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**COME SEE US AT OUR FDIC BOOTH # 3833**

Find us on 



### The New Generation of Auto Charge®1200 Battery Chargers Are Here.

- 40 Amps @12 Volts DC
- Lower Profile, reduced height (3.3")
- Lighter in weight (7 lbs)
- Patented PLC (Parasitic Load Compensation) Technology onboard
- Accommodates Lead-Acid, Gelled Electrolyte, AGM and Odyssey® battery types
- Configures to 3-Step or Float Charging
- Works with Kussmaul Super Auto Eject Deluxe Covers



Model #-091-187-12

Not Shown  
Model #'s-091-187-Remote &  
091-93-12 (Pump Plus 1200)

Optional: Super Auto Eject Deluxe Covers

### Auto Power 1500W Inverter Charger is Now Shipping!



It's finally here and we are so excited about our new AP 1500 Inverter Charger shipping out that our VP of Sales & Marketing, Colin Chambless slipped 5 of his signed business cards randomly in the first shipment of 50. If you happen to get one of these cards, please call or email us. We want to give you a **special thank you!**



## President's Message...

FDIC 2019

It's that time of year again, the 2019 FDIC Show in Indianapolis. This year we will have our large booth #3833 on the Convention Center's main floor. We are particularly excited about our innovative, new product: Auto Power 1500W Inverter/Charger. Beneficially designed from deep Voice of Customer insight, meeting and exceeding the high standards and features our customers come to expect of Kussmaul. Additional details are in this newsletter.

We hope everyone has a chance to stop by our booth to pick up our newest catalog #123. In this catalog, you will find we have many new and innovative products providing time and money saving solutions meeting your electrical needs.

If you cannot make it to the show you will receive our e-mail blasts of the new products shortly. If you're not on our e-mail list, please go to our website to get added.

As always, I wish everyone and their families a healthy and prosperous year.

*Dale Tompkins*

## It's Here!

### Introducing the AP 1500W Inverter/Charger



- Charger: 55 Amps Max
- Inverter: 1500 Watt Continuous /4500 Watt surge
- Pure Sine Wave output
- Built-in automatic load transfer relay
- Built-in high output 3 stage charger (1-hr boost) for rapid battery replenishment- programmable for up to 8 battery types; including Gel, Lead Acid, and AGM batteries
- Automatic over temperature shutdown
- AC output circuit breakers
- Charger will recharge depleted batteries at <1V
- Automatic low battery inverter shutdown at 10.5 VDC with in-rush delay
- Power Save mode: automatically detects when a load is not connected to minimize energy consumption.
- Heavy duty powder coated aluminum construction and conformal coated circuitry
- Built to meet NFPA 1917 (KKK) Specification
- Works with Super Auto Eject with Deluxe Covers
- UL 458 Listed

**See This at FDIC Booth 3833**

# Dealer Spotlight:

## Emergency Equipment Professionals

Founded in 2011, by Jeff and Mary Kuntz, EEP is an emergency apparatus and equipment company that features Pierce Fire Apparatus, Braun and Demers ambulances. EEP has locations in Horn Lake MS, Pelham, AL, Richland, MS and Mobile, AL. Their primary business is focused on providing products and services to first responders.

EEP currently has 50 employees. When we asked Jeff Kuntz what was important about his business and services, he said "This is a special calling, serving our first responders. A large number of our people have a direct involvement as either firefighters or medics. Because of that, we are committed to bringing in the best products and service to allow them to do their job". We also asked Mr. Kuntz what made him most proud of his company and his reply was "our people". He emphasized that "One, we strive to maintain a servant attitude. And two, we are proud of our first responder mentality and culture. We use the product that we represent".



Kussmaul Electronics is proud to be in a successful business relationship with Emergency Equipment Professionals. EEP installs many Kussmaul products, such as Battery Chargers, Air Compressors, Auto Ejects and Inverters. "Kussmaul was the industry standard for on board battery chargers and auto ejects when I first started selling fire apparatus" says Jeff Kuntz. "The relationship was a natural. Danny Graham is our Kussmaul sales representative who is a true professional, and he takes care of our needs". He adds "Kussmaul provides outstanding service to us and our customers".



For more information regarding Emergency Equipment Professionals, Inc., please go to their website at: <https://emergencyequipment.us>



## UPCOMING SHOWS

**April 11-13 2019**

**FDIC 2019 #3833**

**Indianapolis Conv. Center, Indianapolis, IN**

**May 17-19 2019**

**LCFA Fire Expo #428**

**PA Farm Show Complex - Harrisburg, PA**

**June 13-15 2019**

**FIRE 2019 (NY Fire Chiefs) #1515**

**The Oncenter, Syracuse, NY**

**June 21-22 2019**

**NEAFC (New England Assoc. of Fire Chiefs) #517**

**Foxwoods Resort Casino, Mashantucket, CT**

**June 25-26 2019**

**Police Security Expo 2019 #916**

**Atlantic City Conv. Center, Atlantic City, NJ**

**August 8-10 2019**

**Fire Rescue Intl. 2019 #1340**

**Georgia World Congress Center, Atlanta, GA**

Proud Members-





# Technology Corner

## Choosing the Right Battery Charger

Today's emergency vehicles contain many gadgets that can quickly drain the vehicle battery system; this is why selecting the right charger is important. More importantly, adding accessories without considering the charger is a recipe for future problems.

