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Over ten years ago, Borge Christensen started development of a programming language to replace BASIC. The result is known today as COMAL, a modern, powerful, modular and structured way of controlling a computer! COMAL was developed on the PET/CBM series of Commodore computers but, the two versions for the C-64 have put COMAL "on the map". The disk version (0.14) is freely copyable and has spread around the world through most user groups. Hardware versions (2.0) are more powerful and complete.

If you want to manipulate your computer successfully, consider using a language which has the ability to do so using built-in controls and helpful features. In ONE package COMAL has AUTO-numbering, AUTO-indenting, IMMEDIATE syntax checking, LONG variable names, SMART error reporting, and MERGING to make your efforts more enjoyable (FUN, not a headache!).

More efficient and complete structures like the CASE-WHEN-OTHERWISE or IF-THEN-ELIF-ELSE give you control you've never dreamed of, if BASIC has its grip on you. Program blocks (PROCs, FUNCs), proper beginning-ending indicators, Indentation (one statement per line), and upper-lower case listings make for very readable, understandable programs. C-64 owners now have full control of sprites and sound using COMMANDS (not PEEKs and POKEs)! Turtle graphics rivalling LOGO's are included!

The TPUG COMAL Chapter was formed to get COMAL users together as a self-help group. TPUG has printed its first book, the "COMAL Reference Guide" by Borge Christensen (a hot seller!). The COMAL Users Group's library has been donated to TPUG with WELL over one thousand programs, and it grows continually! This set of program listings was compiled by Len Lindsay (CUG-USA), and the disks renamed with TPUG designations by your COMAL librarian.

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#### TPUG COMAL Library Disk Documentation

COMAL disks in the library are designated by a specifically coloured label, currently pale yellow. The disks covered in this documentation are (K)T1 to (K)T4, (K)U1 to (K)U5, (K)B1 to (K)B6 and (K)Z1 to (K)Z4.

(K)Tx

COMAL Today disk series

(K)T1 COMAL Today #1  
(K)T2 COMAL Today #2  
(K)T3 COMAL Today #3  
(K)T4 COMAL Today #4

K)Ux

#### User Group disk series

(K)U1 User Group #1  
(K)U2 User Group #2  
(K)U3 User Group #3  
(K)U4 User Group #4  
(K)U5 User Group #5

(K)Bx

COMAL Book disk series

- (K)B1 COMAL Handbook (1st. ed.)  
(K)B2 Beginning COMAL Handbook  
(K)B3 Foundations in Computer Studies with COMAL  
(K)B4 Structured Programming with COMAL  
(K)B5 Captain COMAL Gets Organized  
(K)B6 The COMAL Library of Functions & Procedures

(K)Zx

Miscellaneous series

- (K)Z1 COMAL Tutorial (best first COMAL disk)  
(K)Z2 COMAL Sample  
(K)Z3 Auto Run Demo  
(K)Z4 Utilities disk #1

The old language series, (C)Lx, in the TPUG C-64 library is now defunct.

- (C)L1 gone  
(C)L2 now (K)Z2  
(C)L3 now (K)B6  
(C)L4 now (K)T1  
(C)L5 now (K)T2  
(C)L6 now (K)Z1  
(C)L7 now (K)T4  
(C)L8 gone  
(C)L9 now (K)T3

FILE NAME CONVENTIONS

COMAL	program saved to disk
COMAL.L	program listed to disk
COMAL.LST	program listed to disk
COMAL.B	BASIC program (saved)
COMAL.BAS	BASIC program (saved)
COMAL.DAT	data file
COMAL.FUNC	function listed to disk
COMAL.HRG	high resolution graphic screen
COMAL.W	wordprocessor text file
COMAL.TWT	wordprocessor text file
COMAL.OBJ	object file (machine language)
COMAL.PROC	procedure listed to disk
COMAL.SRC	assembler source code

DISK HEADER CONVENTIONS

A V0.14 in the header of a COMAL disk indicates that all programs on that disk with the exception of BASIC programs run under version 0.14 or disk COMAL.

A V2.00 in the header of a COMAL disk indicates that all programs on that disk with the exception of BASIC programs run under version 2.00 or cartridge COMAL.

A MIXED in the header indicates that there are both V0.14 and V2.00 COMAL programs on that disk.

