

# Goodbye Changing Batteries. Hello ZPower.



## Who is ZPower?

### History

- Founded in 1997
- Camarillo, CA
- 43,000 ft<sup>2</sup> facility
- Total Staff >100 people

### Expertise

- Silver-Zinc Battery Technology
- High-Energy Rechargeable
- 129 patents to date
- Initial focus on Hearing Aid market



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**Historically used in space/military**

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 **High energy/power density**  **Safe water-based chemistry**

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**Quotes from hearing aid users on disposable batteries (HLAA 2015)**



“I don’t like the fact that I have to change the batteries on my hearing aids,...I do it because I have to.” – Charlene S

“I don’t want to get stuck in an awkward situation where I have to change batteries” – Carol A

“...the other person has to wait, it’s uncomfortable physically and emotionally to make people wait for your hearing impairment.” - Robyn S (on changing batteries)

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## What's In It For The Provider?



- Competitive advantage – Differentiate your practice by offering patients what they want – RECHARGEABILITY!
- Education – Greater knowledge of ZPower chemistry and competitive battery technologies; it's coming!
- Profit – Add a new revenue stream by retrofitting a rechargeable system on current patients in your database
- Patient retention – Replace lost battery revenue from giving away years of free batteries or the “Amazon” rationale
- Quality of care – Tell your patients with confidence: Change your batteries once a year, not once a week

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## What's In It For The Patient?



- Technology benefits – “Patients want and demand better technology. It doesn't have to be sophisticated. Simple improvements, like rechargeability, make our quality of life so much better.”
- Health benefits – “It's just a phenomenal hearing system, it's made my quality of life one step better.”
- Reduce hassle – “With ZPower, I can put batteries, battery changing and looking for batteries out of my mind.”
- Market trends – PSAP's from Samsung and others will be consumer electronics, keep the patients in a clinical setting with modern technology
- Financial benefits – “I pay thousands of dollars for my hearing aids and then a couple hundred each year in batteries.”

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# What's In It For The Planet?

- One ZPower battery replaces as many as 100 disposables
- ZPower batteries are fully recyclable
- They're the best option for the environment



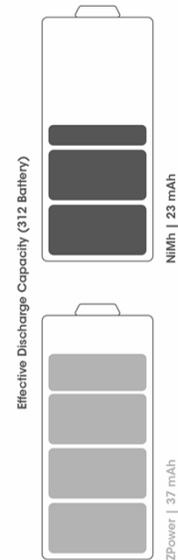
**“Two batteries a year? That’s impossible.  
I use two batteries a week!”**

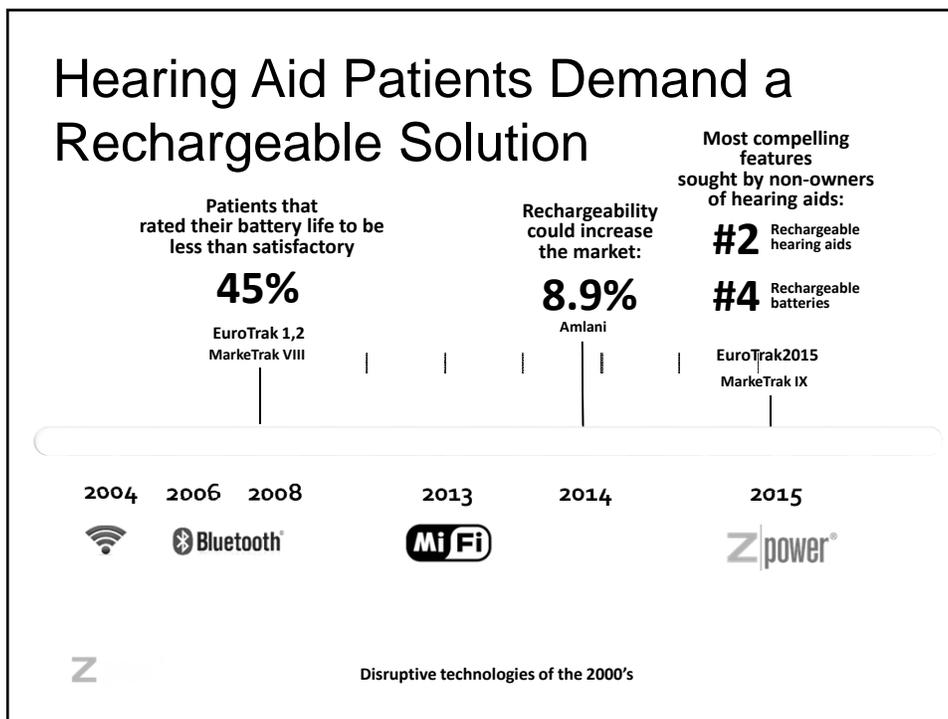
Robyn S., Hearing aid wearer



# Hearing Aid Battery Landscape

	Pros	Cons
Zinc Air	Safe High energy density	Non-rechargeable Unpredictable <i>(needs replacement at inconvenient times)</i> Frequent handling/changing Not eco-friendly
Nickel Metal Hydride (NiMH)	Rechargeable Reduces battery waste	Doesn't provide a full-day charge Micro size limitations
Lithium-Ion (Li-Ion)	Reduces battery waste Energy density greater than NiMH	Can only be used in sealed unit <i>(flammable, fatal when ingested)</i> Inflexible <i>(cannot be interchanged with zinc air)</i> Not fully recyclable
Silver-Zinc (AgZn)	Rechargeable Full day of power Micro size Safe Flexible <i>(can interchange with zinc air)</i> Recyclable	Large batteries are expensive





## Your Patients Want a Rechargeable Solution



Now, They Have One

We would never accept disposable batteries in our smartphones, our laptops or the other advanced technology in our lives. But until now, we've expected our patients to deal with disposable batteries in the most advanced devices they own.

