

Modulation for Energy-Encoding

Starting with binary modulation is a practical approach. Here's a simple breakdown of how we could explore modulating voltage, current, and frequency:

Binary Voltage Modulation (BVM): Voltage represents bits—high voltage for "1," low voltage for "0." It's a direct and simple approach but sensitive to noise and interference, requiring accuracy.

Binary Current Modulation (BCM): Instead of voltage, you'd encode data using different levels of current. Lower power systems may benefit from this, but it would need careful design to avoid misreading due to small fluctuations.

Frequency Modulation (FM): Frequency could encode data more robustly against interference. High frequency = "1," low frequency = "0." It's a strong candidate for continuous data encoding, but accuracy in interpreting frequency shifts becomes crucial.