Sound, Safety and the Electric Vehicle

AES Automotive Audio Conference | September 10, 2017

MAN MADE MUSIC℠

A Joel Beckerman Company

Who we are

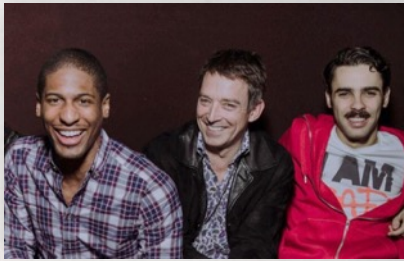
Brian Scherman, Director of Technology + Producer

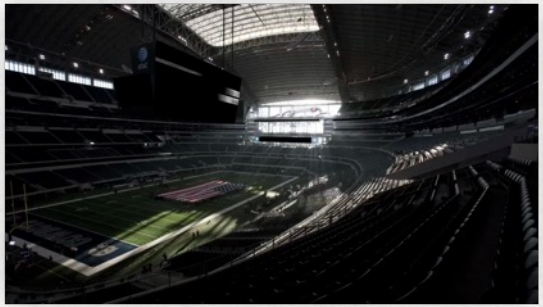
Joel Douek, Man Made Music Creative Director,
+ Chief Scientist

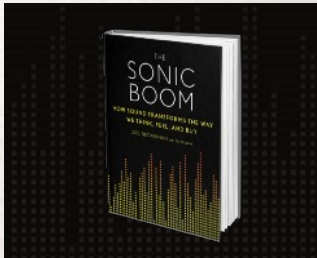
MAN MADE MUSIC™
A Joel Beckerman Company

MAN MADE MUSIC℠
is a strategic music and sound studio.

We create unique sonic identities that efficiently and effectively tie together brand experiences.





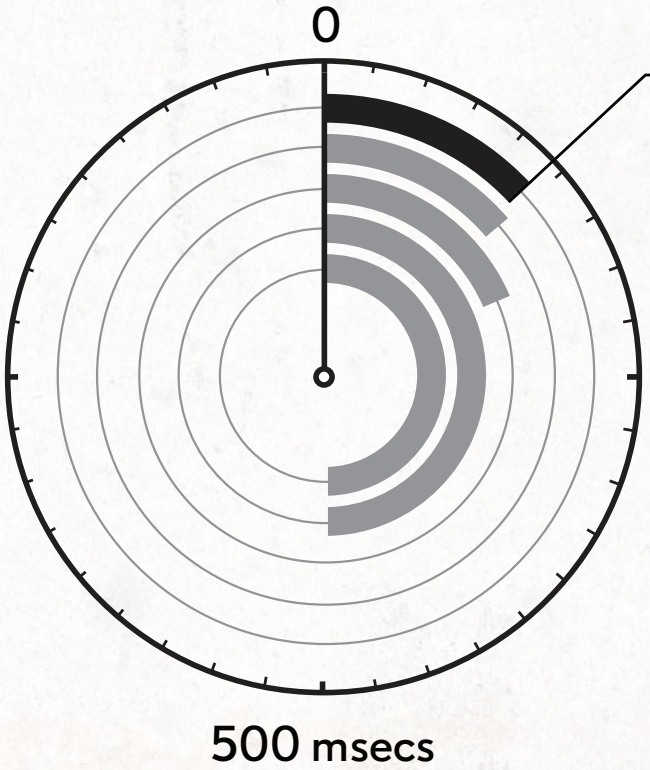


In less than fifty milliseconds—still six times faster than the blink of an eye—you've already identified the sound and where it's coming from. In the actual time it takes for you to blink, sonic input gets directed through your auditory cortex to other parts of your brain that control memories and emotions.

– **Seth Horowitz**, PHD of Advanced Brain Science and author of *The Universal Sense*

One-Second Brain Science

Reaction time to sound is much quicker than all other senses.



Sound 146 msecs

Touch **149 msecs**

Sight **189 msecs**

Taste **500 msecs**

Smell **500 msecs**

Our Approach to Work is Creative, Collaborative and Agile

Sonic Strategy

Creating a Sonic Identity and experience begins with understanding the audience, culture and brand