Hearing Industries Association, MarkeTrak9, May 2015

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## Who is a candidate?

- Vision impaired
- Dexterity impaired
- Budget conscience
- Tech savvy
- Busy Boomers
- High power receivers
- High demand streamers

***“Do you want to change your batteries  
twice a week,  
or once a year?”***

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## Requirements?

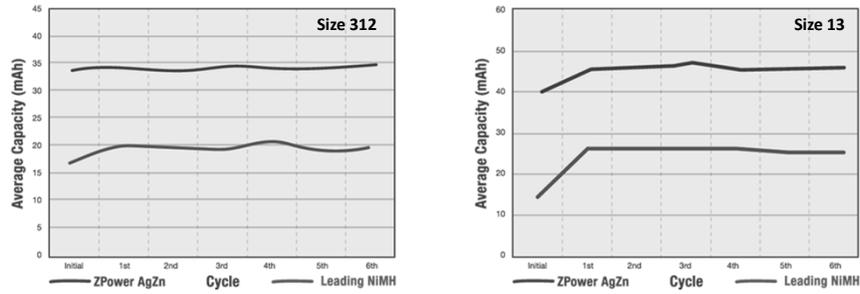
-  Cannot change the HA performance
-  Must charge in the hearing aids
-  Must deliver all day power
-  Must be easy to replace and last a full year
-  Easy to charge
-  Environmentally friendly

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# ZPower AgZn versus Varta PowerOne NiMH

Silver-Zinc delivers nearly twice the mAh as Nickel-Metal Hydride

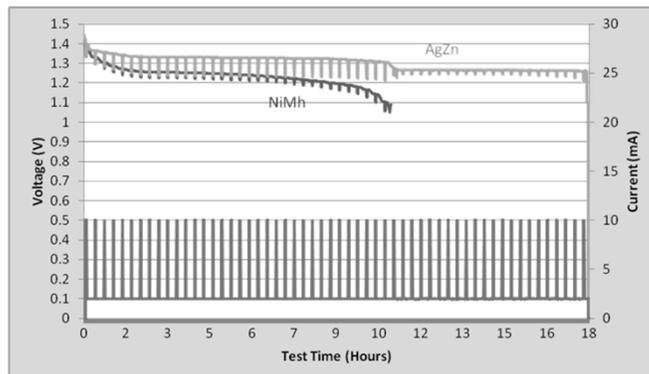


Testing conducted by 3<sup>rd</sup> party battery tester (SGS North America)  
Average capacity (mAh) over 7 discharge cycles  
Discharge tests based on IEC60086-2 hearing aid test

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# ZPower AgZn versus Varta PowerOne NiMH (312)

SS3



Source: SGS North America January 2015  
IEC 60086-2 hearing aid battery test, 2mA base,10mA pulse

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## Slide 14

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**SS3** Need to replace PR41 with SR 312R  
Sara Sable-Antry, 3/21/2015

# Electroacoustic Testing



**Catherine Palmer, Ph.D., CCC-A**

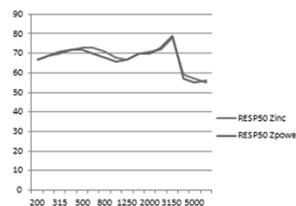
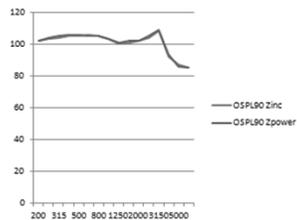
Director of the Center for Audiology and Hearing Aids in the Department of Otolaryngology at the Eye & Ear Institute  
Associate Professor of Communications Science and Disorders at the University of Pittsburgh's School of Health and Rehabilitation Sciences  
Associate Professor of Otolaryngology at University of Pittsburgh School of Medicine

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## Excellent Results (Size 312)

Catherine Palmer, Ph.D.  
Associate Professor  
Communication Science and Disorders  
University of Pittsburgh

