1014-12-389 **Bill Jacob*** (jacob@math.ucsb.edu), Mathematics Department, University of California, Santa Barbara, Santa Barbara, CA 93106, and **Roberto Aravire** (raravire@unap.cl), Departamento de Ciencias Fisicas y Matematica, Universidad Arturo Prat, Casilla 121, Iquique, Chile. *The Unramified Witt Group of Curves in Characteristic Two.*

If F is a field of characteristic different from two and if X is a nonsingular curve defined over F, it is known that the Witt group of quadratic forms on X coincides with the unramified Witt group of the function field $F(X)$. In earlier work the authors constructed a Milnor-Scharlau sequence for the Witt group of a rational function field in characteristic two, and this work included a version of the second residue map necessary to define the unramified Witt group in characteristic two. In this paper this unramified Witt group is used to determine the Witt group of certain hyperelliptic curves in characteristic two. The results proved here in the case of hyperelliptic curves are analogous to work of Parimala and Sujatha, and to results of Arason, Elman, and Jacob in the elliptic case away from characteristic two. (Received September 14, 2005)