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Young Jo Kwak* (kwaky@colorado.edu), CO. *Intermediate report of automorphisms of simple Lie algebras $G(n)$ over $GF(2)$.* Preliminary report.

Kaplansky introduced infinite family of simple Lie algebras $G(n)$ over $GF(2)$ in 1982, and hence over all fields of characteristic two. We investigate structure of automorphism group of $G(n)$ over $GF(2)$. $\text{Aut}(G(4))$ is computed. There is a special element in $\text{Aut}(G(n))$ for $n > 3$ which is almost identity. By the graph theoretical arguments of the complete graph K_n (consisting dots, edges, triangles, ...), we see the partial result that "If all edges are fixed, then automorphism must be identity or the special element for $n > 4$." (Received February 18, 2011)