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Michael A Freeze*, Department of Mathematics and Statistics, UNC Wilmington, 601 South College Road, Wilmington, NC 28403. *Zero-sum Sequence Designs*. Preliminary report.

Let $F(G)$ denote the free abelian monoid with basis given by the elements of a finite abelian group G . The block monoid over G has as elements the members $S = g_1 \cdots g_t$ of $F(G)$ for which $g_1 + \cdots + g_t = 0$ in G . These members S are called zero-sum sequences in G . We consider the construction of zero-sum sequences in G having regularity conditions on the proper, nonempty zero-sum subsequences. (Received September 16, 2008)