The observation of an electric dipole moment (EDM) by searches currently being developed would be a signal of a new source of CP-violation not present in the Standard Model of particles and forces. This talk will present a proposal to search for an EDM using polarized beams (muons, deuterons, or protons) circulating in a storage ring. The electric field in the particle frame arising from the motion through the magnetic field (v x B) would, if an EDM were present, generate a small precession observable by sensitive polarimeters. Two schemes will be discussed for enhancing the EDM signal in the presence of the magnetic moment precession of the stored particles.