input

This syntax is specific to...
IBM PC XT or AT compatible

keys:	**[to]**	*<number>*	output picture
	name	*'<text>'*	input file name
	size	*<x>,<y>,<z>*	if **raw**, size of raw binary data
	skip	*<number>*	if **raw**, number of bytes to skip before reading image data
options:	**cut/dump/paint/link/raw**		input format (the default is to read a Semper 6 data file
	cut		read a Media Cybernetics CUT file
	dump		read a Micro Semper 1 dump file
	paint		read a greyscale Paintbrush PCX file
	link		read a Link Analytical data file
	raw		read a raw binary data file
	swap		if **raw**, read data in *Motorala* instead of *Intel* byte ordering
	byte/integer/fp/complex		if **raw**, input data format
	byte		read image data as bytes (the default)
	integer		read image data as 16-bit integers
	fp		read image data as floating-point values
	complex		read image data as complex values
	again		if **name** is omitted and was used in a command to open a file for reading, open the same file again

Use **input** to read pictures from files created by Semper 6, (from the **output** command), from dump files created by MicroSemper 1, or from other selected programs, such as Media Cybernetics CUT file format.

Examples

```
input 5 name 'newdata'
```

This command reads picture 5 from the Semper 6 file called *newdata.pic.*

input

```
input 20 dump name 'olddata'
```

This command reads picture 20 from a MicroSemper1 dump file called *olddata.dum.*

```
input 104 cut name 'halo'
```

This command reads picture 104 from a Media Cybernetics CUT format file called *halo.cut* and obtains the picture label information from the LAB file *halo.lab.*

```
input 125 raw name 'binary' size 512,512
```

This command reads picture 125, of size 512 by 512 pixels, from the raw binary file called *binary.bin.*

```
input 126 raw again skip 1078 size 512,512
```

This command reads again the file in the previous example, skipping some header bytes.

```
input 11 link name 'import'
```

This command reads picture 11 from the Link Analytical data file *import.im.*

```
input 2:4 paint name 'cells'
```

This command reads picture 4 on device 2 from the Paintbrush PCX file *cells.pcx* (or *cells.pcc* if *cells.pcx* is not found).

Description

By default, **input** expects to read a Semper 6 data file unless you specify the **cut, dump, paint, link** or **raw** option. The default file format contains exactly the same information as files handled by the **read** and **write** commands, but in raw binary form.

If you specify the **cut** option, **input** reads a Media Cybernetics CUT file. Semper also looks for a Semper LAB file (produced by the **output** command) which contains the associated picture label. If no LAB file is found, the output picture is given the source file name as a title.

If you specify the the **dump** option, **input** reads a Micro Semper 1 dump file. Note that not all MicroSemper 1 picture classes are readable (*Macro, Object* and *Program* pictures cannot be read by **input**).

If you specify the **paint** option, **input** reads a greyscale Paintbrush PCX file. Not all Paintbrush formats are supported, in particular, new encoding methods and true colour formats will not be read.

input

If you specify the **link** option, **input** reads a Link Analytical AN10 or eXL file. Not all Link formats are supported (only 8-bit and 16-bit images can be read).

If you specify the **raw** option, Semper reads a binary file. You need to specify the size of the file using the **size** key, with pixels starting with the top left pixel of layer 1, reading along the row. By default, one byte is read for each pixel. You can specify the pixel data form with the options **byte, integer, fp** or **complex.** You can also use the **skip** key to specify the number of bytes to skip before reading data from a file. This key is useful if you have picture files that contain header information of a known size.

The bytes are always ordered in a Semper 6 data file so that the least significant byte appears at the first (lowest) address (*Intel* format). When reading a raw binary file (**raw** option), you can use the **swap** option to read the binary data assuming the *Motorola* packing format.

The following default file extensions are provided:

Semper 6 data file	*.pic*
raw binary file	*.bin*
MicroSemper 1 dump file	*.dum*
Media Cybernetics CUT file	*.cut*
Semper LAB file	*.lab*
Paintbrush PCX file	*.pcx, .pcc*
Link Analytica data file	*.im*

For Paintbrush PCX files, the default extension *.pcc* is used if a file with the extension *.pcx* is not found.

The **again** option allows you to re-open a file without having to specify the file name again with the **name** key. If the **name** key was not used before to open a file for reading, the **input** command will prompt for the file name. This option is most useful for unpicking formats in conjunction with the **raw** option and **skip** key. For example, you could read a file *mystyle.bin* consisting of two 16-bit values giving the image size, followed by the raw image data as bytes, with the following commands:

```
input 1 raw name 'mystyle' size 2,1 integer
origin left; dx=p(0); dy=p(1)
input 1 raw again skip 4 size dx,dy byte
```

Note that **input** searches for files in Semper's file search path (use the command **show path** to list the file search path). You can avoid a time-consuming path scan by specifying a full path in the filename.

