

Mass Users Of the Ninety-nine and
Computer Hobbyists

MUNCH Disk Library

<<<Code Legend>>>

B T.I. Basic
XB Extended Basic
J Joysticks
MM Mini-Memory
C Cassette Data Storage
D Disk Data Storage
SS Speech Synthesizer
TE Terminal Emulator II
P Printer
E/A Editor/Assembler
W T.I. Writer
M Modem

The Following is a list of the disks currently in the MUNCH group library. Programs have been written by members of MUNCH, other groups, and other sources.

All disks are SS/SD unless otherwise noted, the price is \$1.00; some sets have a higher price listed in the catalog. Some programs are fareware, and as such the author would like a donation for the work done.

Any disk in the MUNCH library may be purchased at any MUNCH meeting or by mail (please add .75 for the 1st disk and .50 for each additional disk) orders should be sent to MUNCH C/O J.W. COX 905 EDGEBROOK DR. BOYLSTON, MA. 01565

Note: Whenever Editor/Assembler is required to run a program. The program will usually run by using Funnelweb with Extended Basic. Funnelweb may be purchased from the MUNCH Library.

#1 Air Traffic Controller, Black Box, Chicken Helper, County Fair Derby, Star Dodger, A Day at the Races, AACPS Mailing List, Miner, Stock Market,

Warfish, Zap Ball, Critical Path MethodB, XB, C, J

#2 Score Four, Equations Conversions Tables, Dog-Gone Boggie-Woogie, Kismet, Amortization Schedule, Loans, Star Wars Theme, Match-A-Pair, Mouse Maze, Evaluation and Review Technique, Say Spell, Word World, Word-Builder

#3 Addresses, Air Defense, Christmas, Depreciation Program, Depreciation of Small Bussiness, Flight Planning Program, Watch Your Money Grow, Investments, Spell, N-Vader, Home Secretary, Interest Recieved Projections, Welcome to Motocross, Zanquest, Mastermind, Math Munch, RockpileB, D, J, XB, C

#4 Records, Star Wars, KK Office Data Statement, Basic Typist, Animal Multitudes, Beach World, Murder, Bee Line, Mathamatics Quiz, Space Junket, States Capitals, Ameteurs' Special Purpose Instructional Code .D, B, C, XB, J

#5 Object, Chemin De Fer, Hostage Holdup, U.S. Presidents, Shapes, Teach the Computer, Ten Page Journal, Egg Wars, Game of Duck, Madlib, Helicopter Attack, Jungle Jim, Matching Test, Flag-O-Rama, Music Box, Old MacDonalld, Meet Me in St. Louis ...B, XB, C, TE, SS

#6 Raindrops, Runway-14, Space Zapper, Learning How to Tell Time, Trapshoot, Variations on a Theme, Ships Attack, Annual Budget, Program to Display Calendar, Diet-Menu, Gas Milage, Home Librarian, Home Value Estimator

