Increasing Prioutte Rates with Rate Gyros

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Increasing the pirouette rate on a helicopter when using a rate gyro (non-heading hold) is a simple matter of decreasing the gyro gain. However, using this method you sacrifice stability during hover. A better approach is to use what is called stick priority. This can only by accomplished with a computer radios with a spare mixer and a gyro that has a remote gain input. Simply program a mixer to mix the rudder input into the gyro gain channel. You want the gain to decrease as the rudder stick is moved away from center. The mixing curve should look like an upside down V. If you have multi-point mixing capabilities you may want to have the gain remain constant from 25% to 75% stick deflection (that is 25% either way from center) and then have the gain decrease when the sticks are moved past this travel as shown below.