Choosing the right charger is as important as choosing the right alternator. An ideal system recharges and maintains the battery system. Kussmaul battery chargers range in size, 1 to 80 amps. Size is determined by the maximum output power a charger can deliver to the battery system. To simplify the selection process, consider the following:

**1. How many batteries?** Today, the number of batteries on a vehicle can range from 1 to 6 (or more). At a minimum, a fully charged battery system requires a maintenance charge. Although the maintenance charge can vary, Kussmaul Electronics recommends reserving 5 amps per battery. Therefore, this suggests that a six battery system requires a minimum 30 amp charger.

**2. Estimating parasitic load draw, how many amps?** Once we have determined the maintenance charge requirement one must account for parasitic load draw. These are loads that drain the battery even when the vehicle is not running. For example, the following accessories drain the battery even when the vehicle is off: radios, flashlights, computers, gas detectors, thermal imaging cameras, etc. Try to estimate or measure the total drain on the battery when the vehicle is not running.

**3. Battery type?** The types of battery most often encountered in today's emergency vehicles are the flooded and AGM (Absorbed Glass Mat). Both are lead-acid, but differ in construction and composition. When comparing both battery types one should consider maintenance, performance and cost. The AGM is considered spill-proof, maintenance free, low internal resistance, but higher in cost. Additionally, some batteries are for specific applications, such as SLI (start, lighting, ignition), which provide a burst of energy. Some are dual purpose (SLI and deep cycle). Always refer to the battery manufacturer's datasheet for relevant applications.

Once we consider the above factors we can select a charger that meets or exceeds the total maintenance charge calculated plus the total parasitic load draw. Therefore, a six battery system with 10 amps parasitic draw would require a minimum 40 amp charger. In short, the ideal charger should adequately compensate for parasitic draw and maintenance charge. If possible, always account for future accessory add-ons. In unique cases, also consider vehicle duty-cycle, does the alternator run long enough to fully recharge the system? For additional guidelines, consult the Kussmaul Sales team.



**Phil Sgroi**  
Director of Engineering

The chart below can be cut out for handy reference

SINGLE BATTERY BANK SYSTEMS SELECTION CHART											DUAL BATTERY BANK SYSTEMS SELECTION CHART																			
SINGLE BATTERY BANK SYSTEMS		AVERAGE BATTERY RATINGS CCA: 700 Amp Hour: 100			Main Battery			Engine Battery			DDEC Systems		DUAL BATTERY BANK SYSTEMS		AVERAGE BATTERY RATINGS CCA: 700 Amp Hour: 100			Main Battery			Engine Battery			DDEC Systems						
PARASITIC LOADS IN AMPS	BATTERY CHARGER SERIES	AMPS	0	5	10	0	5	10	0	5	10	0	5	10	0	5	10	0	5	10	0	5	10	0	5	10	0	5	10	
<b>AUTO CHARGE</b>																														
AUTO CHARGE 12	12																													
AUTO CHARGE 12HO	20																													
AUTO CHARGE 1200	40																													
<b>LOW PROFILE</b>																														
LPC 7	7																													
LPC 20	20																													
LPC 40	40																													
LPC 80	80																													
<b>EV</b>																														
EV-20	20																													
EV-40	40																													
<b>AUTO CHARGE / BATTERY SAVER</b>																														
AUTO CHARGE 1000	18																													
AUTO CHARGE 20/20	40																													
AUTO CHARGE 35/10	45																													
AUTO CHARGE 40/20	60																													
AUTO CHARGE D	33																													
<b>WATERPROOF</b>																														
WP-35	35																													
<b>PUMP PLUS</b>																														
PUMP PLUS 1000	18																													
PUMP PLUS 1200	40																													
AUTO CHARGE D PUMP PLUS	33																													
<b>AUTO CHARGE</b>																														
AUTO CHARGE 11	10																													
AUTO CHARGE 11HO	20																													
<b>AUTO CHARGE - BATTERY SAVER</b>																														
AUTO CHARGE 2000	18																													
AUTO CHARGE 4000	45																													
AUTO CHARGE D2	33																													
<b>EURO</b>																														
EURO II	12																													
EURO II VHO	40																													
<b>PUMP PLUS</b>																														
PUMP PLUS HO	11																													
PUMP PLUS 2000	18																													

These chargers are for average recharge rates and average sized batteries. For specific applications please contact our sales or engineering department with battery size, parasitic loads and required recharge time.

For detailed information on these Battery Chargers and many more products please see our catalog or visit us at [Kussmaul.com](http://Kussmaul.com)