ALPHABETICAL LISTING OF DISKS IN THIS PACKAGE

- Auto Run Demo disk (K)Z3  
Beginning COMAL Handbook (K)B2  
Captain COMAL Gets Organized book (K)B5  
COMAL Handbook (1st ed.) (K)B1  
COMAL Sample (K)Z2  
COMAL Today #x (K)Tx  
COMAL Tutorial disk (K)Z1  
Foundations in Comp. Studies with COMAL (K)B3  
Procedures and Functions (K)B6  
Structured Programming with COMAL (K)B4  
User Group #x (K)Ux  
Utilities disk #1 (K)Z4

## Today Series

(K)T1 V0.14 edited disk listing

auto boot comal	etchasketch.1
comal v 0.14	etchasketch
error file	light'pen.1
hi	light'pen
info mar 84	koala.1
help-comal	koala
help-graphics	color'func.1
help-sprites	color'combo
big'letter.1	hidescreen.1
big'letter	show'screen.1
big'letter/demo.1	print'using
logo'emulator.1	note1.17prg
logo'emulator	val/demo.1
dir'lister.1	val/demo
dir'lister	square-a3
sky'catcher.1	square-b3
sky'catcher	design3
create'lander.1	design4
create'lander	square-c3
lander.sprites	squares3
lander.1	sprite-a1
lander	sprite-b1
microscribble.1	link prg.1
microscribble	link prg
paddletest.1	control.1
paddletest	new'prg

Notes:

Big'letter is a slow program that prints characters on the high-res screen from 1x to 8x the normal size in the direction which the turtle is heading. Color'combo allows the testing of combinations of text and background colours. The microscribble, paddletest, light'pen & koala programs demonstrate respectively the use of the joystick, paddles, light pen and koala pad under COMAL. Val/demo demonstrates the conversion of a string to it's floating point value. See COMAL TODAY #1 for further information.

(K)T2 V0.14 edited disk listing

```
auto boot comal          note97.1
c64 comal 0.14           page15samle.1
error file               page.1
hi                       pens'color.1
help-comal               pentagram.1
help-graphics             plottext.1
help-sprites              proc1.1
8023p'options4           proc2.1
background.1              reverse.1
benchmark64.bas           screen.char.1
benchmark64.coma          set'screen.1
border'color.1            sinename
clear'collisn.1           front'page
convert                  sprite'editor21
disk'get2.1               stars1.1
func3.1                  stars1.1
inside.1                 string
meeting                  vt-52.v4
note76.1                 plexpac.1
note79.1                 vecpac.1
note80.1                 matpac.1
note80-2.1                testisf.1
note81-1.1                tset'clog.1
note82-2.1                test'cp'r.1
note96.1                 rotpac
```

Notes:

Sprite'editor21 is the first attempt at editing sprites. Use a later version! vt-52 emulates a vt-52 terminal. Benchmark 64.bas and benchmark 64.coma can be used to compare the speed of BASIC and COMAL for certain types of programming. Vecpac, matpac, rotpac and plexpac are packages for manipulating matrices mathematically. See COMAL TODAY #2 for further information.

(K)T3 V0.14 edited disk listing

```
autoboot                 getbackground.1
c64 comal 0.14           getborder.1
error files              getpen.1
hi                       getspritecolor.1
information84jan          getturtlesize.1
help-comal               graphicstate.1
help-graphics             heading.1
help-sprites              hidescr.1
bit'map'prints            hidescr2.1
circle.1                  jiffies.1
clock                     keyword'print
comal'dump.asm            load'demo
comal'dump.bas            load'demo2
comal'dump.obj            load'screen.1
convert(new).1            load'screen2.1
create1                  moire.hrg
curcol.1                 mount.1
currow.1                 obj'load.1
cursor.1                 obj'save.1
demo                      page.1
dir'manipulator           penstate.1
```

```
pie'chart'maker          set/readtime.1
pie'chart'print           setx.1
plot'char.1               sety.1
plot'char/demo            showscreen.1
polygon.1                 showscreen2.1
quicksort'num             showsprite.1
quicksort'str              spritestate.1
random'file/demo          spritexcor.1
randomize.1               spritexsize.1
randomizer2.1              spriteycor.1
save'demo                 spriteysize.1
save'screen.1              turtlestate.1
```

Notes:

Many of the programs on this disk are 0.14 versions of commands that exist in the cartridge COMAL. But not the disk COMAL. Save'screen saves the high-res screen to disk and load'screen loads the file back into the high-res screen. Plot'char.1 allows the use of any character on the high-res screen. See COMAL TODAY #3 for further information.

