Ni-(2,2'-bipyridine) was produced in a supersonic jet. The electronic spectrum of the complex was measured by using single-photon pulsed field ionization zero electron kinetic energy electron spectroscopy (PFI-ZEKE). The spectrum shows the band origin at 37919(15) cm$^{-1}$ and vibrational intervals of 267, 1035, and 1175 cm$^{-1}$. With the aid of the B3LYP density functional and Franck-Condon factor calculations, the spectrum is attributed to the vibronic transitions from the $^3\text{A}_2$ ground state of the neutral complex to the $^2\text{B}_2$ ground state of the corresponding ion. The 267 cm$^{-1}$ progression is assigned to the Ni-bipyridine symmetric stretch in the cation, whereas the 1035 and 1175 cm$^{-1}$ intervals arise from ligand-based vibrations.