A new cubic nonstoichiometric pyrochlore type antimoniates $(H_3O^+)_{0.36}Ln_xSb_2O_{6+y}$ (with Ln = Gd^{3+}, Eu^{3+} and 0<x, y<1) have been prepared by exchange method starting from $Na_{0.36}Gd_{0.80}Sb_2O_{6.38}$ compound. Their crystal structures were investigated by Rietveld refinement and further confirmed both by infrared spectroscopy and by MAS-NMR experiments. In these defect pyrochlores the 16d positions of space group F d3m (n° 127) is occupied by rare earth ions, the 48f positions by O^{-2} and the 8b positions by O^{2-}' and H_3O^+.