(K)T4 V0.14 edited disk listing

```
auto boot                 joystick.proc
c64comal 0.14             lock'lower.proc
error files               lock'upper.proc
hi                        logical'ops.func
abc.sprite                m1'string/demo
alpha'gen                 music'all/demo
alpha.dat                 opt'triangle
alpha2'gen                optical'hexagon
alpha2'dat                paddle.proc
comal'bug-a               polyspirals
comal'bug-b               prime/demo
dec'to'hex/dem            ram'errors
diamond                   random'plot
disk'protect              rocket'sprite
disk'talk'ex              screen'location
disk'talk'examp2          scroll'down/demo
dodge'em                  seq'print
dump'1525                 spirolateral
dump'big'epson.1           stars
dump'nec8023              takeoff/demo
dump'prowriter             tiles
dumpscreen.proc           tri'hex/demo
dumpscreen/demo            two'drive'copier
dumptext1525.1            two'drive'instru
dynam'data                unlock'case.proc
find'string/demo           wall'clock
gutenberg'shell            wandering
gutenberg'Ademo           1541 backup.bas
gutenberg'Bdemo
```

Notes:

Disk'protect allows a disk to be made 'read only'. Two'drive copier allows two 1541 drives to copy from one to the other. Seq'print lists all of the programs on a disk to the printer. 'Gutenberg' programs demonstrate the ability to print characters to the high-res screen in a variety of styles and size. See COMAL TODAY #4 for further information.

# User Group Series

## (K)U1 V0.14 edited disk listing

```

autoboot          diamond
c64 comal 0.14   dragon
error files      eightboxes
hi               etch-a-sketch
1525screendump  graf1
sd2 copier       graf2
sd2 copy&label  graf3
label            graf4
mail' label' hs  graf5
title'page.proc graf6
shell'sort$.proc grid
header.proc     hanof
seq'print        hilbert
3d'cube          life
aprilfool        p'circle
beeper           percentage gain
bounce           rnd'bounce
c'curve          serpent
circles'key     spirolateral
clock            spiro.plain
cones            starry night
curve            the'thing
design 2         turtlestick 6
design 3         turtlestick 7
design 4         who

```

### Notes:

Various programs such as **dragon**, **hanof** and **hilbert** demonstrate the use of recursion. **Header.proc** allows the quick creation of individual headers on programs.

## (K)U2 V0.14 edited disk listing

```

autoboot          ct.header
c64 comal 0.14   curvette
error files      find'string.demo
hi               flowers
gutenberg'shell  four circle
alpha1'gen       hamburger
alpha1.dat        hourglass
alpha2.dat        lifer
gutenberg'Ademo lissajous
gutenberg'Bdemo nev'house
bit'print'epson  nh3.exc
1525 pixel dump pinwheel
x-ycor.proc     polymusic
heading.proc    spiral'star
circle.proc     spiral mob
title'page.proc star'power
basic'to'comal  starwatch
coin flip        tabby
comal art

```

### Notes:

The 'gutenberg' series of programs are also on (K)T4. **Bit'print'epson** and **1525 pixel dump** dump the high res-screen to the epson and 1525 printers respectively.

## (K)U3 V0.14 edited disk listing

```

auto boot
c64 comal 0.14
error file
hi
tddcfc
tddcfc.inst
prowriterdump.1
nec8023 scrndump
nec ml dump
ml'dump.obj
colors.proc
abc.sprite
rocket.sprite
dynam-data-8
84expenditures
amaz'in basic.b
amaz'in comal.c
amaz'in simon.s
angry.dragon
another'moire
atari'graphics
bagel
beep/gong.demo
chris'star
circles
color swirl
comal promo
crazy quilt
fft'model
key draw
music'all'demo
pascalstrekant
polar
rnd color sqs
shapes
sin'on'the'side
spiral'cir
spirograph
spotty
tiles

```

## (K)U4 V0.14 edited disk listing

```

autoboot          clue
c64 comal 0.14   comal2.02 boot
error files      dizzy turtle
hi               drum
record keeper    fanfare
label-ab         flasher
budget           keno.game
address          kenoboard
dumpscreen.1525 namegame
terminal         perm'game
comal'error'gen print boxes
accept'demo     rectan
hersh demos    rectangles
str$.proc        scale
val2.proc        son of moire
arabesque 1      son'of'pinwheel
arabesque 2      spiral'sqr
arabesque 3      sprite'circle
arabesque 4      starwars
arabesque 5      supersketch
arabesque 6      weirdness
arabesque 7      window
checkerboard

```

## (K)U5 V0.14 edited disk listing

```

auto boot          drawshape.demo
c64 comal 0.14   drumette
error files      envelope'print
hi               fast'circle
neccomaldump    fillbox
txt.screendump.1 flurry
asc.func         fourier sq
scr2petsc1.func  graphics demo
design.dat      haiku
flake.dat       house
e.dat            kaleidoscope
f.dat            moon phase
g.dat            moving'turtle
arabesque8      music'synth'eric
arcs.demo        pauls'math'add
card'dealer     poly'circles
circle'maker    polygoncrazy
circle2.demo    probability
city'scape      random'show
color mix        readsprite/demo
color'pic'loader str's retirement
cube designer   therapy
dog/cat          turtlestick8
dot.and.line    midwestern 4.0

