

limits — Quick reference for limits

[Description](#) [Remarks and examples](#) [Also see](#)

Description

This entry provides a quick reference for the size limits in Stata. Note that most of these limits are so high that you will never encounter them.

Remarks and examples

Remarks are presented under the following headings:

Maximum size limits

Matrix size

Determining which flavor of Stata you are running

Maximum size limits

	Stata/IC	Stata/MP and Stata/SE
# of observations	2,147,483,647	1,099,511,627,775 (MP) (1) 2,147,483,647 (SE) (1)
# of variables	2,048	120,000 (MP) 32,767 (SE)
value of <code>matsize</code>	800	11,000
# of RHS variables	798	10,998
# characters in a command	264,408	4,227,159
# options for a command	70	70
# of elements in a <i>numlist</i>	2,500	2,500
# of interacted continuous variables	8	8
# of interacted factor variables	8	8
# of unique time-series operators in a command	100	100
# seasonal suboperators per time-series operator	8	8
# of dyadic operators in an expression	800	800
# of numeric literals in an expression	300	300
# of string literals in an expression	512	512
length of string in string expression (bytes)	2,000,000,000	2,000,000,000
# of sum functions in an expression	5	5
# of pairs of nested parentheses	249	249
# of characters in a macro (2)	264,392	15,480,200 (MP) 4,227,143 (SE)

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<i>continued</i>	Stata/IC	Stata/MP and Stata/SE
# of nested do-files	64	64
# of lines in a program	3,500	3,500
# of bytes in a program	135,600	135,600
length of a variable name (characters)	32	32
length of ado-command name (characters)	32	32
length of a global macro name (characters)	32	32
length of a local macro name (characters)	31	31
length of a <code>str#</code> variable (bytes)	2,045	2,045
length of a <code>strL</code> variable (bytes)	2,000,000,000	2,000,000,000
anova		
# of variables in one <code>anova</code> term	8	8
# of terms in the <code>repeated()</code> option	4	4
char		
length of one characteristic (bytes)	67,784	67,784
constraint		
# of constraints	1,999	1,999
encode and decode		
# of unique values	65,536	65,536
_estimates hold		
# of stored estimation results	300	300
estimates store		
# of stored estimation results	300	300
exlogistic and expoisson		
maximum memory specification in memory(#)	2gb	2gb
grmeanby		
# of unique values in <i>varlist</i>	$_N/2$	$_N/2$
graph twoway		
# of variables in a plot	100	100
# of styles in an option's stylelist	20	20
infile (free format)		
record length without dictionary	none	none
infile (fixed format)		
record length with a dictionary	524,275	524,275
infix (fixed format)		
record length with a dictionary	524,275	524,275

<i>continued</i>	Stata/IC	Stata/MP and Stata/SE
label		
length of dataset label (characters)	80	80
length of variable label (characters)	80	80
length of value label string (bytes)	32,000	32,000
length of name of value label (characters)	32	32
# of codings within one value label	65,536	65,536
label language		
# of different languages	100	100
macro		
# of nested macros	20	20
manova		
# of variables in single manova term	8	8
matrix (3)		
dimension of single matrix	800 × 800	11,000 × 11,000
maximize options		
iterate() maximum	16,000	16,000
mprobit		
# of categories in a <i>depvar</i>	30	30
net		
# of description lines in .pkg file	100	100
nlogit and nlogittree		
# of levels in model	8	8
notes		
length of one note (bytes)	67,784	67,784
# of notes attached to <code>_dta</code>	9,999	9,999
# of notes attached to each variable	9,999	9,999
numlist		
# of elements in the numeric list	2,500	2,500
reg3, sureg, and other system estimators		
# of equations	800	11,000
set adosize		
memory ado-files may consume	1000K	1000K
set scrollbarsize		
memory for Results window buffer	2000K	2000k

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<i>continued</i>	Stata/IC	Stata/MP and Stata/SE
<code>slogit</code>		
# of categories in a <i>depvar</i>	30	30
<code>snapshot</code>		
length of label (characters)	80	80
# of saved snapshots	1,000	1,000
<code>stcox</code>		
# of variables in <code>strata()</code> option	5	5
<code>stcurve</code>		
# of curves plotted on the same graph	10	10
<code>table</code> and <code>tabdisp</code>		
# of by variables	4	4
# of margins, i.e., sum of rows, columns, supercolumns, and by groups	3,000	3,000
<code>tabulate oneway</code>		
# of rows in one-way table	3,000	12,000
<code>tabulate twoway</code>		
# of rows & cols in two-way table	300 × 20	1,200 × 80
<code>tabulate, summarize()</code>		
# of cells (rows X cols)	375	375
<code>teffects</code>		
# of treatments	20	20
<code>xt</code> estimation commands (e.g., <code>xtgee</code> , <code>xtgls</code> , <code>xtpoisson</code> , <code>xtprobit</code> , <code>xtreg</code> with <code>mle</code> option, and <code>xtpcse</code> when neither option <code>hetonly</code> nor option <code>independent</code> is specified)		
# of time periods within panel	800	11,000
# of integration points accepted by <code>intpoints(#)</code>	195	195

- (1) For Stata/MP, the maximum number of observations is 1,099,511,627,775, and for Stata/SE, the maximum number is 2,147,483,647. In practice, both flavors are limited by memory.
- (2) The maximum length of the contents of a macro are fixed in Stata/IC and settable in Stata/SE and Stata/MP. The currently set maximum length is recorded in `c(macrolen)`; type `display c(macrolen)`. The maximum length can be changed with `set maxvar`. If you set `maxvar` to a larger value, the maximum length increases; if you set `maxvar` to a smaller value, the maximum length decreases. The relationship between them is $maximum_length = 129 \times maxvar + 200$.
- (3) In Mata, matrices are limited only by the amount of memory on your computer.

Matrix size

See [R] [matsize](#).

Determining which flavor of Stata you are running

Type

```
. about
```

The response will be Stata/MP, Stata/SE, or Stata/IC. Other information is also shown, including your serial number. See [R] [about](#).

Also see

- [R] [about](#) — Display information about your Stata
- [R] [matsize](#) — Set the maximum number of variables in a model
- [D] [compress](#) — Compress data in memory
- [D] [data types](#) — Quick reference for data types
- [D] [import](#) — Overview of importing data into Stata
- [D] [infile \(fixed format\)](#) — Read text data in fixed format with a dictionary
- [D] [infile \(free format\)](#) — Read unformatted text data
- [D] [memory](#) — Memory management
- [D] [obs](#) — Increase the number of observations in a dataset