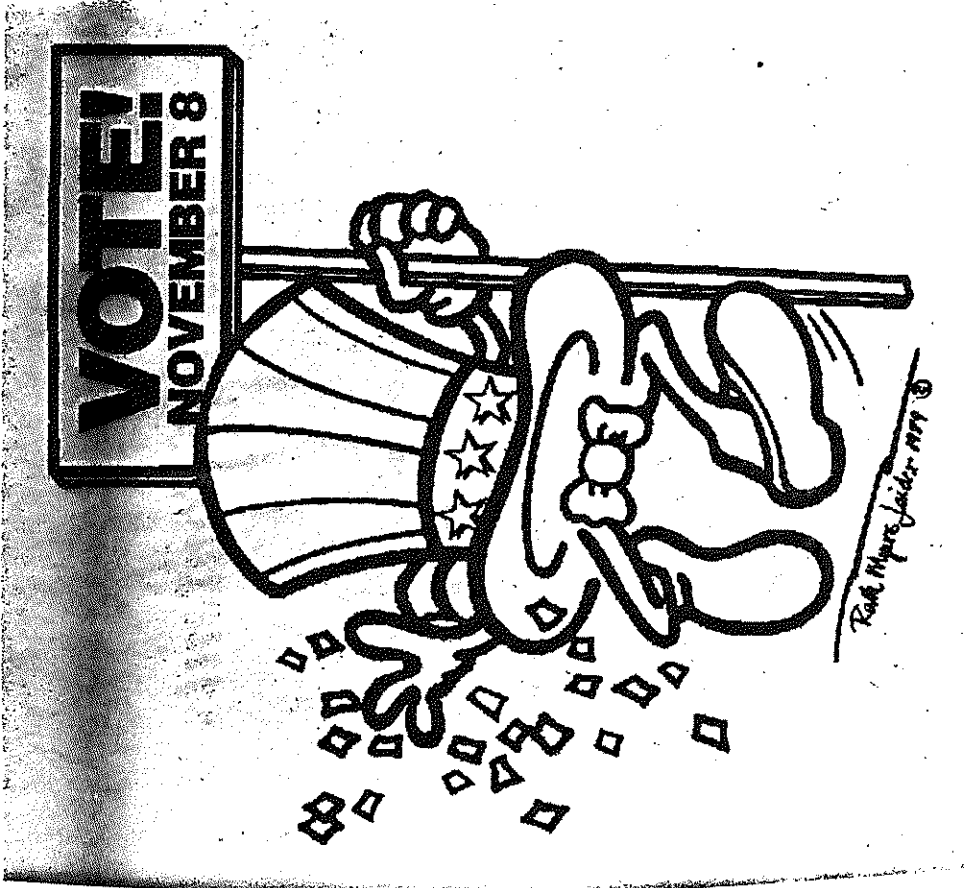
#7 Savings, Treasure Island, Trigonmejry, Bill Tracking Program, Home Check Proprocessor, Kitchen Aids, America the Beautiful, List Maintenance, Air Rescue, 1982 American League Players, Little Town of Bethlehem, Challenge of Camelot, Castle Hallways, Crazy Climber

#8 Translate Spanish to English, Baba, Survival, French Teacher, Character Codes, Christmas Songs, Keyboard Memory, Parrot, Taco-Man, Square Dance, Constellations, Talk Tarrot, Lost Ruins, Autobahn, Battleship, Twinkle

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9	9	100%	9	100%
10	10	100%	10	100%

Mass Users of the Ninety-nine and Computer Hobbyists

NOVEMBER 1994 Monthly Newsletter Version 13.10
 DON'T FORGET TO VOTE!!



M. U. N. C. H.
 C/O J. W. COX
 905 EGDEBROOK DRIVE
 BOYLSTON, MASS. 01505

NEXT MEETING: TUESDAY, NOVEMBER 8th.

POSTMASTER: Forwarding and Address Correction Requested.

FIRST CLASS!!

NEXT MEETING TUESDAY, Nov. 8, 1994 7:00 PM. Happy Thanksgiving!!!!

MUNCH OFFICERS AND NUMBERS (all in 508 area unless noted)

PRESIDENT	W. C. Wyman	865-1213	
VICE-PRESIDENT	Bruce Willard	852-3250	MUNCH DUES:
TREAS./EDITOR/CLK.	Jim Cox	869-2704	New Membership \$25.00
DEMO LEADER	Jack Sughrue	476-7630	Renewal \$15.00
Asst. Demo Leader	Lou Holmes	617-965-3584	Newsletter Sub. \$13.00
LIBRARIAN	Walt Nowak	413-436-7675	
Advanced Programmer	Dan Rogers	248-5502	

OCTOBER MEETING. The October meeting had six members in attendance. We played High Gravity and other games. Jack was able to show us how to change the date on his 3 Column Program. Corson won the raffle. Watch for the October issue of Micropendium. Charles Good does a review of Adventure II and the Tony Falco Classics, he has very nice things to say about both of them and his kind words are appreciated.