```

# Book Series

## (K)B1 V0.14 edited disk listing

auto boot  
c64 comal 0.14  
error files  
hi  
info 84 mar  
help-comal  
help-graphics  
help-sprites  
create.l  
cursor.l  
even.l  
fetch.l  
file'exists!  
get'char.l  
get'valid.l  
jiffies  
lower'to'upper.l  
mount  
new'employee.l  
odd.l  
pos.l  
put'record  
randomize  
round.l  
shift.l  
control.l  
commodore'key.l  
take'in.l  
value.l  
abs  
and  
append  
atn  
case  
chr\$  
close  
closed  
cos  
data  
delete  
dim  
div  
elif  
else  
end  
endcase  
endfor  
endfunc  
endif  
endproc  
endwhile  
eod  
eof  
esc  
exec  
exp  
false  
file  
for

func  
if  
in  
input  
int  
key\$  
len  
let  
log  
mod  
not  
null  
of  
open  
or  
ord  
otherwise  
pass  
print  
printfile  
proc  
random  
read  
ref  
repeat  
restore  
return  
rnd  
select  
sgn  
sin  
sqr  
step  
tab  
tan  
then  
to  
trap  
true  
until  
using  
when  
while  
write  
zone  
print'directory  
utilities  
file'to'print  
file'to'screen  
cursor/demo  
value/demo  
shift/demo  
jiffy/demo  
quicksort/demo  
joystick/demo  
paddle/demo  
disk/get/demo  
logical'ops/demo

### Notes:

See COMAL HANDBOOK by Len Lindsay for further information. This book is available from the COMAL Users Group, U.S.A.

## (K)B2 V0.14 edited disk listing

auto boot  
c64 comal 0.14  
error files  
hi  
info 84 mar  
help-comal  
help-graphics  
help-sprites  
exe 17-141  
discount  
oddeven  
peanuts  
bignuts  
addition  
unclexmas  
auntie  
festivals  
doctor  
eggs  
wheel

enrol  
correct  
entermarks  
report  
hannibal  
wordgame  
xmascards  
xmasfile  
enternames  
enteroptions  
newshop  
writeoffer  
addrpgr  
exhibitoptions  
markbooks  
xmas  
options  
offer  
addresses  
1541 backup

### Notes:

See BEGINNING COMAL by Borge Christensen for further information.

## (K)B3 V0.14 edited disk listing

auto boot  
c64 comal 0.14  
error files  
hi  
info 84 mar  
help-comal  
help-graphics  
help-sprites  
prg# 1 to 118  
1541 backup  
single file copy

### Notes:

See FOUNDATIONS IN COMPUTER STUDIES WITH COMAL by John Kelly for further information.

(K)B4 V0.14 edited disk listing

```
auto boot
c64 comal 0.14
error files
hi
info 84 mar
help-comal
help-sprites
cursor.1
fig 8.1
quicksort
setfile.1
help-graphics
solutions 3.10 - 8.15
problems 1.1 - 3.3
section 1.7 - 12.4
example 3.3 - 12.5
searchfile.1
```

Notes:

See STRUCTURED PROGRAMMING WITH COMAL by Roy Atherton for further information.

(K)B5 V0.14 edited disk listing

```
auto boot
c64 comal 0.14
error files
hi
info 84 jun
help-comal
help-graphics
help-sprites
help-Instruct
compare'dir
delete'dir
disk'summary
dos'menu
find'file
master'maker
print'dir
print'ids
startup
update
view'data
choices.1
disk'get.1
dual'drive.1
file'exists.1
get'dir.1
init.1
intro.1
menu.1
menu2.1
menu3.1
page.1
print'dir'reg.1
print'dirlabel.1
printer.1
quicksort.1
read'dir'part2.1
read'dir.1
read'dir2.1
screen.1
see.1
set'updated.1
sort'ids.1
type'of'dir.1
verified.1
-
1541 backup
single file copy
```

Notes:

See CAPTAIN COMAL GETS ORGANIZED by the COMAL Users Group for further information.

