EMERGENCY POWER

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DSPM INC.
DIGITAL SIGNAL POWER MANUFACTURER
www.dspmanufacturing.com

DSPM's Quarterly Communication

View from the CEO...

Since our last newsletter, I believe we've made progress in developing and executing our mission to serve you better. Toward that end, we presented a variety of interactive webinars designed to provide you the information you've asked for about DSPM's technology and our unique and effective nationwide team.

On a technological note, our uniquely skilled engineering team has been immersed in redesigning and modularizing our systems' circuit boards resulting in reduced board count, more flexibility, improved assembly, lower cost, and most importantly, substantially improved reliability. Additionally, our next generation of inverters will incorporate leading-edge Liquid Crystal Displays that will be more intuitive, informative, enable swift and efficient system management, diagnostics, and maintenance. I'm certain you'll appreciate DSPM's commitment to providing you the most innovative, highest quality technology designed to exceed your customers' needs and expectations.

Out of respect for your precious time and your need for information, we strive to squeeze as much information as possible into every issue of ***Emergency Power***. And this issue is no different. This month's issue will explore **Influencer Marketing**, **DSPM's Collaborative Webinar Strategy**, **Technology primer Tidbits for Newbies**, and **System Overview of our High Voltage DC to AC Converter — Zeus**.

Thank you for choosing to be DSPM's partner.

Milton "Moe" Hanson, President

COLLABORATIVE WEBINARS

There's an old saying attributed to the English poet John Donne (1572-1631) likely known to all — "No man is an island." Donne believed human beings do badly when isolated from others and need to be part of a community in order to thrive. Even though Donne's metaphysical observation was expressed in the 17th Century, the fascinating fact is that his proverbial expression only truly began to be widely used in the 20th Century. In my humble opinion, this is a result of humanity being isolated from one another by technology, such as long-distance forms of communication not requiring us to be closely connected. As a believer in the importance of community, DSPM is committed to being an active member of your business community and contribute in every way to help you thrive. Toward this end, we believe it's imperative that you participate in our new webinar program.

Certainly anyone can host a webinar. However, it's important to ask yourself, "is creating and hosting webinars the best use of your time?" If your answer is yes, we fear you'll be distracted from your mission — ***selling centralized emergency lighting systems***. Here's where being part of a community comes in. DSPM is committed to being your partner. As such, we'll develop the webinar content, prepare your personalized multi-media teaser, provide the webinar hosting platform, and present the material on your behalf all ***free of charge***. All we ask of you is to send invitations to potential customers and industry specifiers in your area. Simple as that.

If you are ready to schedule your webinar, call DSPM and we'll get the ball rolling.

DSPM...your partner in Emergency Power

In this issue

DSPM News

DSPM Podcast

As we've expressed before, our commitment for 2019 is to enhance our communications with you, our partners. Certainly, you're always welcome to call us anytime and speak to us in real-time. However, in this age of high-intensity information flow, it's clear consumers of dynamic and comprehensive content prefer to receive information on their own time and their own pace. Toward this end, we're excited to announce DSPM's ***Power that Matters!*** Podcast launching August 19th, 2019.

It's our plan that each episode of ***Power that Matters!*** will dive deep in to issues that concern you and enable you to become better informed — at a pace and time convenient for you.

Each episode of ***Power that Matters!*** will focus on specific DSPM technology, engage in discussions with DSPM key players — from engineers to technical support — and on-air guests to share their insights, experiences, and plans for addressing challenges presented by everything from system implementation to regulatory compliance.

So, stand by and be ready to board DSPM's high-tech vehicle as we barrel down the information superhighway sharing our proven insights and strategies.

If you have any questions or topics you'd liked covered during DSPM's Podcasts, please email them to tbanks@dspmanufacturing.com.

Zeus High Voltage DC to AC Converter

DSPM penned a $60 Million deal with the Chicago Transit Authority for the only American Made high voltage DC to AC Converter. "We're the right answer at the right time," said DSPM's President, Milton "Moe" Hanson.

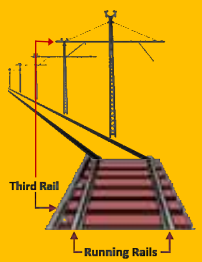
Lightfair — Philadelphia

It was great visiting our friends in Philadelphia at Lightfair. Tradeshows are a great opportunity to cultivate new business and put faces to names. Thanks for taking the time to stop by. See you at Lightfair West.