NOVEMBER MEETING. It's Election Day so vote and then come to the meeting. Jack will demo something of interest I'm sure. We will also try out the disk of the month.

RAFFLE. Every month we have a raffle to help defer the rental cost of our meeting hall. A typical raffle will have programs, blank disks, books, bumper stickers and all sorts of odds and ends of interest to the T.I. user. This month we have some Tandy Model 4 computers.

REPRINTS. Reprints are permitted as long as credit is given to M.U.N.C.H.

ARTICLES. I am always looking for articles for this newsletter, anything which interest you will probably interest other members of the T.I. community, so please share your ideas and opinions with all of us.

DISK LIBRARY. The disk library is at all meetings. We have copies of all disks in the library and they are available to members for just \$1.00 for each disk unless otherwise specified. You can order them through the mail, please add \$1.00 for the first disk and \$.40 for each additional disk ordered to cover postage and handling.

DISK OF THE MONTH. This month's DOM #138 is a game disk with Three Mile Island, Arthropod, Mushrooms, Rebel Pilot and PsyBorg.

ADVENTURE II. This is our fund-raiser for 1994/95. The cost to members is \$4.00 add \$2.00 for first class postage. The regular price is \$6.95 plus postage. This is a two DSSD disk set, archived. There is also a special on The Adventure Compendium and Adventure II for members it is \$8.00 plus \$3.00 for first class postage.

PLAYING WITH NUMBERS 9 (cont)

numerical value of the base, Y is the power of the base, and R(Y) means a repunit string of Y "1"s.

Now, if you want to follow this and other explorations "hands on" into the numerical universe, you should get at your TI99/4A computer with the NR92/V3/+R version of our program and see full results for yourself. The +R means that a "REM" has been inserted to deactivate lines 474 and 1280. For this operation, we do not want switching to decimal arithmetic when quotients reduce to less than 15 digits.

EXPERIMENT (1): LOAD THE X BASIC PROGRAM NR92/V3/+R and, BEFORE RUNNING IT, TYPE THE FOLLOWING LINE TO SCREEN:

PRINT 1/2;1/4;1/8: 1/5;1/25;1/125:
1/3: 1/6: 1/9: 1/7

Check the colons and semicolons to make sure they are exactly as indicated and press ENTER.

The result should demonstrate how the built-in decimal arithmetic of your computer handles reciprocals and points up the following facts:

(a): The reciprocals of the powers of 2 and 5 are FIXED decimal fractions.

(b): The reciprocals of 3, 6 and 9 are infinite periodic decimal fractions with single-digit repetends.

(c): The reciprocal of prime number 7 has a 6-digit repetend. The computer prints ten digits, not enough to confirm the final digits of the second cycle, or even a single cycle of 10 to 500 digits, or more. We intend to examine repetends of mind boggling lengths.

So RUN the program and try the next experiment:

EXPERIMENT (2): From first menu choose "1" for new number, then "N" for NO to numbers of less than 15 digits.

Enter 12 "9"s in hexadecimal blocks as follows: 99 99999 99999 END.

Choose DIVIDE and enter 7 as divisor. The result should show you two full cycles of the reciprocal repetend of 7.

At this point we should make a test of comparison. Get rid of the "9"s by choosing "2" for REP NUMBER AND ASKING FOR 12 ONES. DIVIDE by 7 and you will see two cycles of the REDUCED REPETEND.

Needless to say, if you factor this or any other 2-cycle quotient the result will not be the factors of one cycle repeated twice. If you factor R(12)/7 you will find the factors of the repetend of 7, along with factors belonging to the repetend of 13. Call for 12 ones and divide by 13. You will see two cycles in the repetend. Factor this quotient and you will have the ID of 13. Factor the single cycle (8547) and you will find 3x7x11x37 where the double cycle of the repetend of 13 adds "x101x9901".

