

# R250Engine

INHERITS FROM RandomEngine

## CLASS DESCRIPTION

The R250Engine class implements a random number generator that is reasonably fast.

The algorithm used by the R250Engine class is that given in the article:

"A Fast Pseudo Random Number Generator" by W.L. Maier  
Dr. Dobb's Journal, 1991 May, Page 152.

Published By:  
M&T Publishing, Inc.  
501 Galveston Drive  
Redwood City, CA 94063  
415-366-3600

This class is part of Version 2.0 of Random, distributed 1992 May 29.

Contemporary Design Studios  
2339 Woodchip Way #1B  
Ypsilanti, MI 48197  
313-572-1779

Gregor N. Purdy

Software Designer  
University of Michigan  
gregor@umich.edu

WHILE THE AUTHOR DOES WORK FOR THE UNIVERSITY OF MICHIGAN, AND PROVIDES HIS EMAIL ADDRESS AT WORK, THIS PRODUCT IS IN NO WAY AFFILIATED WITH THE UNIVERSITY OF MICHIGAN. ALL THE DESIGN, CODING, TESTING, AND DOCUMENTATION IS DONE ON THE AUTHOR'S OWN TIME.

THIS WORK IS DISTRIBUTED AS IS, WITH NO WARANTEE OR GUARANTEE EXPRESSED OR IMPLIED IN ANY RESPECT. THE AUTHOR IS NOT LIABLE FOR ANY DAMAGES WHATSOEVER DIRECTLY OR INDIRECTLY RELATED TO THE USAGE OF THIS WORK.

Comments, suggestions, and bug reports are welcome. Feel free to drop us an email or letter with your comments.

This work is distributed as FreeWare. Version 1.0 was further restricted under the GNU Public License, version 1. Version 1.1 had the same restrictions as this version.

This version of the Random Classes may be used by anyone, anywhere, for anything, with the following conditions:

- (i) The usage must not be illegal in any way.
- (ii) You must credit Contemporary Design Studios and include the copyright information at the top of this document in your documentation and in your "Info Panel," if any, if your work is ever used by anyone other than yourself.
- (iii) Contemporary Design Studios retains the right to make improvements to this work and to change the distribution conditions and terms in future versions, including commercial derivative works.
- (iv) You may NOT in any way change the Random Classes and redistribute them, even under a new name, but you MAY, and in fact are encouraged to, report bugs and make suggestions for

- enhancements to Contemporary Design Studios.
- (iv) You MAY make subclasses of Random that do whatever you want. Of course, these subclasses will be governed by your own rules, but the Random Classes will still be governed by these rules.
  - (v) You MAY distribute the source code of the Random Classes with your work, but if you do all the documentation for the Random Classes, including this notice, must be distributed with it. Nobody should ever see the source code to the Random Classes without also seeing these documentation files, so they can use it, too.

## METHOD TYPES

Creating and freeing instances

+ alloc  
- free

Generation of random bits   - makeRandom:  
+ unit

Archiving

- read:  
- write:

## CLASS METHODS

### **alloc**

+ **alloc**

Returns a new uninitialized instance.

### **unit**

+ (int)**unit**

Returns the number of bytes each invocation of **makeRandom:** will produce. For R250Engine, this is 4.

## INSTANCE METHODS

### **free**

- **free**

Frees the memory occupied by the R250Engine instance and returns **nil**.

### **makeRandom:**

- **makeRandom:**(uchar \*)*storage*

Iterates once through the R250 algorithm, and stuffs the results into *storage*.

### **read:**

- **read:**(NXTypedStream \*)*stream*

Unarchives an R250Engine from *stream*.

See also: - **write:**

### **write:**

- **write:**(NXTypedStream \*)*stream*

Archives an R250Engine to *stream*.

See also: - **read:**