Product Spotlight

High Voltage DC to AC Converter

DSPM's High Voltage DC to AC Converter, Zeus, is the only American made device of its kind and is approved by the Chicago Transit Authority. More importantly, Zeus was designed to be dependable evidenced by DSPM's unprecedented 20-Year Design Life. Zeus is securely enclosed in its rugged NEMA 4X/12 Cabinet, has no batteries or moving parts to fail, and, above all, requires absolute minimal maintenance — perhaps tightening a few connections every five years.



Many characterize DSPM's Zeus as a Third Rail Converter which is understandable since the Third Rail is a method often used to provide electric power to a railway locomotive or train. Typically, the third rail is a semi-continuous rigid conductor placed above or between the running rails of a railway track, or in some cases, suspended overhead. Both illustrated here providing 400 VDC to 2,000 VDC.

Very simply, rather than using internal batteries, DSPM's Zeus operates from the DC voltage provided by the Third Rail (whether from above or below) and produces a sinewave output with less than 3% Total Harmonic Distortion (THD). Operationally, Zeus does not require external cooling and can operate at temperatures between -20° F to +122° F in extreme environmental conditions up to 100% humidity. Zeus features include;

- 400 VDC to 2,000 VDC input
- Alarm Interface
- Single or three phase outputs
- 120 VAC to 480 VAC output voltages
- Up to 32KVA
- Motor starting capacity

Flexibility

On its own, Zeus represents a great value for a very unique application. However, the power of Zeus can be enhanced by DSPM's robust list of options such as:

- Battery Backup Capability
- Internal Static Bypass Switch
- Output Circuit Breakers
- Onsite Startup
- Extended Warranty

If your community has electric commuter rail service, they need DSPM's Zeus to keep the lights, signals, radios, and more ready when needed. Don't be caught in the dark as New York City was on July 13th.

Call DSPM to discuss how Zeus can provide 20+ years of peace-of-mind.

NEMA 4X/12 Enclosures

DSPM's NEMA 4X/12 weather-tight enclosures are constructed for indoor or outdoor use providing protection against falling dirt, rain, sleet, snow, windblown dust, splashed and hose-directed water, and will be undamaged by external ice formation. DSPM's NEMA 4X/12 enclosures provide protection even in the worst environments.

INFLUENCER MARKETING

Influencer marketing is the hottest new fad about which much has been written, blogged, broadcast, and blasted across social media. Some see influencer marketing as new and edgy. However, influencer marketing is not by any means a new concept. From celebrity endorsements to social advocacy, influencer marketing is seen throughout advertising's history.

Today, the appeal of influence marketing is not its effectiveness, but rather its affordability driven by the millions of social media channels at our disposal. Historically, each iteration of influencer marketing has given rise to praise and criticism from brands, consumers, and influencers. By exploring how top brands effectively employed influencer marketing, we can learn from their mistakes and hopefully, replicate their successes.

Early beginnings

The first phase of social influencer marketing began around 2010 when social and behavioral monitoring software technology empowered brands to reach followers, engage them, measure them, and more importantly, influence their perceptions and ultimate actions. Basically, influencer technology promised a better understanding of the brand's audience. For the first time in marketing history, brands could reach their desired audience and do so affordably. Social Media looked to be the holy grail of brand marketing.

With the introduction of Social Media, brands quickly developed their presence and messaging around new networks from Instagram to Twitter in hopes to transform their marketing programmatically with unlimited scalability. In response to advertiser demand, we soon saw the emergence of numerous agencies and software platforms designed to optimize influencer marketing divided into two categories:

INFLUENCER AGENCY: Influencer agencies offered brands recruiting services from their rosters of influencers focused on specific industries or interest areas. These agencies promised to streamline the work necessary to build a successful program.

SOFTWARE PLATFORM: Software promised unlimited scalability with a DIY (Do it Yourself) solution. Brand managers could log in, see the influential people in a specific area, and contact them directly thus eliminating the Influencer Agency middleman.

Unfortunately, each of these concepts had their own serious issues. On the low-end, software tools often proved to be unverified mailing lists and lacked social media monitoring. On the high-end, expensive platforms overwhelmed marketers with information they couldn't get their arms around or manage.

At their core, both approaches had serious and tragic flaws:

(Continued on page 3)

INFLUENCER MARKETING *continued*

(Continued from page 2)

(1) Desired built-in efficiencies often misguided planning and marginalized the brand's proposition,

(2) Commoditizing the brand's value proposition weakened the influencer/brand relationship, and

(3) Gave rise to a false belief that easy influencer recruitment would drive sales.

In reality, this era of automated marketing resulted in "Spammy" and "Annoying" messaging that blemished the brand. The human element that once powered brand interactions with consumers and influencers during the early days had been lost. The fact is, brand after brand learned there's more to successful sales and marketing than endorsements.