In order to make sense of all this you should divide R(12) by each of its factors and study the results. Division by 3 produces a quotient consisting of 4 cycles of 3 digits each: 037. Division by 37 likewise produces 4 cycles of 3 digits each: 003. This pair is perpetuated forever in their repunit product R(3)=111. Every R(Y), where Y is a multiple of 3, will include this pair of mated cofactors.

Thus far I have been able to find only five more of this special breed. R(4)=11x101, R(5)=41x271, R(7)=239x4649, and the two surprises:

R(11)=21649x513239 and
R(17)=2071723x53363222357

Once you get the procedure clear in your mind you will be on your way to some very intriguing explorations of your own.

All the factors of R(Y), where Y is an even number of ones, include a factor F=Y+1. R(Y)/F gives the repetend of F which contains all the factors of R(Y) except F. Division of R(Y) by any other factor of R(Y) reveals the number of cycles and digits in the repetend of that factor so its identifying cofactors may be determined.

R(12)/7 shows two cycles, so the repetend of 7 is R(6)/7=15873, a composite consisting of the four prime cofactors of 7 that repeat themselves in every cycle of six ones on the "string without end".

The identification of a composite number is the unique set of prime factors that create it without any duplicate in the numerical universe. The unique identification of a prime number is the unique composite number that contains its prime cofactors in that unique generation.

Next session we will experiment with finding the cycles of repetends within the repetends of larger numbers.



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 1 PLAYING WITH NUMBERS 1
 0 No 9 0
 9 By Meredith Beyers 9
 9 9
 999876543210012345678999

THE "NUMRES" PROGRAM:
 Beginning The Exploration

Often, in writing anything about numbers, I find myself thinking of the story (only vaguely remembered and source forgotten) about two mathematicians who were commissioned to write a book on the History of Numbers. The point that alarmed my brain was that, after a couple of hundred pages, they had not yet gotten beyond 1,2,3. But we need little history here, only a few notes to remind us of a new perspective while blazing a fresh trail of numerical exploration.

ZERO ("0") was invented to be a power-place keeper in positional notation systems, not a numerical digit. The original form of the symbol was more like a small "o" meaning "this space is empty". When the single digit decimal system began to replace the centuries-old two-digit (Base 60) system, zero (0) had not yet been invented. But today we find "0" replacing "o" as a place keeper and at the same time defined as an arithmetical digit by the equations $N-N=0$ and $0 \times N=0$.

Our computer is designed to delete leading place keepers because they are no longer recognized as such. So how can we explore positional notation systems, with bases greater than ten, unless we have leading space keepers? Our computers, based on binary coding, get away with it by using letters of the alphabet to represent the two-digit numerals of the hexadecimal system. This is already regarded as archaic by the few who realize that it seals off the decimal system from further development as a referent system for all other positional notation systems.

This perspective may be helpful in understanding the one small step our program takes in this direction by providing the leading zeros required to explore a universe of positional notation systems. With this disposition of "zero" we can summarize "ONE", skip

TWO and THREE (for now), and get on with our computer "Safari".

ONE ("1"), the unit counter, is the only numerical digit in common with all counting systems. Therefore it serves a special dual purpose in our hectokilorad arithmetic of factoring large numbers. It serves both as a place keeper and as a unit of addition or subtraction. We discount its use in the operations of multiplication and division by "1" because the operation changes nothing and is therefore trivial. But it carries a meaning. As a last quotient in a factoring operation it identifies the previous quotient as prime.

The meaning of "1" as a place keeper is defined in the symbol "10". In every positional notation system "10" represents the value of the Base. The decimal system is the only PNS that assigns to "10" the value of ten. Reading from right to left the zero power position accumulates the count up to but not including the base. With the next count the "empty" place keeper pops in and "1" is added to the unit power position to the left. Since "10" has a different value in every positional notation system we must stop thinking of it as equal to $9+1$.

In order to avoid confusion we must think of "10" only as a symbol meaning "BASE" and consisting of two place keepers: the unit counter which means "this position is not empty. The power of the base in this position must be added in summing up the value of the numeral", and the zero place keeper which means "this position is empty. Skip it."

