

Description

`append` appends Stata-format datasets stored on disk to the end of the dataset in memory. If any *filename* is specified without an extension, `.dta` is assumed.

Stata can also join observations from two datasets into one; see [\[D\] merge](#). See [\[U\] 23 Combining datasets](#) for a comparison of `append`, `merge`, and `joinby`.

Quick start

Append `mydata2.dta` to `mydata1.dta` with no data in memory

```
append using mydata1 mydata2
```

Same as above, but with `mydata1.dta` in memory

```
append using mydata2
```

Same as above, and generate `newv` to indicate source dataset

```
append using mydata2, generate(newv)
```

Same as above, but do not copy value labels or notes from `mydata2.dta`

```
append using mydata2, generate(newv) nolabel nonotes
```

Only keep `v1`, `v2`, and `v3` from `mydata2.dta`

```
append using mydata2, keep(v1 v2 v3)
```

Menu

Data > Combine datasets > Append datasets

Syntax

`append using filename [filename [...]] [, options]`

You may enclose *filename* in double quotes and must do so if *filename* contains blanks or other special characters.

<i>options</i>	Description
<code>generate(<i>newvar</i>)</code>	<i>newvar</i> marks source of resulting observations
<code>keep(<i>varlist</i>)</code>	keep specified variables from appending dataset(s)
<code>no<code>label</code></code>	do not copy value-label definitions from dataset(s) on disk
<code>nonotes</code>	do not copy notes from dataset(s) on disk
<code>force</code>	append string to numeric or numeric to string without error

Options

`generate(newvar)` specifies the name of a variable to be created that will mark the source of observations. Observations from the master dataset (the data in memory before the append command) will contain 0 for this variable. Observations from the first using dataset will contain 1 for this variable; observations from the second using dataset will contain 2 for this variable; and so on.

`keep(varlist)` specifies the variables to be kept from the using dataset. If `keep()` is not specified, all variables are kept.

The *varlist* in `keep(varlist)` differs from standard Stata varlists in two ways: variable names in *varlist* may not be abbreviated, except by the use of wildcard characters, and you may not refer to a range of variables, such as `price-weight`.

`nolabel` prevents Stata from copying the value-label definitions from the disk dataset into the dataset in memory. Even if you do not specify this option, label definitions from the disk dataset never replace definitions already in memory.

`nonotes` prevents notes in the using dataset from being incorporated into the result. The default is to incorporate notes from the using dataset that do not already appear in the master data.

`force` allows string variables to be appended to numeric variables and vice versa, resulting in missing values from the using dataset. If omitted, append issues an error message; if specified, append issues a warning message.

Remarks and examples

The disk dataset must be a Stata-format dataset; that is, it must have been created by `save` (see [\[D\] save](#)).

► Example 1

We have two datasets stored on disk that we want to combine. The first dataset, called `even.dta`, contains the sixth through eighth positive even numbers. The second dataset, called `odd.dta`, contains the first five positive odd numbers. The datasets are

```
. use even
(6th through 8th even numbers)
. list
```

	number	even
1.	6	12
2.	7	14
3.	8	16

```
. use odd
(First five odd numbers)
. list
```

	number	odd
1.	1	1
2.	2	3
3.	3	5
4.	4	7
5.	5	9

We will append the even data to the end of the odd data. Because the odd data are already in memory (we just used them above), we type `append using even`. The result is

```
. append using even
. list
```

	number	odd	even
1.	1	1	.
2.	2	3	.
3.	3	5	.
4.	4	7	.
5.	5	9	.
6.	6	.	12
7.	7	.	14
8.	8	.	16

Because the `number` variable is in both datasets, the variable was extended with the new data from the file `even.dta`. Because there is no variable called `odd` in the new data, the additional observations on `odd` were forward-filled with *missing* (.). Because there is no variable called `even` in the original data, the first observations on `even` were back-filled with missing.

➤ Example 2

The order of variables in the two datasets is irrelevant. Stata always appends variables by name:

```
. use https://www.stata-press.com/data/r19/odd1
(First five odd numbers)

. describe
Contains data from https://www.stata-press.com/data/r19/odd1.dta
Observations:      5      First five odd numbers
Variables:         2      9 Jan 2024 08:41
```

Variable name	Storage type	Display format	Value label
odd	float	%9.0g	
number	float	%9.0g	

Sorted by: number

```
. describe using https://www.stata-press.com/data/r19/even
Contains data      6th through 8th even numbers
Observations:      3      9 Jan 2024 08:43
Variables:         2
```

Variable name	Storage type	Display format	Value label
number	byte	%9.0g	
even	float	%9.0g	

Sorted by: number

```
. append using https://www.stata-press.com/data/r19/even
. list
```

	odd	number	even
1.	1	1	.
2.	3	2	.
3.	5	3	.
4.	7	4	.
5.	9	5	.
6.	.	6	12
7.	.	7	14
8.	.	8	16

The results are the same as those in the [first example](#).



When Stata appends two datasets, the definitions of the dataset in memory, called the *master* dataset, override the definitions of the dataset on disk, called the *using* dataset. This extends to value labels, variable labels, characteristics, and date–time stamps. If there are conflicts in numeric storage types, the more precise storage type will be used regardless of whether this storage type was in the *master* dataset or the *using* dataset. If a variable is stored as a string in one dataset that is longer than in the other, the longer `str#` storage type will prevail. If a variable is stored as a `strL` in one dataset and a `str#` in another dataset, the `strL` storage type will prevail.