Your Influencer Strategy

So you ask, what does influencer marketing have to do with me? Whether you're a DSPM Representative, or Professional Industry Specifier you need to ensure consumers of your products or services are aware of you.

Of course, you don't offer a consumer brand and it's unlikely that Kim Kardashian or other popular influencers could make sense for your marketing, product, or even positively influence sales. However, that isn't to say that an influencer strategy would not prove effective. Your influencer strategy is simple; **Find thought-leaders (Influencers)** — Specifiers, Inspectors, Architects, OSHA/Safety Consultants, Fire Marshalls, Engineers, Professors, etc. — in your region that have blogs, social media presence, training programs, or websites and partner with them. Afterall, as influencers, their desire is not in conflict with yours but rather in harmony. Both you and potential influencers have the same objective: **develop customers**. Your mission should be to identify and collaborate with as many influencers as reasonable to ensure your message is credibly placed before your audience.

Influencers Must Understand Your Product

Successful collaborations require balance between sales and human relationships. Rest assured, like you, influencers seek economic rewards. More importantly, at their core they wish to be authentic and believe in the brands they endorse. As such, effective and genuine influencers work with brands they understand, believe in, and allow them to stay true to their identity. The influencer's desire to be credible and honest is fundamental to a successful strategy. It's imperative upon the brand (You) to keep this in mind. As such, the future of a successful influencer strategy depends on your ability to adopt an authentic program that is a true partnership with influencers and keeping in mind it's the human element that makes programs successful.

PRIMER Tidbits for Newbies: Power Factor

For many, Power Factor is straightforward and logical. However, some of our partners have requested a simplified explanation. Since one of the most common questions we hear is, "what is power factor?" let's take a moment and see if we can offer a simple and effective explanation. From an engineer's perspective, Power Factor is a measure of how effectively incoming power is used in an electrical system and is defined as the ratio of Real (working) power to Apparent (total) power:

$$\text{Power Factor (pf)} = \frac{\text{Real Power (P) in Watts}}{\text{Apparent Power (S) in volt-amps}}$$

Clear as mud? Hmmm...Let's try to clear it up with a few definitions and an example.

DEFINITIONS

REAL POWER (expressed in KW) is the power that actually powers the equipment and performs useful, productive work.

REACTIVE POWER (KVAR) is the power required by some equipment (such as transformers, motors, and relays) to produce a magnetic field **to enable real work to be done**. Reactive Power is **necessary to operate equipment but doesn't produce any useful work**. Think of Reactive Power as the energy it takes you to flip a light switch. The energy cost to flip the switch (calories) enables work to be done, but doesn't contribute to powering the load.

APPARENT POWER (KVA) is the total power supplied through the power mains that's required to produce the necessary amount of Real Power for the load.

To better understand Power Factor, let's look at a favorite example: Glass of Beer. Let's say you ordered a glass of your favorite beer. The thirst-quenching portion (the work) of your beer is represented by Real Power (KW) in the illustration. Unfortunately, along with your ale comes a little bit of foam that doesn't quench your thirst, represented by Reactive Power (KVAR). Finally, the total contents of your mug of your favorite brew (KVA) is the summation of KW (the drinkable beer) and KVAR (the undrinkable foam).

In an ideal world, Real Power would equal Apparent Power resulting in a Power Factor of 1. **However, without the suds, beer wouldn't be beer.**

DSPM, Inc.
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DSPM, Inc. — The Power to Make a Difference™

Frequently Asked Questions

How is an Inverter different from a UPS?
Very simply, like DSPM's Inverters, a UPS includes an inverter, battery, and battery charger in one stand-alone unit. More importantly, a DSPM UL 924 Battery Lighting Inverter has to go through much more stringent testing, evaluation, and must provide at least 90-minutes of backup power.

What are the benefits of Inverters over Emergency Battery Packs?
We at DSPM believe that maintenance/testing and Lumen output are the two major benefits of installing a central inverter system. DSPM Inverters enable a single-point of maintenance reducing cost, improving technician access, enabling simplified regulatory compliance, and full Lumen output during battery run.

What makes DSPM different from the competition?
DSPM is special because we're an American Manufacture and Veteran owned. Additionally, our units are priced 20% to 30% below the competition and we have excellent lead times of two to three weeks for single phase units.

Can DSPM's circuit breakers be single- or three-phase?
Yes. DSPM is happy to configure each Inverter to meet the needs of our customers. We offer flexibility to choose from 1, 2 or 3 pole output circuit breakers.