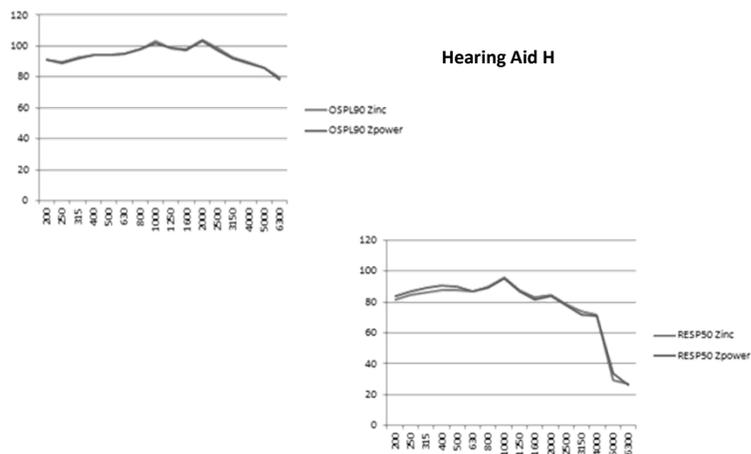
### Hearing Aid A (312)



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## Excellent Results (Size 13)

Catherine Palmer, Ph.D.  
Associate Professor  
Communication Science and Disorders  
University of Pittsburgh



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## Phonak Field Trial Results

- 9 total patients
- 9 Surveys returned
- Data collected from 9 patients
- September 2014 through March 2015

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## Patient Field Trial

The purpose of this investigation was to evaluate patient experience with charger & rechargeable battery module in Bolero Q P & SP hearing aids. **Nine participants (3 male and 6 female)** ranging in age from 23-85 years ( $x = 60$  years,  $SD = 17$  years) completed at minimum of two months of the study. All participants were experienced hearing aid users (**> 4 years of experience**) and all but 1 subject had previously worn the experimental model of hearing aid. On average, hearing losses ranged from mild to severe and were both sensory and/or conductive in nature.



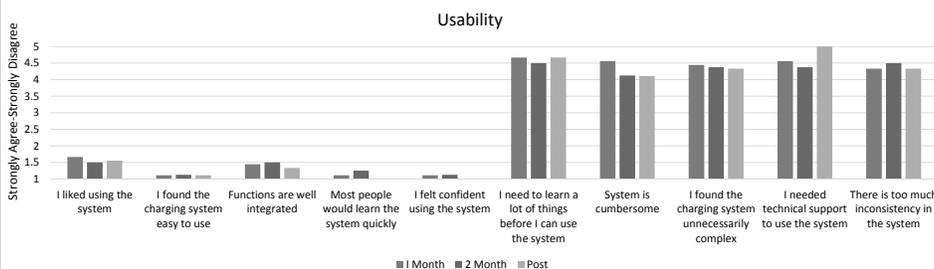
VANDERBILT UNIVERSITY  
MEDICAL CENTER

Todd Ricketts, Ph.D., CCC-A  
Associate Professor and Director, Graduate Studies  
Dept. Hearing and Speech Science

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## Post-Study Survey Summary

- Charging system is easy to use
- Would recommend to a friend
- System was easy to learn and stable
- No need for technical support to use system

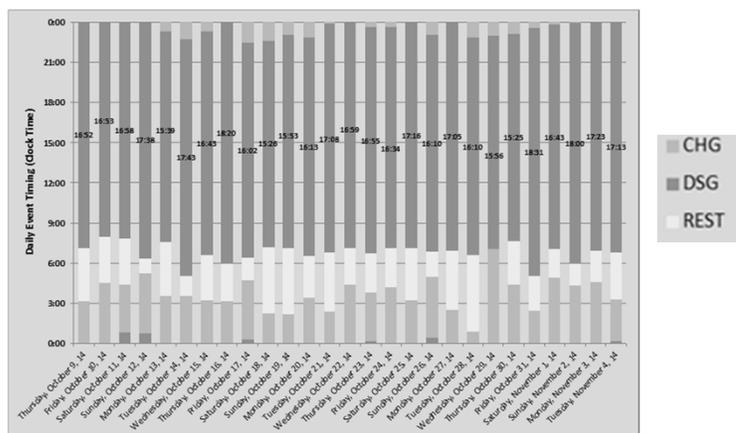


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# Field Study Usage Profile

Todd A. Ricketts, Ph.D.  
 Professor & Director of Graduate Studies  
 Department of Hearing & Speech Sciences  
 Vanderbilt University Medical Center

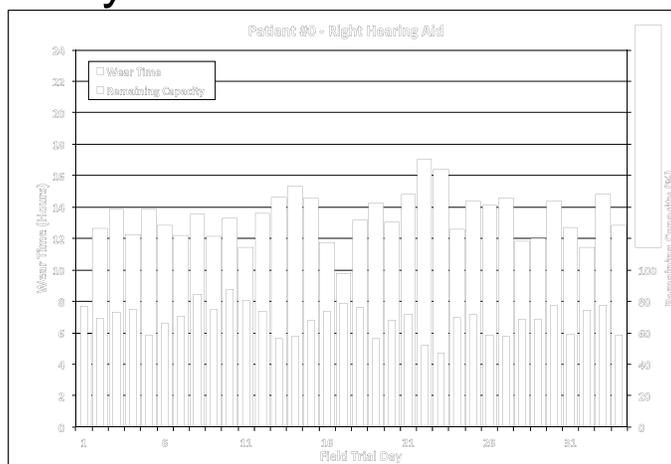
Full day of operation while charging in 3-4 hours



