

EduCALC TECHNICAL NOTES

27953 CABOT ROAD LAGUNA NIGUEL, CA 92677

HP 48 GOODIES DISC #1* DESCRIPTION

The HP 48 Goodies disc is a collection of HP 48 objects prepared by Joseph Horn to be downloaded from your desktop PC to the HP 48 using the serial interface and Kermit. The disc is specially prepared for efficiency with the files ordered alphabetically following the !README!.DOC file. There are 272 files supporting 112 "user" files. The additional support files make the disc self documenting. In most cases each object has a text file. The readme file explains the file extensions Joseph uses. This six page description includes an extended directory of the disc and a printout of the !README!.DOC file. Note that the disc is high density 1.44 MBytes.

You may print text files (.DOC or .TXT extensions) by using your favorite text editor program or the TYPE command in DOS. For example, you may want the documentation associated with the HP library generating program you would print two files. At the DOS prompt key:

"TYPE USRLIB.DOC>PRN" and for the second file of interest to Amiga Owners, "TYPE USRLIBAM.DOC>PRN"

The 112 files are divided into the following categories.

1. Clocks & Calendars (4 = 3.6%): aclok, calendar, calgen9, clock.
2. Data Base (5 = 4.5%): alphsort, db, dsort, msort, roldx.
3. Demonstrations (3 = 2.7%): amigadem, glbr, lll.
4. Electrical Engineering (3 = 2.7%): circuit, cmos, fourier.
5. Forty Eight Articles (11 = 9.8%): buglist, emulator, macstuff, memcards, askernit, newbbs, nface, nullname, rpl, ta, version.
6. Games, Including CHIP48 (12 = 10.7%): bjck, brix, casdemo, chip48, cprac, pong, pong2, puzzle, roborun, roborun2, tetris, u137.
7. Graphics Objects (11 = 9.8%): aenewman, byu, eye, fl5, fish, fld, lion, map, misc, usa, watch.
8. Machine Management (11 = 9.8%): alert, backup, dte48, edir, encode, fileinfo, finders, fre, helpdb, up, vlpase.
9. Mathematics (11 = 9.8%): diffeq, frac, frad2, mulmod, pcoef, poly, prime, pyth, grad, surface, symmat.
10. Miscellaneous (17 = 15.2%): altd, biorythm, cst, k, macf, moon, moon2, music, musik, rev, statplot, sunrset, timr, tj, tvn, usrlib, vga2grob.
11. Programmers Aids/Utilities (24 = 21.4%): addr, alg, asc, asm48, crc, hexify, hide, hp42s, in, io, io2, key, libedt, nice, ob2s, parent, pver, saturn, savf, stack, togf, trac, trace, typstrs.

Noteworthy on the disc is the HP Library builder used in the DOS example above. USRLIB.EXE is a PC program used to assemble HP 48 programs up loaded from the HP 48. A Library provides hidden menus, partial compilation, and the ability to conveniently move large programs. The Chip48 program emulates a simple microprocessor "chip" that is programmable. Chip48 is used to write games programs providing fast execution and "crash" protection during program development. To run a chip48 "program" place the game program on level one (an unusual looking text string) and run chip48. Programmers will find lots of "goodies" on the disc. Users interested in math and music will find some good programs. Direct comments and suggestions to Richard Nelson at EduCALC. Corrections, suggestions for a future disc, etc. should be directed to Joseph Horn. See the README file on the back of these pages.

* The HP 48 Goodies Disc is provided as a public service to HP 48 users. It is supplied "as is" without warrenty of any kind. It is up to the user to evaluate and determine the suitability of the public domain material contained on the disc.

HP 48SX Public Domain Software
Collected and Annotated by Joseph K. Horn
989,337 bytes in 272 files on volume HORN1

