1046-37-1665 **Christopher F. Novak*** (cfnovak@umd.umich.edu), Department of Mathematics and Statistics, College of Arts, Sciences, and Letters, 4901 Evergreen Road, Dearborn, MI 48128. *Centralizers in the Interval Exchange Group.*

Let $\mathcal{E}$ represent the group of interval exchange transformations. For $f \in \mathcal{E}$, the structure of the centralizer $C_{\mathcal{E}}(f)$ is characterized by the dynamical properties of f. If f is topologically minimal, then either $C_{\mathcal{E}}(f)$ is virtually abelian and contains a torus subgroup, or $C_{\mathcal{E}}(f)$ is virtually cyclic. These situations are distinguished by the growth rate of the discontinuities of f under iteration. If f has finite order, then $C_{\mathcal{E}}(f)$ contains a subgroup isomorphic to $\mathcal{E}$. In general, $C_{\mathcal{E}}(f)$ is characterized by the occurrence of these dynamical situations on maximal invariant subsets of f. This characterization of centralizers is used to prove $\mathrm{Aut}(\mathcal{E}) \cong \mathcal{E} \rtimes \mathbb{Z}/2\mathbb{Z}$. (Received September 16, 2008)