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Zoran Sunic* (sunic@math.tamu.edu). *Ordering trees, free groups, and free products.*

We provide a construction of orders on free groups that are easy to describe and work with. In particular, the positive cone is a context-free language (in fact, a one-counter language), which can be described as the set of elements with positive value under certain counting quasi-morphisms. We show how to construct Cantor sets of orders with various properties (for instance, all of them extending the standard lexicographical order on the positive monoid). Finally, we provide a simple proof of Vinogradov's result showing that the free product of left orderable groups is left-orderable (the last result is a joint work with Warren Dicks). (Received September 11, 2014)