

## Amplification: Is Class D Better than Class B

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### SOMETHING ABOUT MEAD

Mead had investigated this amplifier type back when he was at Industrial Research Products INC (IRPI – the R&D division of Knowles) but left to start Etymotic Research before it was ever developed into a product. Ultimately, he got involved in bringing a successful Class D product to market. Bill Johnson was involved with RTI at the time and creatively developed an improved class B product for their product line. It was definitely a different time when competitors could have healthy discussions about the merits of one technique over another.

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### SUMMARY

During the analog days of audio processing the type of power amplifier had a heavy influence on battery life. The rule of thumb for HA designers was that you needed to get one week of use from a single zinc-air cell. In addition to class B and D amplifiers, the class A amplifier was quite commonly used for lower losses, but its low efficiency made it prone to clipping, since we could never “bias” it with enough current to achieve high output levels. The H-bridge output transistor configuration, used in class D receivers, can still be found in all of today’s DSP-based products. Today, modulation of the high-frequency switching is performed digitally rather than the analog technique used when this article was written.

Annotated by: Steve Armstrong