Filename.ext	Size	Date	Description	-Author(s)
!readme! doc	3,415	10-18-90		
aclok	1,479	6-26-90	Running analog clock	-Pete Stoppani
aclok doc	680	10-18-90		
aclok src	2,101	10-18-90		
addr	68	6-04-90	Finds hex address of any object	-Rick Grevelle ML
addr rpl	1,046	10-20-90		
aenewman doc	547	10-18-90		
aenewman gro	1,106	10-01-90	Picture of Alfred E. Newman	-Jim Goddard & Chuck Hacala
aenewman src	2,198	10-18-90		
alert	119	9-21-90	Tests the alert annunciator	-Preston Brown
alert doc	402	10-04-90		
alert src	111	10-09-90		
alg	57	10-20-90	->ALG and ALG-> functions	-James H. Cloos ML
alg asc	125	10-20-90		
alg doc	1,554	10-20-90		
alphsort	149	10-02-90		
alphsort src	299	10-17-90		
altd	108	10-16-90	Seven-level alternate stack display	-Rick Grevelle ML
altd doc	5,931	10-18-90		
amigadem	30,021	10-03-90	Bouncing Ball (Amiga Demo)	-Jim Goddard & Chuck Hacala
amigadem doc	881	10-09-90		
asc	447	9-19-90	->ASC and ASC-> functions	-Bill Wickes ML
asc doc	5,624	10-09-90		
asm48 doc	22,005	10-16-90	Intro to 48 Assembly Language	-Alonzo Gariepy
backup	60	5-22-90	Automatic main memory backupper	-Joe Horn
backup src	321	10-17-90		
biorythm	1,651	5-16-90	Plots your biorhythm	-Scott Thompson
biorythm src	1,783	5-25-90		
bjck	8,704	5-25-90	The game of Blackjack ("21")	-Ron Dippold
bjck doc	9,301	10-17-90		
bjck src	11,726	10-09-90		
brix doc	11,863	10-18-90		
brix48	293	9-19-90	Break Out (Brick Out) video game	-Andreas Gustaffson CHIP
brix48 doc	6,951	10-18-90		
buglist txt	9,060	10-04-90	HP 48 bugs & version fixes	-Bill Wickes
byu doc	160	10-18-90		
byu gro	1,106	5-01-90	Brigham Young University logo	-John Peterson
byu src	2,198	10-18-90		
calendar	2,445	10-20-90	Graphic calendar maker w/ alarms	-Kevin Jessup
calendar doc	7,575	10-20-90		
calendar src	2,545	10-20-90		
calgen9	545	10-02-90	Fast calendar creator	-Davis, Wilborne & Wilson
calgen9 src	1,415	10-18-90		
casdemo	8,187	3-28-90	Advertisement for Casino Game Card	-Preston Brown
casdemo src	14,845	10-17-90		
ces doc	1,556	10-17-90		
chip48	1,746	9-19-90	Video game interpreter	-Andreas Gustafsson ML
chip48v1 doc	11,237	10-17-90		
chip48v2 doc	5,006	9-21-90		
circuit	3,857	10-16-90	Digital circuit simulator	-Tony Duell
circuit doc	6,335	10-17-90		
circuit src	4,218	10-17-90		
clock	1,251	5-25-90		
clock doc	1,620	10-18-90		
clock src	1,955	10-18-90		
cmos	1,683	10-04-90	Field effect transistor equations	-Preston Brown
cmos src	4,896	10-09-90		
cprac src	3,880	10-09-90	Blackjack card counting practice	-Preston Brown
crc	162	10-20-90	Find checksum from hex listing	-James Cloos
crc doc	1,887	10-20-90		
crc src	816	10-20-90		
cst	130	10-18-90		
cst src	554	10-18-90		
db	2,784	10-04-90	Data Base System	-Ross Barnes
db doc	5,046	5-28-90		
db src	4,183	9-14-90		
diffeq	1,874	10-16-90	Differential Equation solvers	-Andy Delano
diffeq doc	3,252	10-18-90		
dsort	98	10-04-90	Directory Sorter	-Kevin Jessup
dsort doc	4,354	10-09-90		
dsort src	112	10-09-90		

HP 48SX Public Domain Software
Collected and Annotated by Joseph K. Horn
989,337 bytes in 272 files on volume HORN1

