

# Package ‘HARr’

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**Type** Package

**Title** 'HAR' ('GEMPACK') File Read/Write Utility

**Version** 1.1.0

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**Description** HAR files are generated and consumed by 'GEMPACK' applications. This package reads/writes 'HAR' files (and 'SL4' files) directly using basic R functions.

**License** CC0

**Encoding** UTF-8

**RoxygenNote** 7.3.2

**Imports** stringi

**NeedsCompilation** no

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**Repository** CRAN

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read_har	<i>Read a GEMPACK HAR file into R</i>
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## Description

Reads in a GEMPACK HAR file and returns its representation a list. Currently can only process integer headers, real full headers and character headers

**Usage**

```
read_har(
  con,
  useCoefficientsAsNames = FALSE,
  toLowerCase = TRUE,
  headersToRead = NULL
)
```

**Arguments**

`con` Connection or path to HAR file

`useCoefficientsAsNames` If a coefficient name is present in the header, use that instead of the four-letter header

`toLowerCase` = TRUE Turn all strings to lower case

`headersToRead` = NULL A vector of header names to read in

**Value**

A list of headers

**Examples**

```
f1 <- system.file("extdata/example1.har", package="HARr")
read_har(f1)
```

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read_SL4	<i>Read an SL4 solution file</i>
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**Description**

This function reads SL4 solution files into a list

**Usage**

```
read_SL4(filename, toLowerCase = TRUE)
```

**Arguments**

`filename` Path to SL4 file

`toLowerCase` Logical: should all text from the SL4 file be turned to lowercase

**Value**

A list of variables

**Examples**

```
f1 <- system.file("extdata/test.sl4", package="HARr")
read_SL4(f1)
```

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write\_har*Write an R list to GEMPACK HAR*

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**Description**

This function writes a HAR file based on a list. If a list element contains attribute "description," then it is used to define the long header name

Some warnings: (1) you cannot have NA's in a HAR file, (2) empty strings are not allowed, (3) some programs (e.g., GEMPACK models) read chunks of data no longer than 1e4 bytes (set maxSize = 1e4), (4) all dimensions in arrays must have names (see example)

**Usage**

```
write_har(data, filename, maxSize = 10000)
```

**Arguments**

data	A list
filename	Path to the file to be created
maxSize	Maximum size of data chunk in real array, default of 10,000

**Value**

No return value, called for side effects

**Examples**

```
myList = list(TEST = c('Test'))
attr(myList$TEST, 'description') = "This is the long header name"
write_har(myList, 'harfile.har')
file.remove('harfile.har')
```

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