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# Wear Time & Remaining Capacity

Todd A. Ricketts, Ph.D.  
 Professor & Director of Graduate Studies  
 Department of Hearing & Speech Sciences  
 Vanderbilt University Medical Center



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Field study shows battery has two days of capacity

## Siemens Market Acceptance Test (MAT) Results

- 16 total patients
- 9 Surveys returned
- Data collected from 7 patients
- July 2015 through November 2015

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## DCM data

- Average days in study: 46.3
- Average hours aids worn per day: 14
- Average hours required to fully recharge: 3.5

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## Survey data

- Average number of day between zinc air changes: 9
- Average number of hours reported to wear hearing aids: 12
- Number of times patient heard low-battery warning: 3 days out of 256 tracked days
- Number of patients reports aids performed the same as zinc air: 9 out of 9
- Number of patients that would recommend the ZPower System to a friend: 9 out of 9
- Number of patients would recommend their Audiologist offer the ZPower System to their patients: 9 out of 9

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## Patient satisfaction – Survey results

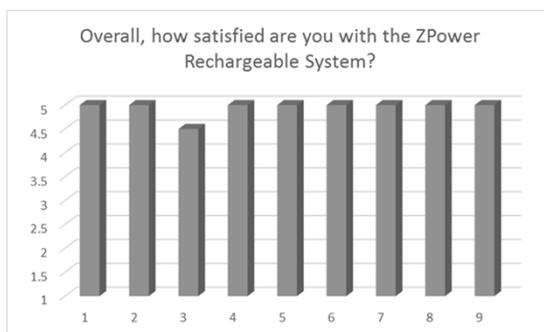
Using the following scale, patients were asked three questions regarding their experience and to express their level of satisfaction or dissatisfaction.

- 5 completely satisfied
- 4 satisfied
- 3 neutral
- 2 dissatisfied
- 1 completely dissatisfied

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### Question 1: Overall, how satisfied were you with the ZPower Rechargeable System?

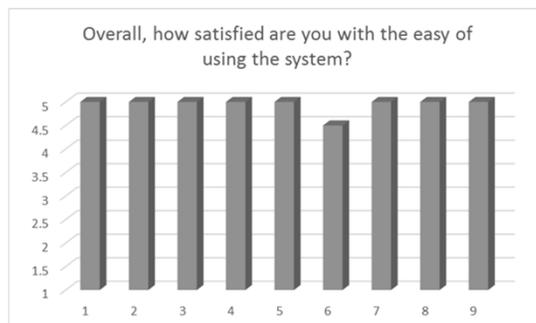
8 out of 9 patients reported the highest level of satisfaction at level 5  
1 out of 9 patients reported a 4.5 of 5



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### Question 2: Overall, how satisfied are you with the easy of using the system?

8 out of 9 patients reported the highest level of satisfaction at level 5  
1 out of 9 patients reported a 4.5 of 5

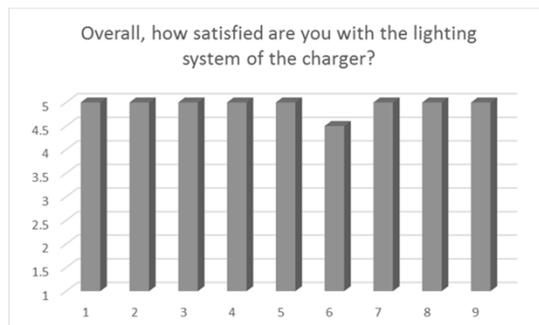


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### Question 3: Overall, how satisfied are you with the lighting system of the charger?

8 out of 9 patients reported the highest level of satisfaction at level 5

1 out of 9 patients reported a 4.5 of 5



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### Belton Market Acceptance Test (MAT) Results – 32mAh

- 7 total 32mAh kits
- Current 28mAh kit users
- All but one had short days with original kits
- 7 technical users / 6 returned surveys
- November 2015 through February 2016
  - Original group of 50 patients using a 28mAh system
  - Moved 7 users into a higher capacity battery
  - Will begin Linx and Linx<sup>2</sup> MAT Testing in March; same platform

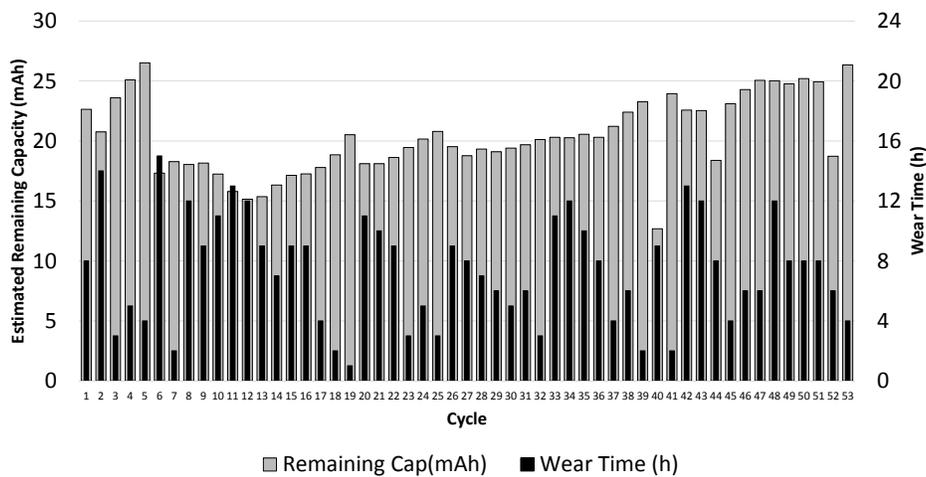
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## Charger data – 32mAh

