

This file consists of Appendix A to **MacAnova User's Guide** by Gary W. Oehlert and Christopher Bingham, issued as part of a revision of Technical Report Number 617, School of Statistics, University of Minnesota, August 1998, describing Version 4.07 of MacAnova.

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Appendix A Commands and Macros Grouped by Topic

Here are lists of various MacAnova functions and pre-defined macros grouped by topic. The topics are the almost the same as the possible values for `key` on `help()`. These do not include any macros that are not pre-defined. In particular, these lists do not include macros in files `Design.mac` and `Tser.mac`. When running MacAnova you can get a brief summary of how a function or pre-defined macro is used by, for example, `usage(anova)`, and more extensive help by `help(anova)` (see Sec 2.9).

Analysis of Variance

<code>anova</code>	<code>factor</code>	<code>makefactor</code>	<code>resid</code>	<code>samplesize</code>
<code>anovapred</code>	<code>fastanova</code>	<code>manova</code>	<code>resvsindex</code>	<code>secoefs</code>
<code>cellstats</code>	<code>glmfit</code>	<code>power</code>	<code>resvsrankits</code>	<code>yates</code>
<code>coefs</code>	<code>glmpred</code>	<code>power2</code>	<code>resvsyhat</code>	<code>yhat</code>
<code>contrast</code>	<code>glmtable</code>	<code>predtable</code>	<code>robust</code>	

Categorical Data Analysis

<code>bin</code>	<code>glmpred</code>	<code>logistic</code>	<code>probit</code>
<code>glmfit</code>	<code>ipf</code>	<code>poisson</code>	<code>tabs</code>

CHARACTER Variables

<code>array</code>	<code>fromclip</code>	<code>ischar</code>	<code>nameof</code>	<code>varnames</code>
<code>compnames</code>	<code>getascii</code>	<code>makefactor</code>	<code>putascii</code>	<code>vector</code>
<code>delete</code>	<code>inforead</code>	<code>match</code>	<code>toclip</code>	

Combining Variables

<code>array</code>	<code>matrix</code>	<code>select</code>	<code>structure</code>	<code>triupper</code>
<code>hconcat</code>	<code>rep</code>	<code>split</code>	<code>trilower</code>	<code>vconcat</code>
<code>makecols</code>	<code>run</code>	<code>strconcat</code>	<code>triunpack</code>	<code>vector</code>

Complex Arithmetic

<code>cconj</code>	<code>cprdc</code>	<code>hconj</code>	<code>hprdhj</code>	<code>rft</code>
<code>cft</code>	<code>cprdcj</code>	<code>hft</code>	<code>hreal</code>	<code>unwind</code>
<code>cimag</code>	<code>creal</code>	<code>himag</code>	<code>hrect</code>	
<code>cmplx</code>	<code>crect</code>	<code>hpolar</code>	<code>htoc</code>	
<code>cpolar</code>	<code>ctoh</code>	<code>hprdh</code>	<code>polyroot</code>	

Confidence Intervals

<code>invchi</code>	<code>invF</code>	<code>invstu</code>	<code>secoefs</code>	<code>tint</code>
<code>invdunnett</code>	<code>invnor</code>	<code>invstudrng</code>	<code>t2int</code>	

Control of Execution

<code>batch</code>	<code>else</code>	<code>getoptions</code>	<code>next</code>	<code>User</code>
<code>break</code>	<code>elseif</code>	<code>if</code>	<code>redo</code>	<code>while</code>
<code>breakall</code>	<code>evaluate</code>	<code>loadUser</code>	<code>setoptions</code>	
<code>breakif</code>	<code>for</code>	<code>macro</code>	<code>shell</code>	

Descriptive Statistics

boxplot	halfnorm	rankits	t2val	twotailt
cellstats	hist	stemleaf	tabs	vboxplot
cor	max	sum	tint	
describe	min	t2int	tval	

File usage

adddatapath	getdata	macrowrite	readcols	vecread
addmacrofile	getmacros	matprint	restore	write
asciisave	inforead	matread	save	
batch	loadUser	matwrite	spool	
console	macroread	read	User	

Input

adddatapath	enterchars	getmacros	matread	vecread
console	fromclip	inforead	read	
enter	getdata	macroread	readcols	