Stakeholder Collaboration

Competitive & Cultural Context

Experience Map with Sonic Opportunities

Sonic Mood Board Session

Creation

We'll offer options that fit your brand needs now and in the future

Sonic Concepts

SonicPulse® Research

Technical Guidelines

Sonic Style Guide

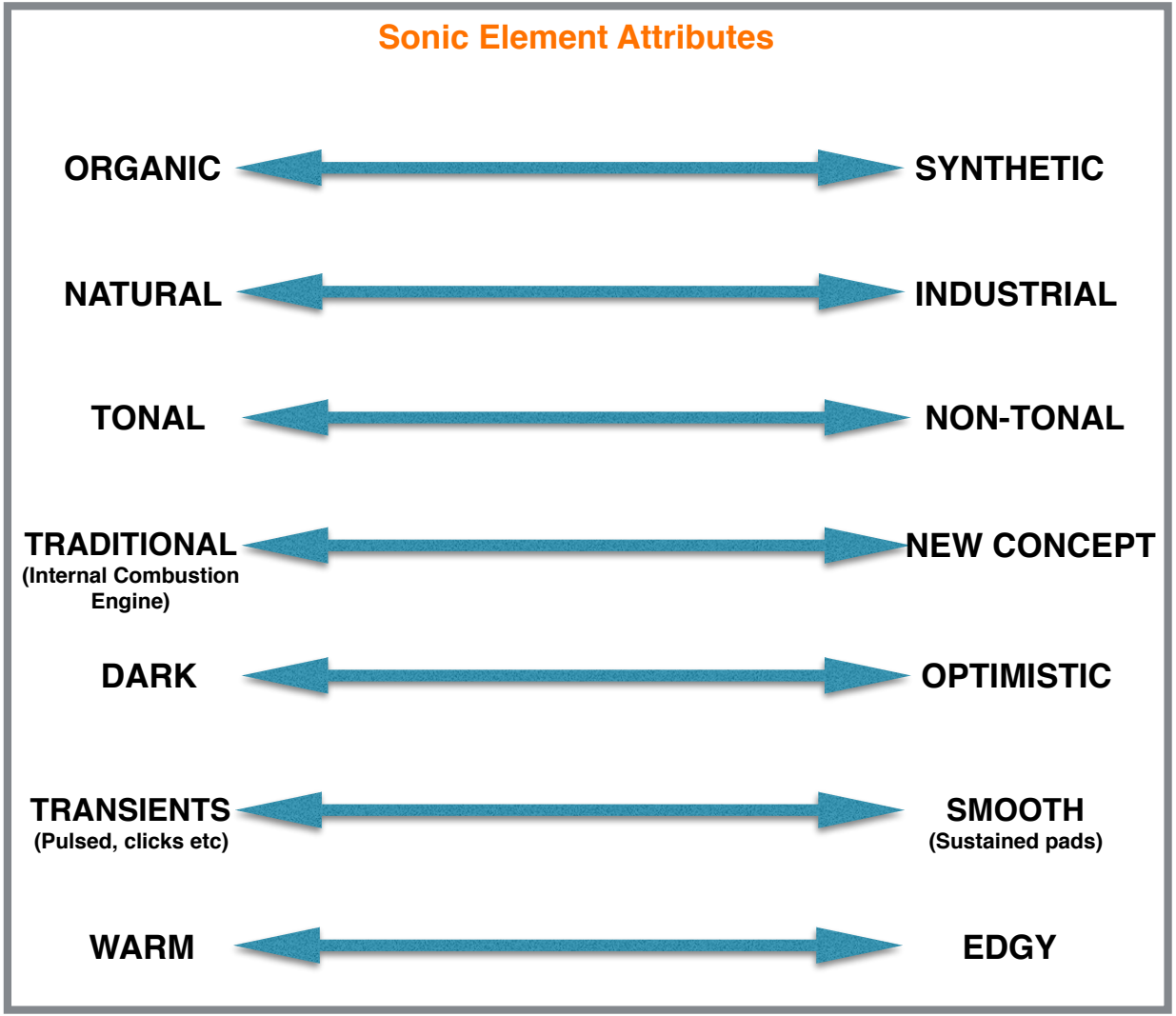
MAN MADE MUSIC™
A Joel Beckerman Company

Finding the Balance of the EV Sound Experience

Safety
Semiotics

Iconic Sonic
Identity

Sonic Element Attributes



MAN MADE MUSIC™
A Joel Beckerman Company

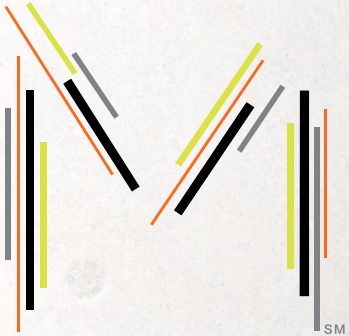
Challenges

- Lives are at stake
- Limitations inherent in EV Regulation
- Competing interests of Marketing vs Engineering (branding, zero emission should equal zero noise)
- Contributing to Noise Pollution – 10,000 EV sounds?
- Reconciling existing car designs with new requirements
- No precedents – inherently untested
- Limitations of Playback systems
- Acoustic Isolation

Opportunities

- Iconic Branding - emotionality
- Inventing a new language for machine communication (Transitional vs Long Term)
- Autonomy = Humanization = Universality
- Rear external speaker for Reverse Sounds
- Directional sound & intelligent proximity alerts (AI)
- Integration with in-car audio system, for sound cancellation, driver feedback & sonic branding consistency
- Enhanced Playback System
- Meaningful sonic information streams
- Further evolution of regulation based on industry/consumer feedback

Questions?



Thank You