Any other integer value in any position, means that its value must be multiplied by the power of the base in that position before adding it, in summing up the value of the complete numeral.

We must get used to processing strings of "1"s as place keepers, and strings of place keeping "0"s sealed off at both ends with a "1". These are prognostic tools of our exploration. Repunit numbers and their mates are the same in any PNS, whatever the base. Only the values of power positions vary. The generalized expression for repunit numbers in any PNS is $R(Y)=(B^Y-1)/(B-1)$, in which B is the



Master, Peter Cottontail Egg Hunt
Spelling List and Silent Night.

#127 DOM 03/94. Jet #2. Includes
Alphanum Delight and Out on A Limb.

#128 DOM 04/94. Games / Trekins, Trek,
King Castle, Sprite Demo and songs.

#129 DOM 05/94. Best of British Games.
Catch, Hatchery, Rescue, Noteworthy
and more.

#130 DOM 06/94. Jack's Stuff.
Wordproblem, Cribbage, Diablo,
Matchmaker, Meteor, Olympics and more.
DSSD.

#131. International Flags.
DSD.

#132 Weather Forecaster. DSSD.

#133 DOM 07/94. More Stuff from Jack
Sughrue. Bazoo, BSC Tutor, MechApt and
Superchall. DSSD.

#134 DOM 08/94. MUNCH Game Pac #1.
Rampage, Cat, Panic, Maze 3-D, Sign,
Strip Poker, Tombstone 2, Medley, NIM,
Noise and WarBirds. DSSD.

#135 DOM 09/94. Funnelweb Enhancement
5.01. This is an upgrade to Version
4.40.DSSD.

#136. GPL #3 Funware. Ambulance, Hen
House, Drive Demon, Video Vagas,
Rabbit Trail and Stnick.

#137 DOM 10/94. GPL #19 T.I. Games.
E.T., Moonmine, Munchmobile and
Sneggit.

ADVENTURE II. An additional set of
more than 15 adventures on two DSSD
disks. \$6.95 plus \$2.00 first class
postage. Member price \$4.00 plus
postage.

TONY FALCO CLASSICS. A set of five
SSSD disks packed with over 70 of
Tony's best programs, mostly
educational. \$8.95 plus \$3.00 first
class postage. Member price \$5.00 plus
postage.

TIPS Label, TIPS VU and TIPS Show.

#94A~~B~~ DOM 3/91 TIPS Ver. 1.7 a further enhancement to the TIPS package with more pictures.

#95 DOM 4/91 GPL-#12 Centipede, Dig/Dug, Pacman, Pole Position and Moon Patrol.

#96 DOM 6/91 GPL-#11 Jungle Hunt, Donky-Kong, Ms. Pac-Man, Shamus, Picnic Paranoia.

#97 DOM 9/91 GPL-#13 T.I. Games Video Graphics, Video Chess, Football and Video Games 1.

#98DOM 10/91 A flippie with Mac Labels and other programs by Ed MacHiniious.

#99 DOM 12/91 CSGD Labels, GR Lables and environment, GR Cataloger and environment. Three flippies at the special price of \$5.00.

#100 Infocom Adventure Hints, with maps and hints for all your favorite adventures. Archived.

#101 DOM 1/92 Jack Sughrue's Spapce Disk. See the stars on your T.I.

#102 DOM 2/92 Imagic Games. Demon Aattack, Fathom and Micro-Surgeon.

#103 TI Games: Facemaker, Story Machine, Jaw Breaker, Slymoids and Crossfire.

#104 Games: Zargon Warrior, Balloonist and Combat.

#105 GPL #9, TI Utility #3: Home Financial Decisions, Personal Record Keeping and Personal Report Generator.

#106 Archie/PFC: used to pack EA 5 files.

#107 GPL #10, TI Utility #4: Diagnostics, Diskmanager 3, TE 1 and TE 2.

