

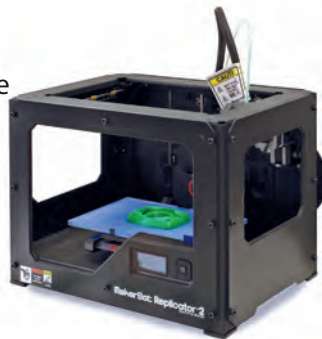


President's, Message...

Another year has come and the FDIC show is already around the corner. We are diligently preparing two booths for the show. That's right this year we will have two booths to visit, one in Lucas Oil Stadium, booth #7018 and the other on the main floor in the convention center, booth #4140. We have many new innovative products to show you so please stop by either booth to take a look. If you cannot make it to the show you will be receiving our e-mail blasts of all new products shortly. If you're not on our e-mail list please go to our website at www.kussmaul.com to be added.

The engineering department has purchased its first 3D printer, a tool that will help speed new products to market, by manufacturing and testing prototypes much faster.

I am very proud of our Service Department's new repair notification system that sends you an e-mail as soon as we received your product. Then within two days after your product has been repaired you will receive another e-mail that the unit is on its way back to you. We are averaging less than two days for all repairs, Chargers, Ejects and Pumps.



Wishing all a healthy and happy year ahead.

Thomas H. Nugent

The New 30 Amp Air/Electric Auto Eject

There was a time when disconnecting an electric shoreline and/or an airline took physical effort. Precious time by emergency personnel on their way to save lives and property was lost. Kussmaul Electronics provided a solution to this problem. Ways were developed to disconnect air or electric shoreline power automatically when an emergency vehicle is started, resulting in the Auto Eject and Air Eject.

Kussmaul has now combined both the products in one. Kussmaul took the 30Amp Auto Eject and added a specially designed airline connection to the plug while still utilizing the original dimensions. The Air/Electric connector contains a shut off valve that is opened when the connector is mated with the Auto Eject. The valve closes when the plug is ejected and retains the supply air.

The Air/Electric Eject comes in both 120 Volt and 250 Volt models.



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The Team Behind the Scenes



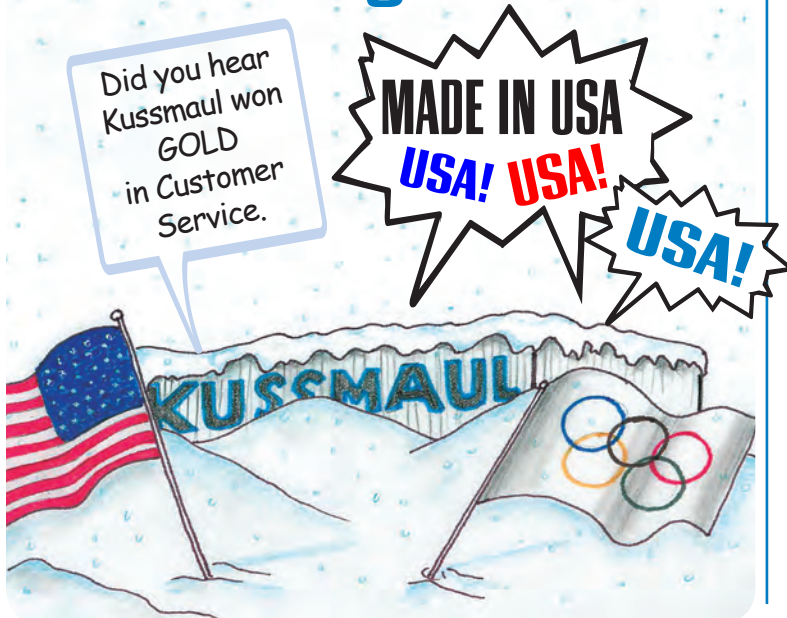
The Kussmaul Manufacturing Team is comprised of a unique blend of new talent and veteran employees who collectively have almost 350 years of experience at Kussmaul Electronics.

We have built a cross trained and flexible workforce to maximize efficiency and streamline overall operations, resulting in increased value to the customer. Our mission is to consistently provide our customers with superior quality, service, flexibility, technology and great value, while focusing on individual customer requirements and continuous process improvement.

From metal and plastic fabrication to printed circuit board production through packaging, every step is guided by one principle, total customer satisfaction.

Andy Superior-Director of Operations

On The Lighter Side



Upcoming Shows

APRIL, 10-12

FDIC #7018, #4140

Lucas Oil Stadium, Convention
Center Main Floor, Indianapolis, IN

May 1-2

Police Fleet Expo Southwest # 324

Kansas City Convention Center
Kansas City, MO

**May 4-5 Ontario Association of
Fire Chiefs #821**

Toronto Congress Centre,
Toronto, Ontario

May 16-18 Fire Expo 2014 #428

Farm Complex, Harrisburg, PA

May 18-19

Quebec Fire Chiefs #

Hilton Place, Montreal

June 12-14 Fire 2014 Fire

Industry, Rescue, EMS Expo #1405

Turning Stone Resort, Verona, NY

June 20-22

New England Fire/Rescue/EMS

Expo #406

Expo Center, West Springfield, MA

June 24-25

Police Security Expo #923

Atlantic City Convention Center

Atlantic City, NJ

Battery Charger Selection

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. Like an alternator, which can be undersized (depending on system demand), a charger could, in time, become undersized if accessories are added without charger size consideration.

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.

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President: Thomas H. Nugent
**Any questions or comments should be directed to
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See pages 3 & 4 of our catalog 118 for our Battery Selection Guides

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.



Philip Sqroi Electrical Engineer



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In Dash Dual USB Charging Port

Charges Any USB Compatible Device

- 3.1 Amps Output
- Charges iPads At Full Current
- Fits Into Standard Switch Cutouts
- Built-In Led Indicator
- Retrofit Into Existing Vehicles



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