(K)B6 V0.14 edited disk listing

```
autoboot
c64 comal 0.14
error file
hi
copy files.b
control.1
link'program
accept.1
acos.1
are'as.1
arc.1
arc1.1
arcr.1
asc11.1
asin.1
aspect.1
back'color.1
bin'str.1
bin.1
bit'm1.1
bitand.1
bitor.1
bitor.1
border'color.1
bubsort'str.1
bubsort.1
cen.1
circle'as.1
circle.1
clearcoll.1
convert.1
cot.1
create
csc.1
curcol.1
currow.1
cursor.1
date.1
day'of'week.1
day'of'year.1
deg.1
delay.1
disk'get.1
draw.1
easter.1
eps.1
expb.1
fah.1
fp.1
get.1
getspritecolor.1
graphic state.1
heading.1
hex'str.1
hex.1
inf.1
inkey.1
insertsort'str.1
insertsort.1
ip.1
jiffies.1
joystick.1
koala.1
leap'year.1
lightpen.1
load'screen.1
logb.1
lpad.1
lfrm.1
lwrc.1
matadd.1
match'r.1
matequal.1
matinvert.1
matmult.1
matscale.1
mattransp.1
matunit.1
matvec.1
max.1
 maxlen.1
metric.1
min.1
mount.1
move.1
obj'load.1
obj'save.1
paddle.1
page.1
pen'color.1
penstate.1
pi.1
play.1
plot'char.1
poly'as.1
poly.1
print'at.1
put'char.1
quicksort'str.1
quicksort.1
rad.1
randomize1.1
randomize2.1
rect.1
remain.1
replace'char.1
replace'str.1
reverse.1
rpad.1
rtm.1
save'screen.1
screen'char.1
sec.1
select'lc.1
set'time.1
settime.1
setx.1
sety.1
shellsort'str.1
shellsort.1
shift'wait.1
showsprite.1
shuffle'str.1
shuffle.1
sid.1
sin2.1
sprite state.1
spritexcor.1
spritexsize.1
spriteycor.1
spriteysize.1
squeeze.1
star.1
swap.1
translate.1
turtle'size.1
turtlestate.1
uprc.1
val.1
xcor.1
ycor.1
```

Notes:

See THE COMAL LIBRARY OF FUNCTIONS AND PROCEDURES by Kevin Quiggle for further information.

# Misc. Series

(K)Z1 V0.14 edited disk listing

auto boot  
c64 comal 0.14  
error file  
hi  
menu  
lesson one  
lesson two  
lesson three  
lesson four  
lesson five  
lesson six  
lesson seven  
lesson eight  
lesson nine  
lesson ten

lesson eleven  
lesson twelve  
lesson thirteen  
lesson fourteen  
lesson fifteen  
lesson sixteen  
lesson seventeen  
lesson eighteen  
lesson nineteen  
lesson twenty  
graphic's tutor  
turtle'tutor  
number file  
studentfile

(K)Z3 V0.14 edited disk listing

auto boot  
c64 comal 0.14  
error files  
hi  
menu  
arabesque  
business graph  
chris's star  
clock  
clown  
color swirl  
curves  
draw diamond  
draw house  
example song  
graphic equat.  
graph waveforms  
graphics tutor  
gutenberg

hilbert  
ink blot  
keno  
optical hexagon  
optical triangle  
pie chart  
poly spirals  
random music  
slide show  
spirolateral  
takeoffdemo  
towers of hanoi  
abc.sprite  
alpha2.dat  
blither.hrg  
calculator.hrg  
glady.hrg  
griffin.hrg  
rocket.sprite