Filename.ext	Size	Date	Description	-Author(s)	
dte48	567	10-16-90	Dumb Terminal Emulator	-Kevin Jessup	
dte48 doc	3,833	10-18-90			
dte48 src	875	10-16-90			
edir	615	9-12-90	Extended Directory utility	-Kevin Jessup	
edir doc	3,267	10-09-90			
emulator doc	4,350	10-17-90	HP 41CV Emulator comments	-Joseph K. Horn	
endcode src	522	10-17-90			
eye doc	202	10-18-90			
eye gro	2,966	10-11-90	Big picture of a human eye	-Dave Marsh	
eye src	5,919	10-18-90			
f15 doc	100	10-18-90			
f15 gro	4,554	10-11-90	Big picture of F15 fighter jet	-Dave Marsh	
f15 src	9,095	10-18-90			
fileinfo doc	227	10-20-90			
fileinfo fi	7,298	10-21-90			
fileinfo src	6,683	10-20-90			
finders doc	2,060	10-09-90	File finders	-Jurjen Bos	
fish doc	146	10-18-90			
fish gro	3,574	5-14-90	Big picture of a fish	-John Peterson	
fish src	7,135	10-18-90			
fourier	1,914	10-18-90	Digital signal processing	-Robert Yoder	
fourier doc	4,579	10-18-90			
fourier src	2,623	10-18-90			
frac	4,381	6-19-90	Fraction Arithmetic package	-David Vomocil	
frac doc	1,756	10-18-90			
frac src	10,490	10-09-90			
frad2	615	10-08-90	Decimal -> A/B*sqrt(C/D)	-Larry Morton	
frad2 doc	1,454	10-18-90			
frad2 src	686	10-09-90			
fre	23	9-21-90	MEM without garbage collection	-Jurjen Bos	ML
fre asc	106	10-17-90			
fwld doc	105	10-18-90			
fwld gro	1,929	9-19-90	Small map of the whole world	-?	
fwld src	3,844	10-18-90			
glbr	8,451	5-01-90	Animated rotating world globe	-John Peterson	
glbr doc	1,150	10-18-90			
glbr src	16,375	5-25-90			
helpdb	2,759	10-08-90	Global variables help utility	-Scott Thompson	
helpdb doc	1,623	10-18-90			
helpdb src	4,991	10-18-90			
hexify doc	7,885	10-20-90			
hide	396	10-01-90	Hides things so they are in no menu	-Lindqvist & Dahl	
hide doc	3,397	10-20-90			
hide src	660	10-01-90			
hp42s	665	10-16-90	42S -> 41CV Emulator translator	-Joseph K. Horn	
hp42s doc	4,470	10-20-90			
hp42s src	1,606	10-17-90			
in	1,002	10-09-90	READLN-like user interface	-Ullrich Horlacher	
in doc	2,902	10-17-90			
in src	828	10-17-90			
io	1,130	10-01-90	Dangerous PEEK/POKE utilities	-various authors	ML
io doc	1,467	10-17-90			
io2	954	10-05-90	Dangerous PEEK/POKE utilities #2	-various authors	ML
io2 doc	1,627	10-17-90			
k doc	645	10-18-90			
k exe	102,144	5-05-89			
key doc	810	10-09-90	->KEY function	-?	ML
keymap	302	10-16-90			
keymap doc	63	10-16-90			
keymap src	349	10-16-90			
libedt src	727	10-09-90	RAM-backupped DIR editor	-?	
libxt	4,876	9-18-90	Library Extractor, ROM->RAM	-Dave Marsh	ML
libxt doc	4,257	10-18-90			
lion doc	84	10-18-90			
lion gro	3,676	10-11-90	Big picture of a lion	-Dave Marsh	
lion src	7,339	10-18-90			
l11	610	5-01-90	Animated rotating Lissajous curve	-Rob Steele	
l11 doc	1,215	10-18-90			
l11 src	1,271	10-18-90			
macf	45	9-19-90			
macf doc	2,959	10-18-90			