- Average days in study: 56
- Average hours aids worn per day: 11.6
- Average hours required to fully recharge: 4.5

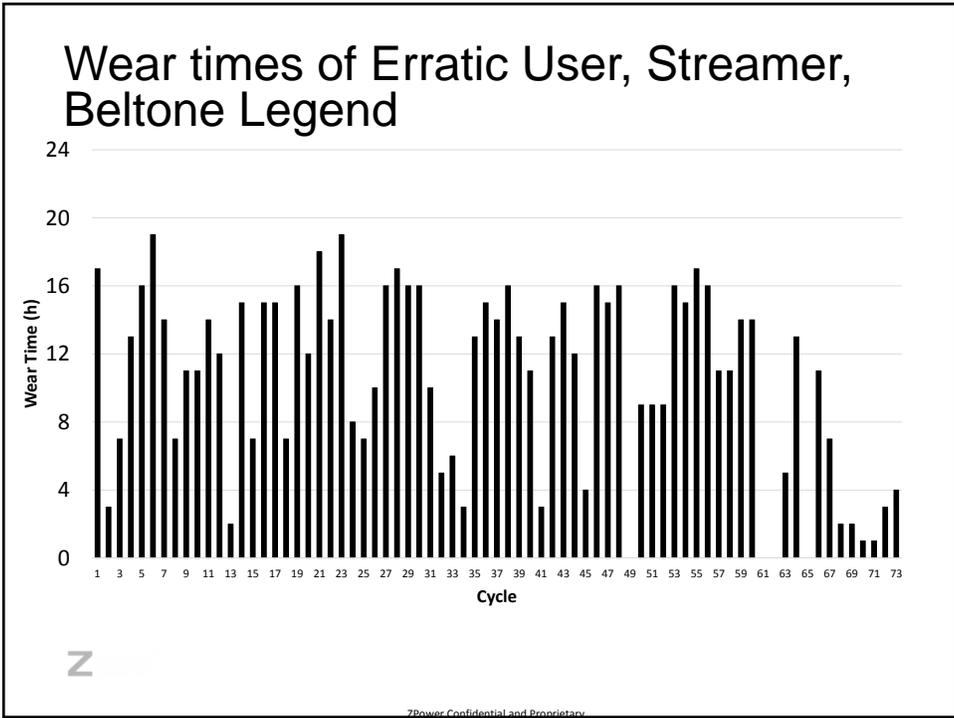
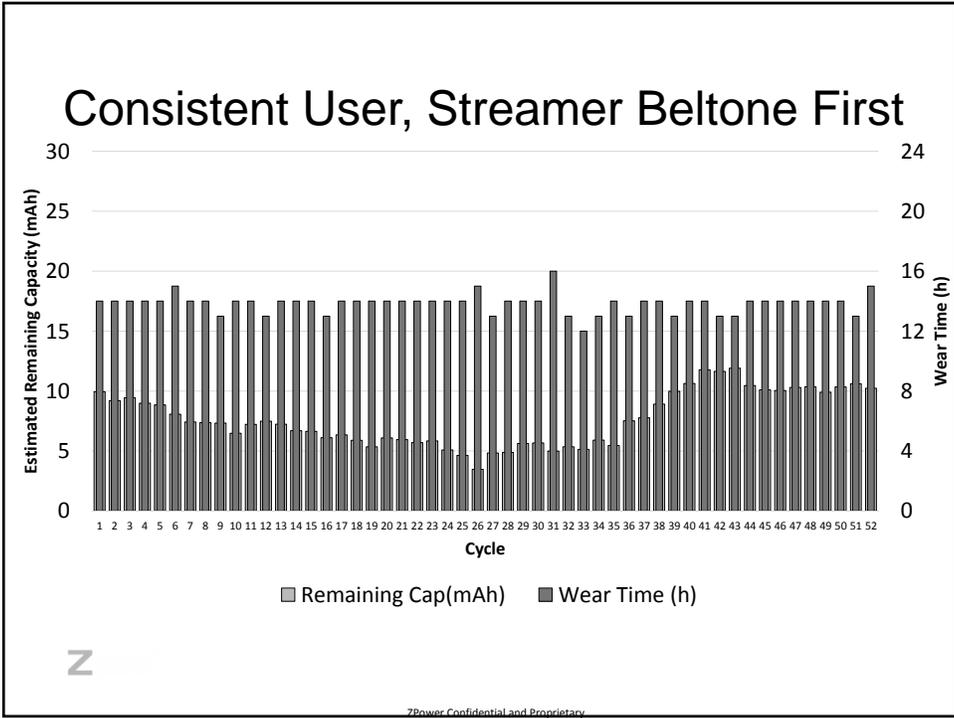
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