(K)Z2 V0.14 edited disk listing

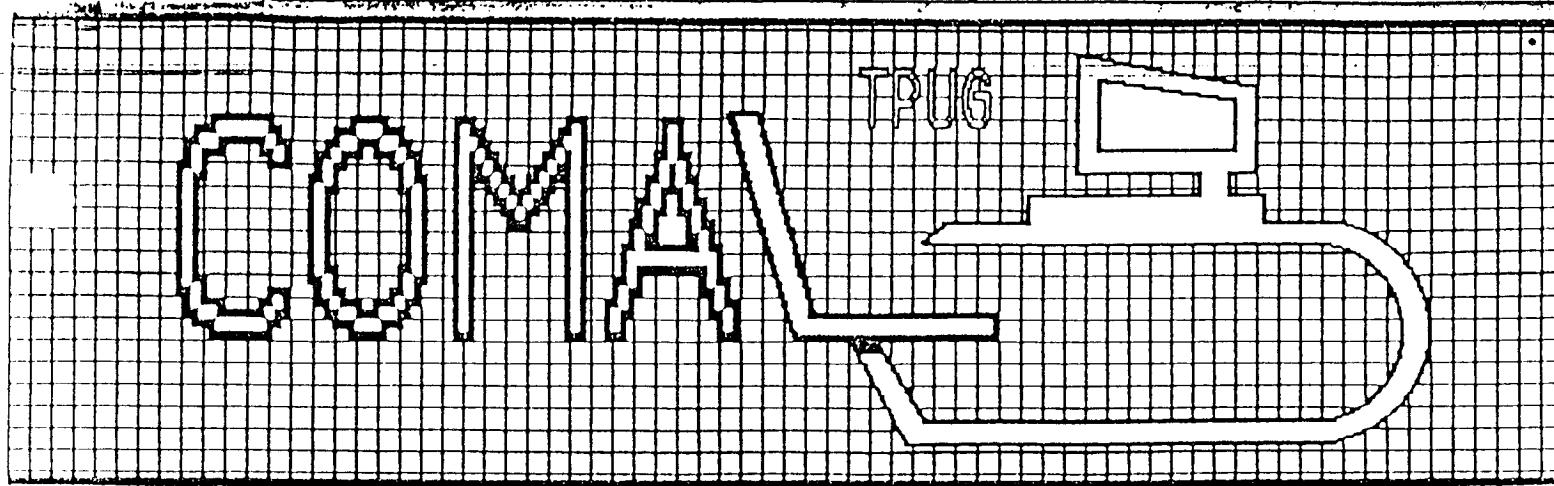
auto boot  
c64 comal 0.14  
error files  
info 84 mar  
help-comal  
help-graphics  
help-sprites  
see'info.  
see'instruct.  
logo'book'sample  
snowflake  
sprite/turtle  
squiral  
music  
bounce  
sprite'design2  
lander  
create'lander  
sky'falling  
create'sky  
read'directory  
print'directory  
expression

utilities  
recursions  
formatter2  
file'to'print  
file'to'screen  
disk commands  
c64 comal info  
remove comments  
see'roll/demo  
see'page/demo  
cursor/demo  
value/demo  
shift/demo  
jiffy/demo  
quicksort/demo  
joystick/demo  
paddle/demo  
disk'get/demo  
logical'ops dem  
sprite data  
lander'sprites  
sky'sprites

(K)Z4 edited disk listing

auto boot  
c64 comal 0.14  
hi  
error file  
generate errfile  
ram'errors  
dump'1525  
dump'big'epson.1  
dump'nec8023a  
dump'prowriter  
dumpscreen/demo  
file'to'print  
8023p'options4  
abc.sprite  
sprite'editor  
beeper.1  
fanfare  
music/demo  
auto'directory  
copy & label  
dir'lister  
dir'manipulator  
disk'get/demo  
disk'protector

file'to'screen  
two'drive'copier  
two'drive'instru  
utilities  
view'directory  
terminal  
vt=52.v4  
basic'to'comal  
color'combo  
dec'to'hex/demo  
dynam-data=8  
find'string/fast  
find'string/full  
formatter2  
hex'to'dec/demo  
load'screen2.1  
pie'chart'maker  
print'seq'files  
quicksort'number  
quicksort'string  
remove comments  
save'screen.1  
turtle/demo  
1541 backup



COMAL is a structured language with turtle graphics and automatic syntax checking on entry. TPUG has one of the largest public domain collections of COMAL in North America with over 80 disks. There are two versions for the Commodore 64 in the library; a disk based version, v0.14, and a cartridge version, v2.00. The disk version has about 10K free memory and is on many of the early v0.14 disks. The cartridge version has about 32K free memory and the cartridge can be bought from the COMAL Users Group, USA for about \$80(US).

#### CURRENT COMAL DISKS (Dec. 1, 1987)

##### (K)I SERIES

(K)T1	V0.14	COMAL TODAY #1	(K)T9	V2.00	COMAL TODAY #7	v2.00 side
(K)T2	V0.14	COMAL TODAY #2	(K)TA	V0.14	COMAL TODAY #8	v0.14 side
(K)T3	V0.14	COMAL TODAY #3	(K)TB	V2.00	COMAL TODAY #8	v2.00 side
(K)T4	V0.14	COMAL TODAY #4	(K)TC	V0.14	COMAL TODAY #9	v0.14 side
(K)T5	MIXED	COMAL TODAY #5	(K)TD	V2.00	COMAL TODAY #9	v2.00 side
(K)T6	V0.14	COMAL TODAY #6 v0.14 side	(K)TE	V0.14	COMAL TODAY #10	v0.14 side
(K)T7	V2.00	COMAL TODAY #6 v2.00 side	(K)TF	V2.00	COMAL TODAY #10	v2.00 side
(K)T8	V0.14	COMAL TODAY #7 v0.14 side				

