

## Re: change standard deviation of normal or Gaussian distribution (faq 13.20)

---

*Source:* [http://coding.derkeiler.com/Archive/C\\_CPP/comp.lang.c/2007-06/msg04053.html](http://coding.derkeiler.com/Archive/C_CPP/comp.lang.c/2007-06/msg04053.html)

---

- *From:* Verbal Kint <TENSOAPFEN@xxxxxxxx>
  - *Date:* Fri, 29 Jun 2007 09:20:24 -0000
- 

:) I understand what you mean. Maybe I didnt express myself clear enough. I wanted to use to following method as mentioned in FAQ:

```
double gaussrand()
{
static double V1, V2, S;
static int phase = 0;
double X;

if(phase == 0) {
do {
double U1 = (double)rand() / RAND_MAX;
double U2 = (double)rand() / RAND_MAX;

V1 = 2 * U1 - 1;
V2 = 2 * U2 - 1;
S = V1 * V1 + V2 * V2;
} while(S >= 1 || S == 0);

X = V1 * sqrt(-2 * log(S) / S);
} else
X = V2 * sqrt(-2 * log(S) / S);

phase = 1 - phase;

return X;
}
```

Now I wonder, whether I can multiply the standard deviation of e.g. 0.5 with X or with which variable (v1, v2, etc.) I need to multiply it?  
Thanks a lot.

.