#108 GPL #5, Milton Bradley Games: Attack, Blasto, Blackjack Poker, Hustler, Zero Zap, Hangman, Connect 4 and Yatzee.

#109 Astroblitz. A Parsec type game. Lots of Action!

#110 MAGOG. A Munch/Pac Man type game.

#111 A~~B~~ List manager and Bill Gaskill's Mail List Manager. A flippie with a special price of \$2.00.

#112 DOM 11/92. Merry Christmas a disk of seasonal music from the B.C. 99ers'.

#113 DOM 12/92. GPL #26 T.I. Utility. Physical Fitness, Touch Typing Tutor, Tunnels of Doom.

#114 DOM 01/93. Texas Games Medley. 3-D Tic Tac Toe, Blackjack, Texas Frogs and more.

#115 The Best of British Games 1.

#116 DOM 02/93. DM 1000 Version 6.1. The latest version of the popular disk manager program.

#117 DOM 03/93. Two utilities BXB and Smallify.

#118 DOM 04/93. Funnelweb enhancement 5.00. The latest update files for the popular word processor.

#119 DOM 07/93. The latest version of the MUG Boot Loader.

#120 DOM 08/93. Tiger Cub Special. Sixbones, Number Guess, Kindermath, Trickle, Name That Tune, Music scales and more.

#121 DOM 09/93. A compilation of programs from the T.I. great Regina.

#122 DOM 10/93. Reverse RLE.

#123 DOM 11/93. GPL #20 T.I. Games. StarTrek, Buck Rogers, Congo Bongo, Hoper and BurgerTime.

#124 DOM 12/93. Music from BACH to Boogie. Thirteen classic tunes.

#125 DOM 01/94. Padlock Plus and other utilities.

#126 DOM 02/94. Jet #1. Includes Color

#65 Games. Blitz, boxing, defend, fireball, missile T-dive.

#66 Utilities. Catalog library, compac, direct, disassembler, sector and others with docs.

#67A 67B PR Base data base with full documentation. Two disks.

#68 Adventure Hints. A disk full on hints for the Acott Adams adventures.

#69 C99 complete program and instructions.

#70 Home helpers. Budget, calendar, diet-menu, Home checker, home library, home value est., kitchen aid, more.

#71 Educational programs. Health exam, number nibbler, statistics, tell-time, trig, word-wizzard, more.

#72A 72B 72C Creative Filing System. A data base program with full instructins and help. Three disks.

#73 TI Advanced Assembly Debugger.

#74 TI 99/4A System Test, Extended Basic.

#75 TI System Test, Mini Memory.

#76 TI Writer and Multiplan enhancements.

#77 DOM #1 Word processing utilities and MUG loader. Writer Aid.

#78 DOM #2 Utilities. Amortization, alphabatize, Calendar and other word processing utilities.

#79 DOM #3 Games. Chisolm Trail, Pinbal, Football Soccer and more.

#80 DOM #4 Space. Solar system, star gazer, ursa and more.

#81 DOM #5 Hockey and Labels, archived.

#82 DOM #6 Zodiac. What happened on the day you were born?

#83A 83B DOM #7 Adventure and

Tunnels of Doom, also carwars, blackjack, wumpus, more. Two disks.

Set #1. Best of MUNCH. A flippie full of games, Tennis Beyond Parsec, Lasso, Sargon Sub Hunt Draw Poker, more. \$4.95.

Set #2. Adventure Compendium. A set of more than 70 adventures. 10 SSSD disks \$19.95, 5 DSSD disks \$15.95 or 3 DSDD disks \$11.95.

Set #3. T.I.P.S. The TI Print Shop. A set of 11 archived SSSD disks. Great graphics. \$9.95 mail orders add \$2.50 postage and handling.

#84 TI PD II Basketball Stats, Universal Graphics MSG, Firing Squad, TI Rescue, Trucker.

#85 TI PD III Stock Records, Piano, Old MacDonald's Farm, Readfast, Snakes Ladders.

