1046-15-541 Charles Waters (charles.waters@mnsu.edu), Department of Mathematics and Statistics, 273 Wissink Hall, Mankato, MN 56001, and In-Jae Kim\* (in-jae.kim@mnsu.edu), Department of Mathematics and Statistics, 273 Wissink Hall, Mankato, MN 56001. Low Rank Perturbations and Inertias of Full Symmetric Sign Patterns.

For a given n by n complex (resp. real) matrix A, we use a rank-one (resp. rank-two) perturbation to alter exactly one eigenvalue (resp. exactly one pair of complex-conjugate eigenvalues) of A while keeping the others equal. We use this low-rank perturbation to derive inertias of a full symmetric sign pattern  $\mathcal{A}$  from a known inertia (p, q, r) of  $\mathcal{A}$  with  $r \geq 1$ . (Received September 07, 2008)