Linear and Generalized Linear Model Analysis

anova	glmtable	poisson	resid	varnames
anovapred	ipf	power	resvsindex	xrows
bcprd	isfactor	power2	resvsrankits	xvariables
coefs	logistic	predtable	resvsyhat	yates
contrast	makefactor	probit	robust	yhat
factor	manova	regcoefs	samplesize	
fastanova	modelinfo	regpred	screen	
glmfit	modelvars	regress	secoefs	
glmpred	nbits	regs	swp	

LOGICAL Variables

alltrue	anytrue	islogic
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Macros

addmacrofile	ischar	ismacro	isscalar	macroread
argvalue	isdefined	ismatrix	isstruc	macroustage
evaluate	isfactor	ismissing	isvector	macrowrite
getmacros	isgraph	isnull	keyvalue	
isarray	islogic	isreal	macro	

Matrix Algebra

bcprd	eigen	qr	t	triunpack
cholesky	eigenvals	releigen	toeplitz	triupper
det	matrices	releigenvals	trace	
diag	matrix	svd	trideigen	
dmat	outer	swp	trilower	

Miscellaneous

appendnotes	getnotes	isgraph	isscalar	rename
asciisave	gettime	islogic	isstruc	restore
asLong	haslabels	ismacro	isvector	save
attachnotes	help	ismatrix	list	sethistory
edit	ischar	ismissing	listbrief	setlabels
gethistory	isdefined	isnull	macroustage	shell
getlabels	isfactor	isreal	more	usage
isarray				

Missing Values

anymissing	matprint	paste	read
ismissing	matread	print	setoptions

Multivariate Analysis

cluster	kmeans	manova	rotation
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NULL Variables

anymissing	hconcat	isnull	ndims	vconcat
dim	ismissing	length	save	vector

Operations

nbits	t
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Ordering

grade	match	rankits	unique
halfnorm	rank	sort	

Output

asciisave	matprint	paste	setoptions	write
error	matwrite	print	spool	
macrowrite	more	putascii	toclip	

Plotting

addchars	boxplot	lineplot	resvsyhat	vboxplot
addlines	chplot	plot	rowplot	
addpoints	colplot	resvsindex	showplot	
addstrings	hist	resvsrankits	stemleaf	

Probabilities

cumF	cumnor	invdunnett	power	tval
cumbeta	cumpoi	invF	power2	twotailt
cumbin	cumstu	invgamma	samplesize	
cumchi	cumstudrng	invnor	t2int	
cumdunnett	invbeta	invstu	t2val	
cumgamma	invchi	invstudrng	tint	

Random Numbers

getseeds	invchi	rbin	runi
invF	invgamma	rnorm	setoptions
invbeta	invstu	rpoi	setseeds

Regression

coefs	poisson	regress	resvsrankits	secoefs
glmfit	power2	regs	resvsyhat	wtregress
glmpred	probit	resid	robust	yhat
logistic	regpred	resvsindex	screen	

Residuals

resid	resvsindex	resvsrankits	resvsyhat
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Statistical comparisons

contrast	invstu	t2val	twotailt
cumstudrng	invstudrng	tval	

Structures

changestr	isstruc	split	structure
compnames	ncmps	strconcat	

Syntax

alltrue	batch	breakif	for	macro
anytrue	break	else	if	next
argvalue	breakall	elseif	keyvalue	while

Time Series

autoreg	cprdc	himag	movavg	trideigen
cconj	cprdcj	hpolar	padto	unwind
cft	creal	hprdh	partacf	yulewalker
cimag	crect	hprdhj	polyroot	
cmplx	ctoh	hreal	reverse	
convolve	hconj	hrect	rft	
cpolar	hft	htoc	rotate	

Transformations

abs	boxcox	floor	log10	sin
acos	ceiling	halfnorm	nbits	sinh
asin	cos	hypot	rankits	sqrt
atan	cosh	lgamma	rational	tan
atanh	exp	log	round	tanh

Variables

appendnotes	getnotes	ismacro	matrix	setlabels
array	haslabels	ismatrix	nameof	trilower
attachnotes	hasnotes	ismissing	ncols	triunpack
delete	hconcat	isnull	ncmps	triupper
diag	ischar	isreal	ndims	unique
dim	isdefined	isscalar	nrows	varnames
dmat	isfactor	isvector	rep	vconcat
getdata	isgraph	length	run	vector
getlabels	islogic	match	save	