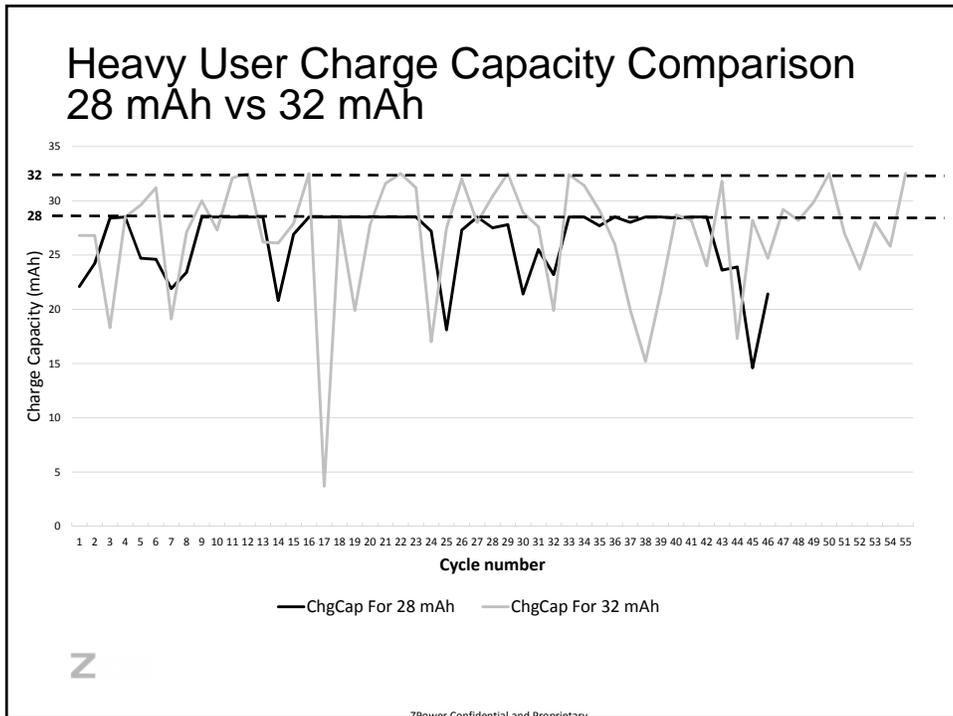
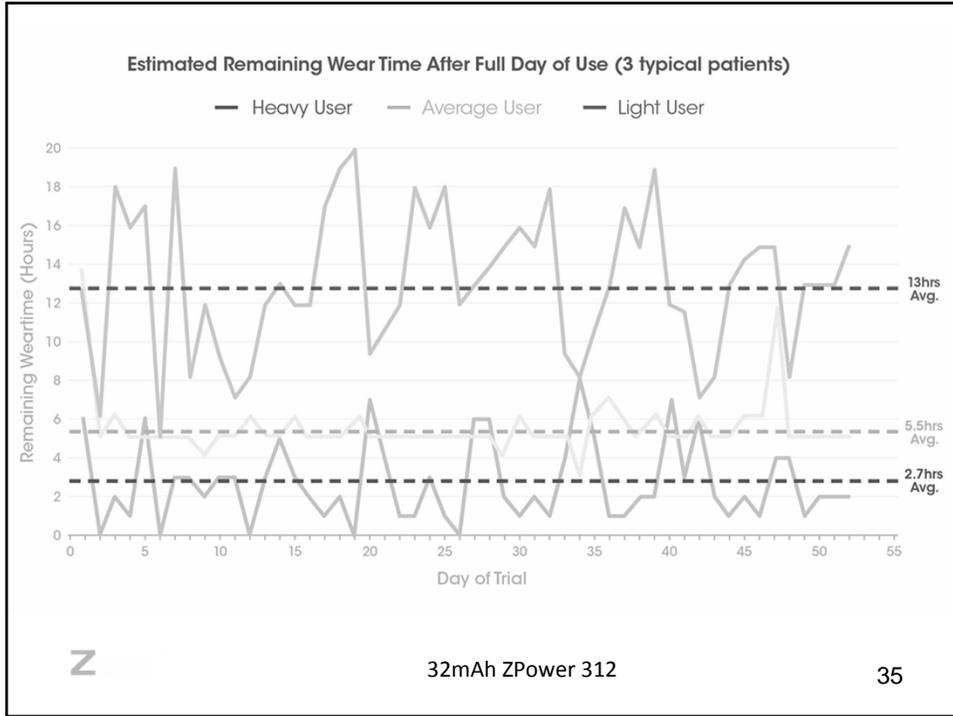
### Light User, Non-Streamer Beltone Promise



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ZPower Confidential and Proprietary