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Filename.ext	Size	Date	Description	-Author(s)	
macstuff.doc	1,864	10-18-90			
map.doc	113	10-18-90			
map.gro	8,118	10-11-90	Big map of the whole world	-Dave Marsh	
map.src	16,823	10-18-90			
memcards.doc	2,327	10-18-90			
misc.doc	234	10-18-90			
misc.gro	1,106	10-18-90	Miscellaneous small pictures	-Richard Nelson	
misc.src	2,198	10-18-90			
moon	1,187	5-25-90	Phase of moon, w/ graphics	-Craig Finseth	
moon.doc	3,482	10-18-90			
moon.src	1,317	10-18-90			
moon2	2,142	10-18-90	Phase of moon, high accuracy	-Dan Gerson	
moon2.doc	2,198	10-18-90			
moon2.src	2,093	10-18-90			
mskermit.doc	588	10-18-90			
mskermit.ini	27	10-18-90			
msort	344	5-29-90	Mark Sort (for integers only)	-Jeremy Hawdon	
msort.doc	2,544	10-18-90			
msort.src	513	5-29-90			
mulmod	81	9-19-90	A*B (mod C), high precision	-Jurjen Bos	ML
mulmod.asc	166	10-18-90			
mulmod.doc	1,846	10-20-90			
music	10,836	9-26-90	Play real music; w/ samples	-Jeff Broido	
music.doc	7,863	10-20-90			
musik	8,327	10-08-90	Better music player; w/ samples	-Leland Lightfoot	
musik.doc	1,010	10-08-90			
musik.src	4,427	10-08-90			
newbbs.doc	396	10-15-90			
nface.doc	476	10-20-90			
nface.gro	522	10-17-90	Better clock face for clock progs	-David Lowenstein	
nface.src	1,029	10-18-90			
nice	69	9-12-90	Cleans up menus	-Joe Horn	
nice.src	219	10-16-90			
nullname.doc	9,018	10-16-90	All about the hidden directory	-Rick Gravelle	
ob2s	67	5-25-90	OBJ->STR, with 'ABC'->'ABC'	-Joe Horn	
ob2s.src	322	5-25-90			
parent	454	9-12-90			
parent.src	271	10-18-90			
pcoef	203	5-16-90	Polynomial coefficients extractor	-Bill Wickes	
pcoef.doc	1,300	5-25-90			
poly	3,002	10-20-90	Polynomial utilities	-Wayne Scott	
poly.doc	4,191	10-20-90			
poly.src	5,509	10-20-90			
pong	9,536	10-16-90			
pong2	259	10-16-90	Pong video game	-Paul Vervalin	CHIP
pong2.asc	571	10-18-90			
pong2.doc	1,162	10-18-90			
prime	550	10-02-90	Prime factorizer	-Joe Horn	
prime.doc	2,173	10-18-90			
puzzle	1,942	9-29-90	24 numbered tiles game	-Hamish McGovern	
puzzle.doc	3,300	10-18-90			
puzzle.src	2,818	10-18-90			
pver	31	9-09-90	Picture Viewer	-John Peterson	
pver.src	99	10-18-90			
pyth	181	10-18-90	Primitive Pythagorean Triangles	-Joe Horn	
pyth.doc	1,582	10-18-90			
pyth.src	459	10-18-90			
qrad	1,641	10-17-90	Decimal -> A/B*sqrt(C/D)	-David Lowenstein	
qrad.doc	2,227	10-18-90			
qrad.src	2,363	10-18-90			
rev	96	6-05-90	Fast string reversal	-?	ML
rev.rpl	2,437	10-18-90			
roborun	22,793	9-12-90	RoboRun video game	-David Liu	
roborun.doc	2,023	10-18-90			
roborun.src	10,130	10-18-90			
roborun2.src	27,230	10-18-90			
roldx.doc	6,040	9-12-90			
roldx.lib	3,709	9-12-90	Rollodex	-Tom Mullin	
rpl.doc	2,198	10-20-90	Notes about RPL programming	-Rick Gravelle	
saturn.doc	8,967	10-15-90	Saturn Assembly Instruction Set	-Derek Nickel	