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ZEUS

HIGH VOLTAGE AC TO DC CONVERTER

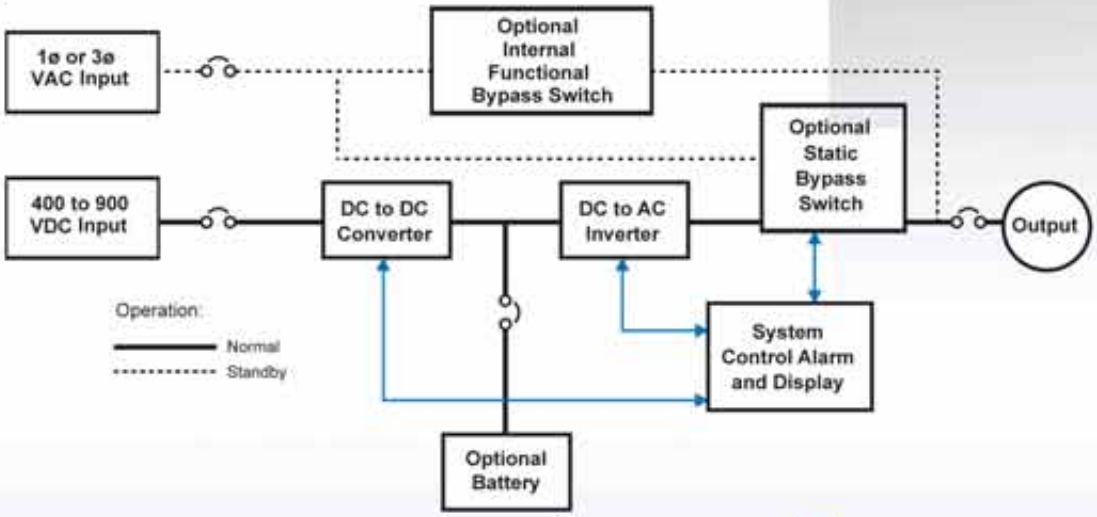
600 VDC INPUT

SINGLE OR THREE PHASE 8KVA - 32KVA

MADE IN THE USA

FIELD TESTED BY THE CHICAGO TRANSIT AUTHORITY

- 600 VDC converter indoor or outdoor operation.
- Optional Static bypass built in for utility bypassing.
- DSPM Watchdog software always on guard.
- Display monitor keeps you in control 24/7.
- Dependable DSP/PWM technology for unsurpassed reliability.
- NEMA 4X Stainless Steel Cabinet.
- 1Ø or 3Ø AC outputs.
- Self-diagnostics for a safe and secure environment.
- Pure sine wave output for all types of loads.
- Withstands 3000 Volt impulse without damage.
- Meets federal, state and local codes: NFPA 101, NFPA 70, NEC and OSHA.
- Complies with the Buy America Act.
- Model available 2000 VDC continuous operation.
- Optional battery



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ZEUS

HIGH VOLTAGE AC TO DC CONVERTER

600 VDC INPUT

SINGLE OR THREE PHASE 8KVA - 32KVA

MADE IN THE USA

- Standard Power Levels: 8, 16, 24, and 32
- Bypass Voltage AC: 120, 208,240, 277, 480, 120/208Y, or 277/480VAC
- Bypass Voltage AC Range: +10%, -15%
- Input Voltage DC: 400VDC to 900VDC, 600VDC Nominal
- Output Voltage: 120, 208, 120/240, 277, 480,120/208Y or 277/480YVAC
- Output Voltage Regulation: ±3% for all loads and battery discharge mode
- Output Wave Form: Sine-wave <3% at 100% linear load
- Output Frequency: 50 or 60Hz
- Crest Factor: 2:5:1 typical
- Input Protection: Input Main Circuit Breaker
- Load Power Factor: .7 to Unity
- Input Protection: Input Main Circuit Breaker
- Output Protection: Output Main Circuit Breaker
- Surge Protection: The unit will protect itself and the load against surges as defined in ANSI/EEE C62.45 category A and B.
- Efficency: ≥92% at 100%
- Operating Temperature: -20° to 50°C (-4° to 122°F)
- Storage Temperature: -20° to 60°C (-4° to 140°F)
- Humidity: 5 -100%
- Cabinet: NEMA 4X
- Continuous operaton at full load

Options:

ECM - Environmental Control Module
EPO - Emergency Power Off
OCB - Output Circuit Breaker
SNMP - SNMP Card
HTR - Heater
SBS - Static Bypass Switch
BAT - Battery 5 Minutes - 24 Hours

Model	Power Rating	Inverter Cabinet Dimensions			Weight (combined)
		W	H	D	(lbs)
	8.0	41"	72"	32"	1880
	16.0	41"	72"	32"	2700
	24.0	41"	72"	32"	3600
	32.0	41"	72"	32"	4500

*Contact factory for battery cabinet dimensions

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