#86 DOM 6/90 Aggressor, Barrage Buzzard, Cave, Facechase, Fish, Hopper.

#87 ASSEMBLY LANGUAGE GAMES. DOM 7/90 Beyond Parsec, Blitz, Lasso, Sub.

#88A88B DOM 8/90 John Johnson's Label Maker utility and a complete list of modules available on disk. TI Ytility Disk #1: Adventure, disk manager 2, Disk Mapper, Editor/Assembler, Easybug and TI Demo.

#89 DOM 9/90 Mickey Schmidt's manuel "Getting the Most from Your Cassette Recorder" and a disk of all of its programs done by Jack Sughrue. The charge for both is \$5.00 plus 2.00 postage.

#90 DOM 10/90 The German fareware game The Mine. A most challenging game.

#91A91B DOM 11/90 A companion set of disks to jack Sughrue's Cassettes #89.

#92 DOM 11/91 Christmas music from the B.C. 99ers and the game Segregation.

#93A93B DOM 2/91 TIPS Ver. 1.6 with new pictures and utilities, such as

Inventory, Job Cost, Estate

#33 Acme Hotel, Crazy Frazee, Add Magic, Film Exposure, Surveyor II, Nerm Beamer, Gemini

#34 Music Demo, Word Search, XB Demos

#35 Crossword, Hunt, Invasion, Maze, Mine, State Capitol, Regression, Calender, Chart, Sprite Demo

#36 Screen Dump Utilities

#37 Kismet, Algebra, Fractions, Italian, Crayons, Tic-Tac-Toe, Learn to Count, Numbers, Letters

#38 Bingo, Acey-Ducey, Supercity, Number-Nimble

#39 28 Column Converter, Tax Help, R'Bert, Flight Simulator

#40 1040/84, Checkbook, Database, Fernando, Finance, Phrase Demo, Speak

#41 40 Column Program, Sign Language, Mousekins, Sprite Game

#42 Color, Diskinfo 1A, Egg Hunt, Intruder, Silent Night, Sp/Builder.

#43 DM 1000, Disk Manager program.

#44 German, Nations, Presidents, Spelldown, Trees, Trig, Who, Elevate, Marksman, Night.

#45 Data Base with catalog auto loads and Help instructions.

#46 Genealogy Disk.

#47 Collections of utilities to use with Disassembler and Word Processor.

#48 Trivia Game, Great game with full instructions and capability to add questions.

#49A 49B FUNNELWEB VER. 4.40
Enhanced with extras from Jack Sughrue 2flippies, archived disks containing the latest Funnelweb version also, Archiver, Disk utilities and Plus

enhancements.

#50 Mass-Copy V. 3.25 Ultimate back-up utility. Handles all formats, copies two disks at once supports 128K card.

#51 A menu driven disk of utilities such as; Bar Charts, Appointment Calendar, Disk Card File, Word Processor and more.

#52 Games. Bowling, freeway, Hobo, Mind Buster, Shark, Trap, Vanilla more.

#53 Educational and Games. Flashcards, Spelling, Math, Wordsearch, Flags, etc.

#54 Utilities Games. Plots, Keyboard, Inventory, Black-jack, Grizzy, Doxology and more.

#55 Collection of 50+ utilities and sub-routines.

#56 Games. Demolition, Balckhole, Las-Vegas, Math Challenge, Maze Madness, Sky Dive and more.

#57 Utilities Games. Cataloger, Labels, Record File, Hangman and more.

#58 More utilities games. Condition print, Sorts, Disk Loader, Bandit more.

#59 Great utility disk includes Fast Term and DM 1000 with full documentation.

#60 Neat-List Utility. Creates list of programs with each statement on a separate line and variable cross referencing table. In assembly, fast.

#61 Loaders. Clock, Catalog, Debugger, TI-Disassembler and Fixer with docs.

#62 #63 Pilot 99. An excellent implementation of Pilot Program Language. Includes full support for TI sound and graphics. Two disks.

#64 Data-Base 99. Create a data base with full documentation.

