# Package: rbcor (via r-universe)

June 4, 2026

**Type** Package

**Title** Read BCOR Files into R

**Version** 1.0.0

**Description** Reads binary correlation (BCOR) files generated by LDStore into R's sparse matrix format. BCOR files store linkage disequilibrium correlation matrices in a compressed binary format.

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** true

**Imports** Rcpp (>= 1.0.14), Matrix

**LinkingTo** Rcpp, RcppArmadillo

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**RoxygenNote** 7.3.2

**Repository** https://mkanai.r-universe.dev

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**RemoteUrl** https://github.com/mkanai/rbcor

**RemoteRef** HEAD

**RemoteSha** 7b433dd19a729e0eab117e6da616faf440ef09d6

## Contents

## print.bcor *Print bcor Object*

### Description

Print bcor Object

### Usage

```
## S3 method for class 'bcor'
print(x, ...)
```

### Arguments

| | |
|---|---|
| x | A bcor object |
| ... | Additional arguments (ignored) |

## read_bcor *Read BCOR File*

### Description

Opens a BCOR (binary correlation) file and returns a bcor object. Supports both standard BCOR format (magic: "bcor1.1") and extended format (magic: "bcor1.x") which stores diagonal values explicitly.

### Usage

```
read_bcor(filename, read_header = TRUE, packed_threshold = 1000)
```

### Arguments

| | |
|---|---|
| filename | Path to the BCOR file |
| read_header | Whether to read the header and metadata immediately (default: TRUE) |
| packed_threshold | Size threshold for using packed symmetric matrices (default: 1000) |

### Value

A bcor object containing:

- ptr: External pointer to the C++ bcor object
- filename: Path to the BCOR file
- nSNPs: Number of SNPs in the file
- nSamples: Number of samples used to compute correlations
- is_extended: Whether the file uses extended format with diagonal values

## Examples

```
## Not run:
bcor <- read_bcor("path/to/file.bcor")

# Access metadata
meta <- bcor$get_meta()

# Read full correlation matrix
corr_full <- bcor$read_corr()

# Read subset of correlations
corr_subset <- bcor$read_corr(snps = c(1, 10, 20))

# Read rectangular submatrix
corr_rect <- bcor$read_corr(snps = 1:10, snps2 = 11:20)

# Read sparse matrix with threshold
corr_sparse <- bcor$read_corr(snps = 1:100, sparse = TRUE, threshold = 0.1)

# Read packed symmetric matrix (memory efficient for large matrices)
corr_packed <- bcor$read_corr(packed = TRUE)

# Get diagonal values (useful for extended format files)
diag_vals <- bcor$get_diagonal()

## End(Not run)
```

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