketed to protect against dust and spills, have a renewable air filter, and heavy duty cooling features that allow it to operate at temperatures up to 122 degrees Fahrenheit.

The LorTec line of UPS covers just about every requirement you might have. But at A.E.F. Sales we can also offer you single phase UPS from Best, and a complete line of isolation transformers and power conditioners from Rapid.

If you've got a power problem, we've got a solution.



# Ask Dr. Science

Guest Columnist

*Dr. Ralph Science is an internationally known author, lecturer, and Notary Public. He is also the host of the popular PBS series "I Know More Than You Do".*

DEAR DR. SCIENCE:

*I'm responsible for a large snowmelting project. Can I really use self-regulating heater cables for snowmelting?* C. M.

DEAR C.M.: Sure you can! Of course you'll need to run quite a few more circuits, and you'll need to oversize the breakers to accommodate the inrush current, so your power distribution costs will be higher, but on the other hand the cable will be more expensive! The real question is why would you want to? How did the use of self-regulating cables for snowmelting start anyway?

The answer really begins at the Federal Department of Finding Silly Ways to Spend Large Amounts of Money Quickly. This is the elite group that was instrumental in the development of the \$600 Toilet Seat. With the end of the Cold War they set to work spending the peace dividend.

Their task was to make snowmelting systems less efficient and more expensive, by creative misapplication of existing technology, and were

## Equipment and Watermelons

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at the supermarket. But while we can't help with those dilemmas, we do have a few ideas on how to hedge your bets when you're buying electrical equipment.

*Work With People Who Care.* Once upon a time people took pride in their work; things had to be done right, built to last, before they'd put their name on it. Some people still work that way.

*Do They Know Their Stuff?* Unfortunately good intentions aren't enough to get the job done. Try to find people who know what they're talking about.

they ever successful!

You know, you could play 18 holes of golf using only putters. And if you asked a company that made only putters, they'd probably tell you it was a swell idea. But for your project I'd talk to a manufacturer who makes both Self-Regulating and MI Cables, so you can get an unbiased opinion. If possible, try to work with an agency with at least 29 years of experience in designing snowmelting systems. Let me know how you make out.

DEAR DR. SCIENCE:

*We installed a submersible transformer 15 years ago. Now we need to replace it with an identical unit, same dimensions, same impedance, same everything. The problem is the manufacturer won't make it for us. The closest available unit won't fit in the existing vault. This is going to cost us a fortune. Help!* D.L.

DEAR D.L.: Between corporate takeovers and diversification many manufacturers of electrical equipment have actually forgotten how to manufacture electrical equipment. Many of these companies have replaced engineers with Marketing Specialists and Public Relations Persons. What you need is a company that still designs and builds transformers. R.E. Uptegraff has been doing just that for over fifty years, so you can talk to people who understand your problem, and can solve it!

*(EDITOR'S NOTE: The Uptegraff rep in your area is A.E.F. Sales Engineering Co.)*

*Got a question? Need help? Write to Dr. Science, c/o A.E.F. Sales Engineering Co., PO Box 295, Mamaroneck, N.Y. 10543.*

Experience counts. Quick answers aren't as important as good answers. Are they willing to recommend a competitor's product, if that's the right solution to your problem?

*Look At The Company They Keep.* What about the manufacturers they work with? They should be quality companies with quality products. Honest effort and genuine expertise don't help if the products they supply don't measure up.

We'd like to think that all this describes how A.E.F. Sales operates; it certainly describes the way we try to do business.

But what we think isn't important; it's what you think that counts.

*Some luck lies in not getting what you thought you wanted but getting what you have, which once you have it you may be smart enough to see is what you would have wanted had you known.*

Garrison Keillor

*Whenever things sound easy, it turns out there's one part you didn't hear.*

Donald E. Westlake

*Nothing can keep an argument going like two persons who aren't sure what they're talking about.*

O.A. Battista

*If more of us valued food and cheer and song above hoarded gold, it would be a merrier world.*

J.R.R. Tolkien

*I wish I didn't know now what I didn't know then.*

Bob Seger

*'So knights are mythical!' said the younger and more inexperienced dragons. 'We always thought so.'*

J.R.R. Tolkien

# Is Your Emergency Lighting the BEST?

Recent headlines have shown just how important it can be for your emergency lighting to work when it's needed: when disaster strikes you don't get a second chance. Now, BEST Power Technology, the world's largest manufacturer of single-phase uninterruptible power systems has entered the Emergency Lighting market and is UL924 Listed.

The new FERRUPS ELS option is offered in emergency lighting AC voltages of 120, 240, and 277. One and one-half hour backup time is standard. In addition, it is fully compatible with the BEST Uninterruptible Battery System, for extending battery reserve time by hours, days, or even weeks.

*Reliability, reliability, reliability.* Nowhere is reliability more important than in your Emergency Lighting and Power Equipment. The inherent reliability of FERRUPS, with its line-interactive, ferroresonant-based design was borne out in a recent study. This study, based on more than 3.6 million run hours of data, showed BEST with a field MTBF of 96,480 hours (that's a little over 11 years), almost double the field MTBF of the second place UPS. Uptime was 99.99%.

Call us for more information, and to find out how to make sure your Emergency Lighting system is the BEST it can be.

## 4 Things Worth Knowing

- *Ruby-throated Hummingbirds weighing just 1/10 of an ounce migrate 600 miles across the Gulf of Mexico, beating their wings 75 times a second for 25 hours straight. That's over 6,000,000 wingbeats without stopping.*
- *R.E. Uptegraff Manufacturing can rebuild your transformer, and give you a new transformer warrantee, for about 70% of what a new one would cost.*
- *This past quarter A.E.F. Sales received a Big Order on a job for the Federal Government. The value was less than \$1000, but the Purchase Order weighed in at over 4 lbs.*
- *Lortec's System DSP UPS samples output waveform 4000 times per second, providing extremely uniform output even under rapidly changing load conditions.*

### **BEST POWER TECHNOLOGY**

*(Authorized Reseller)*

*Ferrups Single Phase UPS to 18kva*

### **LORTEC POWER SYSTEMS**

*On-Line UPS to 225kva*

*Specialty Inverters*

### **RAPID POWER TECHNOLOGIES**

*Power Conditioners to 1000kva*

*Voltage Regulators to 1000kva*

*Isolation Transformers to 750kva*

### **GLEASON REEL CORPORATION**

*Cable and Hose Reels*

*Festoon Systems and PowerTrak*

*Workstations and Tool Balancers*

### **MYRON ZUCKER, INC.**

*Low Voltage Capacitors to 600 volts*

*Harmonic Traps*

### **R.E. UPTEGRAFF MANUFACTURING**

*Liquid-Filled Transformers to 15mva*

*Subsurface, Load Center, Station Type*

*Rebuilding and Rewinding Services*

### **CENTRAL MOLONEY**

*Single Phase Transformers: Pole Type,*

*Padmounted, Vault, and Stepdown*

*Components: Bushings-Switches-Accessories*

### **NELSON ELECTRIC HEATER PRODUCTS**

*MI Cable for Pipe Tracing and Snowmelting*

*Self-Regulating Cable for Pipe Tracing*

*Thermostats*

*Controls and Monitoring Panels*

### **ELECTRICAL POWER SYSTEMS INC**

*Switchgear and Motor Control to 15KV*

*Powerhouses: Special Purpose Buildings for*

*Distribution and Control*

### **NORBERG INDUSTRIES**

*Silver Sand Current Limiting Fuses*

*Type R Motor Starting Fuses*

*Type E General Purpose Fuses*