

## append — Append datasets

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

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## 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 [\[U\] 22 Combining datasets](#) for a comparison of `append`, `merge`, and `joinby`.

## 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`.

`no`label 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

[stata.com](https://www.stata.com)

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.

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## ▶ Example 2

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

```
. use http://www.stata-press.com/data/r13/odd1
(First five odd numbers)
```

```
. describe
```

```
Contains data from http://www.stata-press.com/data/r13/odd1.dta
obs:                5                First five odd numbers
vars:               2                9 Jan 2013 08:41
size:              40
```

---

variable name	storage type	display format	value label	variable label
odd	float	%9.0g		Odd numbers
number	float	%9.0g		

---

```
Sorted by: number
```

```
. describe using http://www.stata-press.com/data/r13/even
```

```
Contains data from http://www.stata-press.com/data/r13/even
obs:                3                6th through 8th even numbers
vars:               2                9 Jan 2013 08:43
size:              27
```

---

variable name	storage type	display format	value label	variable label
number	byte	%9.0g		
even	float	%9.0g		Even numbers

---

```
Sorted by: number
```

```
. append using http://www.stata-press.com/data/r13/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 http://www.stata-press.com/data/r13/odd
Contains data from http://www.stata-press.com/data/r13/odd
  obs:                5                First five odd numbers
  vars:                2                9 Jan 2013 08:50
  size:               60
```

variable name	storage type	display format	value label
number	float	%9.0g	
odd	float	%9.0g	Odd numbers

Sorted by:

```
. describe using http://www.stata-press.com/data/r13/even
Contains data from http://www.stata-press.com/data/r13/even
  obs:           3                6th through 8th even numbers
  vars:           2                9 Jan 2013 08:43
  size:           27
```

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 http://www.stata-press.com/data/r13/oddeven
Contains data from http://www.stata-press.com/data/r13/oddeven
  obs:           8                First five odd numbers
  vars:           3                9 Jan 2013 08:53
  size:           128
```

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 http://www.stata-press.com/data/r13/even, clear
(6th through 8th even numbers)
. append using http://www.stata-press.com/data/r13/odd
number was byte now float
. describe
Contains data from http://www.stata-press.com/data/r13/even.dta
  obs:           8                6th through 8th even numbers
  vars:           3                9 Jan 2013 08:43
  size:           96
```

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**.

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## ▷ 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.

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## □ 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 `educ1b1` 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 http://www.stata-press.com/data/r13/capop
. list
```

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

```
. append using http://www.stata-press.com/data/r13/ilpop
> http://www.stata-press.com/data/r13/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

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## 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] [22 Combining datasets](#)