##### (K)II SERIES

(K)U1	V0.14	USER GROUP #1	(K)U8	V0.14	USER GROUP #8
(K)U2	V0.14	USER GROUP #2	(K)U9	V0.14	USER GROUP #10
(K)U3	V0.14	USER GROUP #3	(K)UA	V2.00	USER GROUP #11
(K)U4	V0.14	USER GROUP #4	(K)UB	V0.14	USER GROUP #12
(K)U5	V0.14	USER GROUP #5	(K)UC	V2.00	USER GROUP #13
(K)U6	V0.14	USER GROUP #6	(K)UD	V2.00	USER GROUP #14
(K)U7	V0.14	USER GROUP #7			

##### (K)Z SERIES

(K)Z1	V0.14	COMAL TUTORIAL	(K)ZE	V2.00	HOLLAND #3 (dutch lang.)
(K)Z2	V0.14	COMAL SAMPLER	(K)ZF	V2.00	HOLLAND #4 (dutch lang.)
(K)Z3	V0.14	AUTO RUN DEMO	(K)ZG	V2.00	HOLLAND #5 (dutch lang.)
(K)Z4	V0.14	UTILITIES DISK #1	(K)ZH	V2.00	HOLLAND #6 (dutch lang.)
(K)Z5	V2.00	CARTRIDGE DEMO #2	(K)ZI	V2.00	HOLLAND #7 (dutch lang.)
(K)Z6	V2.00	CARTRIDGE DEMO #3	(K)ZJ	V2.00	HOLLAND #8 (dutch lang.)
(K)Z7	V2.00	CARTRIDGE DEMO #4	(K)ZK	V2.00	HOLLAND #9 (dutch lang.)
(K)Z8	V0.14	BRICKS TUTORIAL #1 side	(K)ZL	V2.00	ENGLAND #1 (UK user group)
(K)Z9	V0.14	BRICKS TUTORIAL #2 side	(K)ZM	V2.00	ENGLAND #2 (UK user group)
(K)ZA	V0.14	UTILITIES #2 side #1	(K)ZN	V2.00	ENGLAND #3 (UK user group)
(K)ZB	V0.14	UTILITIES #2 side #2			
(K)ZC	V2.00	HOLLAND #1 (dutch lang.)			

(K)B1	V0.14	COMAL HANDBOOK (1st ed.)	(K)B6	V0.14	COMAL LIB. OF FUNC. & PROC.
(K)B2	V0.14	BEGINNING COMAL HANDBOOK	(K)B7	V2.00	COMAL HANDBOOK (2nd. ed.)
(K)B3	V0.14	FOUND. IN COMP. STUDIES	(K)B8	V0.14	GRAPHICS PRIMER
(K)B4	V0.14	STRUCTURED PROG. WITH COMAL	(K)B9	V2.00	COMAL 2.0 PACKAGES
(K)B5	V0.14	CAPT COMAL GETS ORGANIZED	(K)BA	V2.00	COMAL 80 vers. 2.01

#### (K)X and (K)L SERIES

(K)X1	V0.14	BEST OF COMAL #1	(K)S1	V0.14	SLIDE SHOW #1 (pictures)
(K)L1	V0.14	COMAL FOR THE PET/CBM	(K)S2	V0.14	SLIDE SHOW #2 (pictures)

All COMAL Today disks received after May 1st., 1986 have been put into a new classification system. The disks will be (K)xxx where xxx runs from AAA to ZZZ.

#### (K)XXX SERIES

(K)AAA	C0.14	COMAL TODAY #11 v0.14 side	(K)AAJ	C2.00	COMAL TODAY #15 v2.00 side
(K)AAB	C2.00	COMAL TODAY #11 v2.00 side	(K)AAK	C0.14	COMAL TODAY #16 v0.14 side
(K)AAC	C0.14	COMAL TODAY #12 v0.14 side	(K)AAL	C2.00	COMAL TODAY #16 v2.00 side
(K)AAD	C2.00	COMAL TODAY #12 v2.00 side	(K)AAM	C0.14	COMAL TODAY #17 v0.14 side
(K)AAE	C0.14	COMAL TODAY #13 v0.14 side	(K)AAN	C2.00	COMAL TODAY #17 v2.00 side
(K)AAF	C2.00	COMAL TODAY #13 v2.00 side	(K)AAO	C0.14	COMAL TODAY #18 v0.14 side
(K)AAG	C0.14	COMAL TODAY #14 v0.14 side	(K)AAP	C2.00	COMAL TODAY #18 v2.00 side
(K)AAI	C2.00	COMAL TODAY #14 v2.00 side	(K)AAQ	C0.14	COMAL TODAY #19 v0.14 side
(K)AAI	C0.14	COMAL TODAY #15 v0.14 side	(K)AAR	C2.00	COMAL TODAY #19 v2.00 side