#9 Success Formula, Termite, Aardvark, Creative Learning, Number Nimbler, Giants Dwarfs, Gold Rush, Micro Jaws, Pocket Sunrise, The Fly, Alpha Blast ...B, XB, J, SS

#10 Knights Tour, Adventure, Counting Fun, Harried Housewife, Caves of Carnage, Make Your Mark, Boa Alley, Steps and Chords Get gold, Diamond Drop, Counting Fun, ...B, XB, J, TE, SS

#11 Robo-Chase, Switch-A-Row, Be a Clown, TI Tower, Dogfight, Cookie File

#12 Wizards Keep, Nerm, Interplanetary Rescue, Force One

#13 Window Washer, Melt-Down, Circus, Robotron, Homebound

#14 Allowance Planner, Bartender, The Cheerleader, Chore Assigner, Cpu Maze, Crossing Paths, Dicision Maker, Dollar Bill Serial Number, Dracula's Family Tree, Egg Hunt, Future Age, Heat Loss Calculator, Jack O' Lantern, Learn Names Quicker, LOAD, Mystery Manor, Misical Chairs, Pig Latin Translator, Pulse Rate, Rad Rhymer, Shopper Search, Trick or Treet, True Love, Turkey, Turkey Panic, Valentine, Family Voting Booth, Wrapping Papper, Christmas TreeB, XB

#15 Schmoo, Koala, Dice, Golf, Star Trek, Simple Math, Dissembler, Relocator for Miny Memory

#16 Guessing Money,

#17 Crayon program, 3D Tic Tac Toe, Areas, Biorhythm, Character Definition, Color-Vision, Craps, Darts, Devil's Dungeon, Forest Fire, Graphics Match, Welcome to Computer Quiz, Wagon Wheel

#18 Frogger, Indy 500, Hot Dog, Corner Wars, Space Dual, Story Writer

#19 Salvo-Battleship, Connect-Five, Freeway, Let's Build America, Program Compactor

#20 Artist Board, Block 'Em, Brain Teaser, Craps, Itchie, Magic Squares, Minature Golf

#21 Call Key, Color Fractions, Directory, Drawing, Large Charactors, Printing Letters, Master Index, Playing Cards Demo, Making Signs,

#22 Bach, Oregon Flag, Othello, Print Right, Safty Awareness Program, Scorcher, Utah Flag, Color Math, Finger Spelling, Mace Race, Terminal Emulator Logon

#23 Cryptography, Doctors Billing System, Formatted Printing, Homework Helper, Grade Average Program Demo,

#24 1040 Estimated Tax, Expense Account, Invasion from Space, Last Rpbot, Nautical Navigations, Music Maker, Slot Machine Vegas Style, Mother Goose Nursery Rhymes, Checkbook Manager, Chi square

#25 Estimate Tax Valuation, Factorial Logarithm, House Inventory, Income Averaging, Music Box Dancer, Watch the Planets Move, Set up for Modem, Shipping Labels, South Pacific

#26 Household Budgeting, Make Music, Make Pictures, Pony Race, Bible Quiz, Running Digital Time Piece, Hangman, Kaleidoscope, Obstacle, Guess the Presidents, Stock Market Record Program, Simon One, Tarot Cards, Word search, Mastermind

#27 TI-Dogfight, Air-Missile, Zippy One, Mozart, Ludwig, Bach Minuet, Boogie

#28 Name that Bone, Match-up, Rescue, Mug-Wumps, Forest Rose, Singing TI, Sprite Aid

#29 Finance, Heat Eff, Hex-Convert, Geometry, Psycho, Print-Maze, Frog, Gas Electric

#30 Black Tunnel, Camels, Closeouts, Grabs, Goblin, Gunner

#31 Orbit Planet Chart, Pay, Word, Spanish, Statement, PERT, Flight Planning, Slot Machine, America, Aquarius

#32 Checking, Cost, Convert, Deduct, Diet, Energy, Gas, Nutrition,