❑ Technical note

If a variable is a string in one dataset and numeric in the other, Stata issues an error message unless the `force` option is specified. If `force` is specified, Stata issues a warning message before appending the data. If the using dataset contains the string variable, the combined dataset will have numeric missing values for the appended data on this variable; the contents of the string variable in the using dataset are ignored. If the using dataset contains the numeric variable, the combined dataset will have empty strings for the appended data on this variable; the contents of the numeric variable in the using dataset are ignored.



➤ Example 3

Because Stata has five numeric variable types—byte, int, long, float, and double—you may attempt to append datasets containing variables with the same name but of different numeric types; see [U] 12.2.2 Numeric storage types.

Let’s describe the datasets in the example above:

```
. describe using https://www.stata-press.com/data/r19/odd
Contains data                               First five odd numbers
Observations:                               5
Variables:                                   2
9 Jan 2024 08:50
```

Variable name	Storage type	Display format	Value label	Variable label
number	float	%9.0g		
odd	float	%9.0g		Odd numbers

```
Sorted by:
. describe using https://www.stata-press.com/data/r19/even
Contains data                               6th through 8th even numbers
Observations:                               3
Variables:                                   2
9 Jan 2024 08:43
```

Variable name	Storage type	Display format	Value label	Variable label
number	byte	%9.0g		
even	float	%9.0g		Even numbers

```
Sorted by: number
. describe using https://www.stata-press.com/data/r19/oddeven
Contains data                               First five odd numbers
Observations:                               8
Variables:                                   3
9 Jan 2024 08:53
```

Variable name	Storage type	Display format	Value label	Variable label
number	float	%9.0g		
odd	float	%9.0g		Odd numbers
even	float	%9.0g		Even numbers

Sorted by:

The number variable was stored as a float in `odd.dta` but as a byte in `even.dta`. Because float is the more precise storage type, the resulting dataset, `oddeven.dta`, had number stored as a float. Had we instead appended `odd.dta` to `even.dta`, number would still have been stored as a float:

```
. use https://www.stata-press.com/data/r19/even, clear
(6th through 8th even numbers)

. append using https://www.stata-press.com/data/r19/odd
(variable number was byte, now float to accommodate using data's values)

. describe
Contains data from https://www.stata-press.com/data/r19/even.dta
Observations:      8              6th through 8th even numbers
Variables:         3              9 Jan 2024 08:43
```

Variable name	Storage type	Display format	Value label	Variable label
number	float	%9.0g		
even	float	%9.0g		Even numbers
odd	float	%9.0g		Odd numbers

Sorted by:
Note: Dataset has changed since last saved.



➤ Example 4

Suppose that we have a dataset in memory containing the variable `educ`, and we have previously given a label variable `educ` "Education Level" command so that the variable label associated with `educ` is "Education Level". We now append a dataset called `newdata.dta`, which also contains a variable named `educ`, except that its variable label is "Ed. Lev". After appending the two datasets, the `educ` variable is still labeled "Education Level". See [\[U\] 12.6.2 Variable labels](#).



➤ Example 5

Assume that the values of the `educ` variable are labeled with a value label named `educ1b1`. Further assume that in `newdata.dta`, the values of `educ` are also labeled by a value label named `educ1b1`. Thus there is one definition of `educ1b1` in memory and another (although perhaps equivalent) definition in `newdata.dta`. When you append the new data, you will see the following:

```
. append using newdata
label educ1b1 already defined
```

If one label in memory and another on disk have the same name, append warns you of the problem and sticks with the definition currently in memory, ignoring the definition in the disk file.



□ Technical note

When you append two datasets that both contain definitions of the same value label, the codings may not be equivalent. That is why Stata warns you with a message like “label educ1bl already defined”. If you do not know that the two value labels are equivalent, you should convert the value-labeled variables into string variables, append the data, and then construct a new coding. `decode` and `encode` make this easy:

```
. use newdata, clear
. decode educ, gen(edstr)
. drop educ
. save newdata, replace
. use basedata
. decode educ, gen(edstr)
. drop educ
. append using newdata
. encode edstr, gen(educ)
. drop edstr
```

See [D] [encode](#).

You can specify the `nolabel` option to force `append` to ignore all the value-label definitions in the incoming file, whether or not there is a conflict. In practice, you will probably never want to do this. □

▷ Example 6

Suppose that we have several datasets containing the populations of counties in various states. We can use `append` to combine these datasets all at once and use the `generate()` option to create a variable identifying from which dataset each observation originally came.

```
. use https://www.stata-press.com/data/r19/capop
. list
```

	county	pop
1.	Los Angeles	9878554
2.	Orange	2997033
3.	Ventura	798364

```
. append using https://www.stata-press.com/data/r19/ilpop
> https://www.stata-press.com/data/r19/txpop, generate(state)
. label define statelab 0 "CA" 1 "IL" 2 "TX"
. label values state statelab
```

```
. list
```

	county	pop	state
1.	Los Angeles	9878554	CA
2.	Orange	2997033	CA
3.	Ventura	798364	CA
4.	Cook	5285107	IL
5.	DeKalb	103729	IL
6.	Will	673586	IL
7.	Brazos	152415	TX
8.	Johnson	149797	TX
9.	Harris	4011475	TX



Video example

[How to append files into a single dataset](#)

Reference

Chatfield, M. D. 2015. [precombine](#): A command to examine $n \geq 2$ datasets before combining. *Stata Journal* 15: 607–626.

Also see

- [D] [cross](#) — Form every pairwise combination of two datasets
- [D] [joinby](#) — Form all pairwise combinations within groups
- [D] [merge](#) — Merge datasets
- [D] [save](#) — Save Stata dataset
- [D] [use](#) — Load Stata dataset
- [U] [23 Combining datasets](#)

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