#### DISK HEADER CONVENTIONS

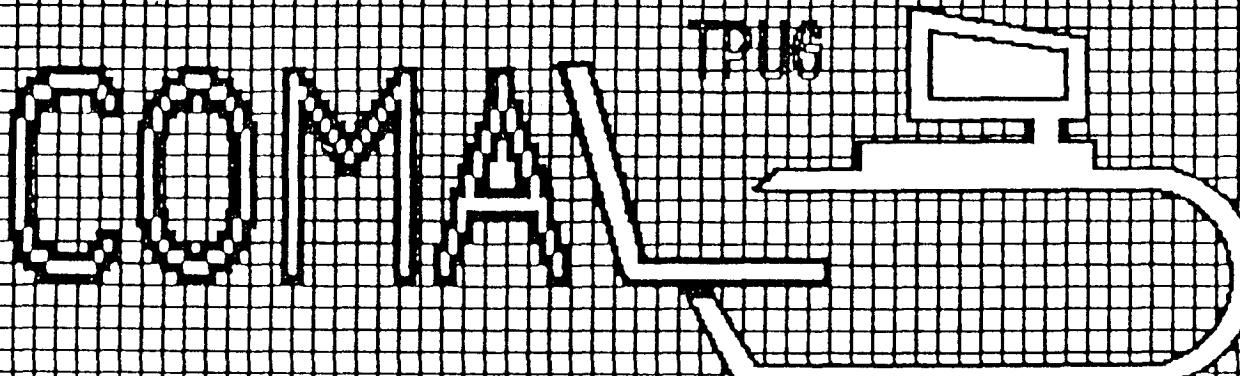
A V0.14 in the header of a comal disk indicates that all programs on that disk with the exception of basic programs run under version 0.14 or disk comal.

A V2.00 in the header of a comal disk indicates that all programs on that disk with the exception of basic programs run under the version 2.00 or cartridge comal.

A MIXED in the header of a comal disk indicates that there are both V0.14 and V2.00 comal programs on that disk.

#### FILE NAME CONVENTIONS

suffixed	prefixed	meaning	suffixed	prefixed	meaning
NAME	NAME	COMAL program file		SNG.NAME	Song file
NAME.L	LST.NAME	Program listed to disk		HRG.NAME	Colour COMAL picture
	DSP.NAME	Program displayed to disk		CRG.NAME	Black/white bitmap
NAME.PROC	PROC.NAME	PROC listed to disk	NAME.CRC	ICON.NAME	Compacted colour pix
NAME.FUNC	FUNC.NAME	FUNC listed to disk		SCRN.NAME	Compacted b/w bitmap
NAME.DAT	DAT.NAME	Data file		POP.NAME	Print shop type icon
NAME.TXT	TXT.NAME	Text file		POP.NAME	Text screen file
NAME.DOC	DOC.NAME	Documentation file	NAME.POP	POP.NAME	Mergeable popover
	EXT.NAME	External PROC/FUNC		CHIP.NAME	Program with popover
	SHAP.NAME	Sprite shape file	NAME.BASIC	CHIP.NAME	Program for superchip
	FONT.NAME	COMAL font file		BASIC.NAME	BASIC program
FONT.MC.NAME	Multicolour font file			MEM.NAME	Memory image file
	SET.NAME	BASIC type font file		LIB.NAME	Assembly library file
	PKG.NAME	Package file		SYM.NAME	Assembly library file
BAT.NAME	BATCH FILE			SRC.NAME	Assembly source code



NEW COMAL DISKS AVAILABLE FROM TPUG

TODAY SERIES

(K)T5 MIXED today #5 disk  
(K)T6 V0.14 today #6 disk (side 1)  
(K)T7 V2.00 today #6 disk (side 2)

USER GROUP SERIES

(K)U6 V0.14 user group #6 disk  
(K)U7 V0.14 user group #7 disk  
(K)U8 V0.14 user group #8 disk

BOOK SERIES

(K)B7 V2.00 COMAL handbook (2nd ed.)  
(K)B8 V0.14 GRAPHICS PRIMER book  
(K)B9 V2.00 COMAL 2.0 PACKAGES book

MISC. SERIES

(K)Z5 V2.00 cartridge demo #2  
(K)Z6 V2.00 cartridge demo #3  
(K)Z7 V2.00 cartridge demo #4

BEST OF SERIES

(K)X1 V0.14 best of comal #1

(K)Z8 V0.14 bricks tut. side 1

(K)Z9 V0.14 bricks tut. side 2

SLIDE SHOW SERIES

LANGUAGE SERIES

(K)L1 PET V0.14 V0.14 for PET/CBM

(K)S1 V0.14 slide show #1 disk

(K)S2 V0.14 slide show #2 disk