Files written using the **output** command on a Unix worksttion can be read by the **input** command.

input

Notes

see also: **output, read, write**

Defaults and Ranges

keys/options	defaults	range
[to]	current picture, held in the variable *select*	valid picture number
name	*none*; prompts for file name if interactive	valid filename
size	*none*	valid picture size
skip	0	positive integer
map	*none*	valid picture number
cut/dump/paint/ link/raw	read a Semper 6 data file	
swap	if **raw**, read data assuming *Intel* byte ordering	
byte/integer/fp complex	if **raw**, read data as bytes	

input

This syntax is specific to...
Sprynt systems and workstations running Unix

keys:	**[to]**	*<number>*	output picture
	name	*'<text>'*	input file name
	size	*<x>,<y>,<z>*	if **raw**, size of raw binary image
	skip	*<number>*	if **raw**, number of bytes to skip before reading image data
	map	*<number>*	if **raster**, picture containing Sun Raster colormap
options:	**raw/raster**		input format (the default is to read a Semper 6 data file
	raw		read a raw binary data file
	raster		read a Sun Raster file
	swap		if **raw**, write data in *Motorala* instead of *Intel* byte ordering
	byte/integer/fp/complex		if **raw**, input data format
	byte		read image data as bytes (the default)
	integer		read image data as 16-bit integers
	fp		read image data as floating-point values
	complex		read image data as complex values
	again		if **name** is omitted and was used in a command to open a file for reading, open the same file again

Use **input** to read pictures from files created by Semper 6 on workstations or PCs (using the **output** command) or by other selected programs.

Examples

```
input 5 name 'newdata'
```

This command reads picture 5 from the Semper 6 file called *newdata.pic*.

```
input 125 raw name 'binary' size 512,512
```

This command reads picture 125, of size 512 by 512 byte pixels, from the raw binary file called *binary.bin*.

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```
input 33 raw integer name 'mydata' size 640,480 swap
```

This command reads picture 33, of size 640 by 480 pixels, as 16 bit integers with *Motorola* byte ordering from the file *mydata.bin*.

```
input 1 raw name 'special.pic' size 128,128 skip 64
```

This command reads picture 1, of size 128 by 128 byte pixels, from the raw binary file *special.pic*, skipping the first 64 bytes of the file.

```
input 1 raster name 'dump.rff' map 2
```

This command reads a Sun raster file, called *dump.rff*, into picture 1, storing any colormap information in picture 2.

Description

By default, **Input** expects to read a Semper 6 data file unless you specify the **raw** or **raster** options. The default extension for Semper 6 files is *.pic*. The default file format contains exactly the same information as files handled by the **read** and **write** commands, but in raw binary form.

If you specify the **raw** option, Semper reads a raw binary file. The default extension for raw binary files is *.bin*. You also need to specify the size of the file using the **size** key, with pixels starting with the top left pixel of layer 1, reading along the row. By default, one byte is read for each pixel. You can specify the pixel data form with the options **byte, integer, fp** or **complex.** You can also use the **skip** key with the **raw** option to specify the number of bytes to skip before reading data from a file. This key is useful if you have picture files that contain header information of a known size.

The bytes are always ordered in a Semper 6 data file so that the least significant byte appears at the first (lowest) address (*Intel* format). When reading a raw binary file (**raw** option), you can use the **swap** option to read the binary data assuming the *Motorola* packing format.

The **again** option allows you to re-open a file without having to specify the file name again with the **name** key. If the **name** key was not used before to open a file for reading, the **Input** command will prompt for the file name. This option is most useful for unpicking foreign file formats in conjunction with the **raw** option and **skip** key. For example, you could read a file *mystyle.bin* consisting of two 16-bit values giving the image size, followed by the raw image data as bytes, with the following commands:

```
input 1 raw name 'mystyle' size 2,1 integer
origin left; dx=p(0); dy=p(1)
input 1 raw again skip 4 size dx,dy byte
```

input

If you specify the **raster** option, Semper reads a Sun Raster image file. The default extension for raster files is *.rff*. Currently only files with 8 bits per pixel are accepted. The file packing types support the old and new unpacked types 0 (RT_OLD) and 1 (RT_STANDARD), and also the byte encoded type 2 (RT_BYTE_ENCODED). If you use the **map** key with the **raster** option, Semper stores any colormap data that is present in the specified picture number. This information can be used to remap the image data that you read in using the Semper **map** command. If the map data has three rows (RGB colormap) you can remap the original image as follows:

```
input 1 raster name 'myfile.rff' map 2 ; ! read the data
project 2 vertically fp                ; ! sum columns
calculate :2/3 to :3                   ; ! average
copy 3 2 byte                          ; ! restore as byte map
map 1 to 3 with 2                      ; ! and map the data
```

Files written using the **output** command on a PC can be read into a UNIX workstation linked over a *PC-NFS* network. Note that **input** searches for files in the file search path (use the command **show path** to list the search path). You can avoid a time-consuming path scan by specifying a full path in the filename.

Notes

see also: **output, read, write, show path**

Defaults and Ranges

keys/options	defaults	range
[to]	current picture, held in the variable *select*	valid picture number
name	*none*; prompts for file name if interactive	valid file name
size	*none*	valid picture size
skip	0	positive integer
map	*none*	valid picture number
raw/raster	read a Semper 6 data file	
swap	if **raw**, read data assuming *Intel* byte ordering	
byte/integer/fp complex	if **raw**, read data as bytes	