Abstract. We report the results of first magnetic observations of white dwarfs with the Main Stellar Spectrograph of the BTA. An accuracy of measurements of effective magnetic fields in relation to the signal-to-noise ratio and spectral line parameters have been simulated. For white dwarfs up to the 13th magnitude the accuracy of the measurements is from about several hundred Gauss to several kilogauss. For the brightest white dwarf 40 Eri B a significant low-frequency trend of the magnetic field variations with a 4-hour period was detected.