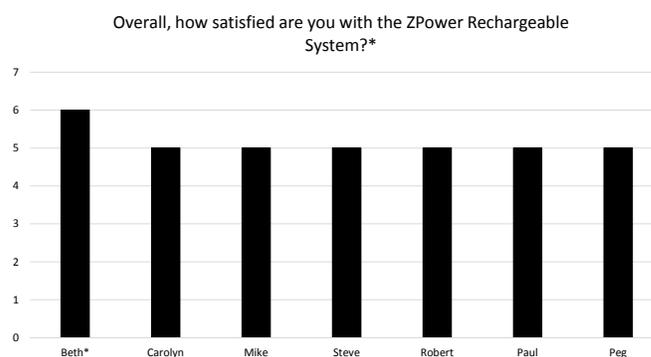
## Survey data – 32mAh

- Average number of day between zinc air changes: 4
- Average number of hours reported to wear hearing aids: 3.7
- Number of times patient heard low-battery warning: 3 days out of 392 tracked days
- Number of patients reports aids performed the same as zinc air: 7 out of 7
- Number of patients that would recommend the ZPower System to a friend: 7 out of 7
- Number of patients would recommend their HCP offer the ZPower System to their patients: 7 out of 7

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## Question 1: Overall, how satisfied were you with the ZPower Rechargeable System?

7 out of 7 patients reported the highest level of satisfaction at level 5\*



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“  
It's just a phenomenal hearing system; it's made my quality of life one step better.  
- Stephen, Hearing Aid User, ZPower User



“  
When I compare ZPower to my old rechargeable batteries, it's like night and day. With ZPower I have never, ever had the charge go out.  
- Barbara, Hearing Aid User, ZPower User



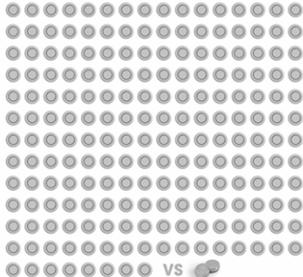
“  
It's been a game changer for me. I have complete confidence that my batteries are going to last.  
- Grea, Hearing Aid User, ZPower User

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## Inspired by Patients





VS 



“  
Our patients are very satisfied with ZPower. Some patients ask for rechargeability and others have dexterity issues. We would lose those sales without ZPower.  
- Independent Hearing Care Provider



“  
ZPower allows for an ease of use not available with traditional batteries. Patients no longer have to deal with batteries being difficult to change or dying at the worst time.  
- Director of Professional Services



“  
When our patients use ZPower, the hearing aid return rate drops by three or four percentage points from the 12% average seen in the industry.  
- CEO

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## Inspired by Providers

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## The ZPower Rechargeable System

**Goodbye Changing Batteries.**  
Hello ZPower.



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### Giving Away Batteries In Your Practice?

- Turn battery revenue loss into a gain
  - Why give away batteries when patients will see the value and pay for rechargeability?
- Reduce inventory management
  - 120 batteries per year / per patient (change every 6 days)
  - Assume 500 active patients
  - That's 60,000 batteries your practice gives away annually!
  - **Bottom line: What's your cost?**

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## Determining Value

Q: How much would you be willing to pay?

Retrofit	New Purchase
\$300	\$340

- Field study prototype vs. production system
- Nashville, TN market
- \$1,800 ASP yields 10% increase in acquisition price
- Nominal price point difference

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## Value Breakdown

Item	Your Cost	Resell Estimate	Gross Profit
ZPower Kit	\$199.00	\$300.00	\$101.00
Replacement Batteries Year 2	\$30.00	\$50.00	\$20.00
Year 3	\$30.00	\$50.00	\$20.00
Year 4	\$30.00	\$50.00	\$20.00
<u>Year 5</u>	<u>\$30.00</u>	<u>\$50.00</u>	<u>\$20.00</u>
<b>Total</b>	\$319.00	\$500.00	<b>\$231.00</b>

- \$231 additional revenue per patient
- \$350 average acquisition cost for a new patient
- Loss or revenue or breakeven?

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## Your 5-Year Rate of Return (from ZPower purchased in Year A)

Units Per Year	Initial Kit Potential	40% Penetration	Initial Kit Gross Profit	Annual Battery Replacement Gross Profit	<b>TOTAL PROFIT</b>
200	100	40	\$4,040.00	\$3,200.00	\$7,240.00
600	300	120	\$12,120.00	\$9,600.00	\$21,720.00
1,000	500	200	\$20,200.00	\$16,000.00	\$36,200.00

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## Hearing Aid Compatibility & Regulatory

Performance Parameter	Regulatory Standard	Compliance Test Lab	Results
Acoustic	IEC60118/ANSI S3.22 OSPL90	Delta Copenhagen	OEM equivalent
	IEC60118/ANSI S3.22 Full-on gain		OEM equivalent
	IEC60118/ANSI S3.22 Distortion		OEM equivalent
	IEC60118/ANSI S3.22 Internal Noise		OEM equivalent
EMC	IEC60118/ANSI C63.19		OEM equivalent
Safety	IEC60601-1/-2-66		In testing
Wireless Streaming	IEC60118		OEM equivalent
Ingress Protection	IEC60529	NEMKO San Diego, CA	IP67 OEM equivalent

OEM equivalent: measurements within test equipment test tolerances or met the same pass criteria