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Filename.ext	Size	Date	Description	-Author(s)
savf	40	5-24-90	Flag setting backupper	-Joe Horn
savf src	276	10-09-90		
stack	211	5-25-90	Six-level alternate stack display	-Jake Schwartz
stack doc	1,651	10-18-90		
stack src	335	10-09-90		
statplot	138	10-18-90	Line plot of current stat data	-Joel Nevison
statplot doc	1,535	10-20-90		
statplot src	189	10-18-90		
sunrset	2,015	6-22-90	Sunrise / Sunset calculator	-Charles Kluepfel
sunrset doc	3,201	10-18-90		
sunrset src	2,496	10-18-90		
surface	1,663	9-21-90	3-D surface plotting, w/ sample	-Eric Hall
surface doc	627	10-20-90		
surface src	2,825	10-20-90		
symbmatt	1,597	9-19-90	Symbolic Matrices	-Eliel Louzoun
symbmatt src	4,194	10-18-90		
ta doc	7,960	10-09-90		
tetris	8,343	9-29-90	Tetris video game	-Lennart Boerjeson
tetris doc	756	10-20-90		
tetris src	12,207	10-09-90		
timr	80	5-02-90	Object execution timer	-Joe Horn
timr doc	2,101	10-09-90		
tj	145	10-08-90		
tj src	238	10-18-90		
tk	145	10-08-90		
tk src	238	10-18-90		
togf	38	10-16-90		
togf doc	153	10-16-90		
togf src	109	10-16-90		
trac	780	6-27-90	Print trace utility	-Jeff Broido
trac doc	7,507	10-09-90		
trace doc	697	10-20-90	Another "trace mode" utility	-?
tree	421	10-08-90	View directory tree	-Eric Davis
tree doc	1,858	10-18-90		
tree src	1,515	10-09-90		
tvm	997	10-10-90	Time Value of Money w/o Eq Card	-Kevin Jessup
tvm doc	6,065	10-18-90		
tvm src	798	10-18-90		
typstrs	248	9-12-90		
typstrs doc	76	10-17-90		
ul37	2,120	9-29-90	Submarine game	-Lindqvist & Dahl
ul37 doc	4,053	10-09-90		
ul37 src	3,094	10-20-90		
up	91	9-12-90	Smart UPDIR (like 42S EXIT)	-Jake Schwartz
up src	377	10-20-90		
usa doc	112	10-18-90		
usa gro	6,388	10-11-90	Big map of 48 United States	-Dave Marsh
usa src	12,763	10-18-90		
usrlib doc	6,452	10-20-90		
usrlib exe	53,845	6-08-90	Library Creator for PC & HP 48	-Hewlett Packard
usrlib txt	21,371	6-08-90		
usrlibam doc	646	10-18-90		
version doc	1,253	10-18-90	Three ways to find a 48's version	-Joe Horn
vga2grob com	3,606	9-30-90		
vga2grob doc	938	10-18-90		
vlparse	181	10-02-90		
vlparse src	298	10-17-90		
watch doc	99	10-18-90		
watch gro	5,518	10-11-90	Big picture of an analog watch	-Dave Marsh
watch src	11,023	10-18-90		

!README!.DOC - HORN1 disk of HP 48 software - 18 Oct 1990
Collected & annotated by Joseph K. Horn, aka [-jkh-].

This is Joe Horn's personal collection of favorite HP 48 goodies, disk #1. It contains many excellent programs by many excellent programmers. Most of these files were downloaded from HP's Corvallis bulletin board system.

Note: Everything on this disk is either freeware or shareware.
If you use the shareware, please register as instructed.
PLEASE DO give copies of this disk to everybody!

FILENAME EXTENSIONS

*.	(no extension) = raw binary downloadable HP 48 object.
*.DOC *.TXT	Documentation (explanation) for HP 48 file not written by HP. Same as .DOC, but by HP, for an application by HP. If a file has no DOC, look for comments in its SRC file.
*.SRC	HP 48 Source Code (user code) in downloadable ASCII format. If a file has no SRC, look for its source code in its DOC file.
*.GRO	HP 48 Graphics Object (GROB) in binary format.
*.LIB	HP 48~Library in binary format.
*.RPL *.ASC	Assembly Language source code with commented hex listing. Assembly Language uncommented hex listing in Wickes ASC format.
*.EXE *.COM	IBM PC executable; not for HP 48, MacIntosh, Amiga, etc. IBM PC command (same as .EXE).

Notes: Files with the same name before the extension are all related. For example, FRED would be a downloadable binary; FRED.SRC would be its source code (possibly commented); FRED.DOC would be its documentation; etc.

Do not include any comments in GROBs' SRC files; they make GROB2TIF fail.

All other listable files have their authors' names somewhere in the first few lines. If I couldn't figure out who wrote it, it'll say "By ?".

I have tried to provide documentation of some sort for every file on this disk. Any help would be appreciated in writing docs for those files missing them; for example, if you know who wrote a file "by ?", please let me know so that proper credit may be given.

Apologies to those whose files I accidentally mangled or miscredited.
Warm thanks to all authors whose works lurk herein. Good job!

These files are not guaranteed in any way; use at your own risk.

- Joseph K. Horn - 1042 Star Rt - Orange, CA 92667 USA - (714) 858-0920.

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