Delta: Sound Pressure Level 200 Hz - <8000 Hz: ± 2.1 dB; 8000 Hz: ± 3.0 dB; Frequency: ± 0.5 %

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## Charger/Cell Compatibility & Regulatory

### Charger

Performance Parameter	Regulatory Standard	Compliance Test Lab	Results
EMC	IEC60601-1-2	TÜV Rheinland Irvine, CA	Pass
Safety	IEC60601-1/-2-66		Pass
FCC	FCC Part 15 Class B	Compatible Electronics Calabasas, CA	Pass

### Silver-Zinc Cell

Performance Parameter	Regulatory Standard	Compliance Test Lab	Results
Safety	UL2054	TÜV Rheinland Shanghai, CN	Pass
	IEC62133		Pass

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## Who is a candidate?

- Vision impaired
- Dexterity impaired
- Budget conscience
- Tech savvy
- Busy Boomers
- High power receivers
- High demand streamers

***“Do you want to change your battery twice a week,  
or once a year?”***

Z

## Product Availability

### Currently Available

- Siemens Pure micon, binax and primax 312 (All levels; 7, 5, 3 and Orion)
  - Audeo V-series 312 (All levels; 90, 70, 50 & 30)
  - Rexton Emerald
  - GN ReSound Verso
  - GN ReSound Alera
  - Beltone Legend, First and Promise (All levels: 17, 9& 6)
- 
- **Coming Soon**
    - Audeo V-series 312T (All levels; 90, 70, 50 & 30)
    - ReSound Linx and Linx<sup>2</sup> 312

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## Post Order Process

### Tracking Kit

- Double sticker with kit number
- One inside for patient chart
- One outside to remain on patient box

### Box within a box

- BDM & BAM inside to replace patient
- Battery door, discard “clam shell”
- Patient takes box home with instruction manual and charger

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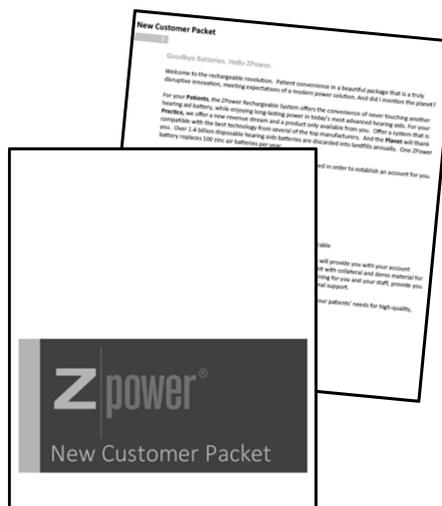
## Warranty

- No manufacturer endorses or supports ZPower – very important
- All manufacturers have the same standard warranty verbiage: “should any damage occur from a 3<sup>rd</sup> party the warranty shall be voided”
- Sivantos / Signia will honor their standard warranty; any 3<sup>rd</sup>-Party damage not covered will be paid by ZPower directly to Sivantos / Signia
- GN ReSound will honor their standard warranty; any 3<sup>rd</sup>-Party damage not covered will be paid by ZPower directly to GN ReSound
- Phonak will honor their standard warranty; any 3<sup>rd</sup>-Party damage not covered will be paid by ZPower directly to GN ReSound
  - Per Hans Mehl, GVP of Operations

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## Next steps

- To become a ZPower Distributor fill out the New Customer Packet and send back to your Account Manager or ZPower Customer Care.



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# What Support to Expect



## Launch Kits

- Poster
- B2B brochure
- B2C brochures (20)
- Lobby display
- Dummy charger
- 2 Dummy hearing aids



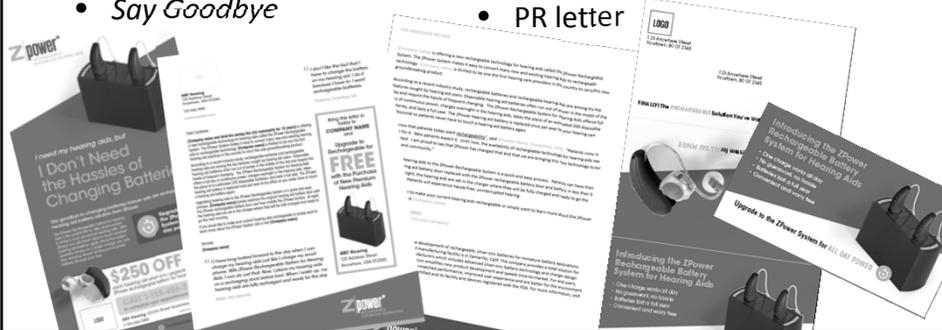
# 4 Integrated Marketing Campaigns

## Campaign message

- *Don't need the hassle*
- *Power your life*
- *Power to the People and the Planet*
- *Say Goodbye*

## Marketing support

- Full Page NP AD
- Database letter
- Direct Mail piece
- Web banner
- PR letter



How do I start offering my patients rechargeability?

***“Do you want to change your battery twice a week,  
or once a year?”***

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## Say Goodbye to Changing Batteries Forever

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