<u>USING TINY BASIC GAMES AND PROGRAMS</u>

1. All Digital Group Software Systems, Inc. (DGSS) release-software for
TINY BASIC was originated by using the TBX-TVCOS Option 2 (Write TINY BASIC
cassette). The resultant software was created by keying-in the program in
the normal entry mode and then copying the program out to a cassette.

2. In order to use TINY BASIC Games and Programs, it is first neces-
sary to "bootstrap" the system with the TBX-TVCOS tape; then read in the
game or program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When
the read-in is completed, the TBX-TVCOS Option List should reappear on the
TV screen. At this point, key-in RUN(RETURN) to run the game.

3. The effect of performing the actions listed in paragraph 2 above is
the same as if the user had keyed in the game or program by hand after
keying-in a NEW command.

<u>NOTE</u>: The above procedure will work ONLY if the game/program read-in was
written out under Option 1 of TBX-TVCOS.

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                    <u>TINY BASIC GAMES, Set 1</u>

        All the the games and programs in TINY BASIC GAMES, Set 1, are versions
of games which were published in either <u>101 Computer Games</u> or <u>What To Do After
You Hit Return</u> . DIGIGUESS & BRAIN-TEASER are products of Mr. Charles Howerton.

1. <u>CHOMP</u>: CHOMP is a game of elementary strategy in which two or more
players attempt to avoid being forced to take the last (the "poisoned") bite
of an imaginary cookie. As each player takes a "bite", that portion of
the cookie to the right and below the "bite" point is removed from the cookie.
A player looses when forced to take the last bite (or "byte", if you prefer)!!

2. <u>CHECKERS</u>: The CHECKERS games is one in which the player plays
against the computer. In all honesty, the computer is pretty dumb and
does not play a very sophisticated game. In addition, because of size
limitations, there are almost no error checks built into the program. However,
if the user follows the rules of checkers and does not attempt multiple jumps
or jumping his own pieces or moving illegally, the game can be fairly inter-
esting. An error has been noted in the built-in documentation: the represen-
tation of the computer's pieces are X and * and the player's pieces are O
and Ø (piece and king, respectively).

3. <u>TIC-TAC-TOE</u>: In the TIC-TAC-TOE game, the player plays against the
computer. In the interest of making it possible to beat the computer, the
program makes opening moves according to a randomizing procedure. In addition,
the player makes the first move!!

4. <u>DIGIGUESS</u>: DIGIGUESS is a game in which the player attempts to guess a four-digit number based upon clues supplied by the computer. Entering zero as a guess indicates that the player has given up. Be prepared for some surprises when playing DIGIGUESS.

5. <u>BRAIN-TEASER</u>: In BRAIN-TEASER, the player attempts to create a pattern on the board in which all of the elements of a two-dimensional 3 X 3 array are one's except the center-one. The rules are as follows:

      a. The elements of the array are numbered 1 through 9 from upper left to lower right.

      b. Only an element containing a 1 may be selected for manipulation.

      c. Selecting a corner element for manipulation (e.g., 1,3,7 or 9) will change the ones to zeros and the zeros to ones in all four of the elements in that corner (e.g., selecting 1 will cause 1,2,4 and 5 to be changed).

      d. Selecting the center element of any side for manipulation (e.g., 2,4,6 or 8) will cause all of the elements on that side to be changed. (Selecting 6 will change 3,6 and 9).

      e. Selecting the center element (5) will cause the center element and the center elements of each side to be changed (2,4,5,6 and 8 are changed).

The object is to create a ring of ones around a central zero. If you should change all of the elements to zeros, YOU LOSE!!

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USING TINY BASIC GAMES AND PROGRAMS

     1. All Digital Group Software Systems, Inc. (DGSS) release-software for TINY BASIC was originated by using TBX-TVCOS Option 2 (Write TINY BASIC cassette). The resultant software was created by keying-in the program in the normal entry mode and then copying the program out to a cassette.

     2. In order to use TINY BASIC Games and Programs, it is first necessary to "bootstrap" the system with the TBX-TVCOS tape; then read in the game or program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When the read-in is completed, the TBX-TVCOS Option List should reappear on the TV screen. At this point, select either Option 5 or 6 and in response to the prompt colon (:), key-in RUN(RETURN) to run the game.

     3. The effect of performing the actions listed in paragraph 2 above is the same as if the user had keyed in the game or program by hand after keying-in a NEW command.

NOTE: The above procedure will work <u>only</u> if the game/program read-in was written out under Option 2 of TBX-TVCOS.

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<div align="center"><u>TINY BASIC GAMES, Set 2</u></div>

     All of the games in TINY BASIC Games, Set 2, were adapted to TINY BASIC by Dr. Robert T. Suding, Ph.D.

     1. <u>WAR-3</u>: WAR-3 was adapted to TINY BASIC from the version published in <u>Creative Computing</u>, Vol 2, No. 1, January-February 1976. Basically, the game is an artillery duel between two or three apposing armies. The armies take turns shooting in rotation until all but one of them have been destroyed. Initially, the players decide on the distrance between the armies and the muzzle velocities of the weapons. Once these decisions have been made the duel begins. On each turn, the player decides which of the apposing armies is the target and at what angle to elevate the guns. The computer computes the trajectory of the shell, determines the point of impact, and advises the player whether he has overshot or had a short-fall and by how much. An impact point which is within five percent of the correct range is scored as destructive and the target enemy is destroyed.

     2. <u>DR. THERAPY</u>: DR. THERAPY was adapted to TBX from the same issue of <u>Creative Computing</u> as WAR-3. It was originally written to illustrate some of the possibilities of interactive conversation with a computer. The user enters comments in any natural language and Dr. Therapy responds by asking questions and making comments about the users' responses. Dr. Therapy can be a fun "party" game; especially after things have "loosened" up a bit. Try it!!

     3. <u>GOLF</u>: GOLF is a modification of the version printed in <u>What To Do After You Hit Return</u>. From one to four players can play at the same time (taking turns, of course,) and up to nine holes can be played in one game. All players use the same set of clubs which include a one and three wood , irons four through nine, a wedge and a putter. Each club has a range of distances so proper club

selection is important when making a shot. The players play one complete hole from a drive to putt(s) in turn and the computer keeps score and evaluates performance against par at the end of the game. Keep your head down, your eye on the ball and swing away. Don't forget to replace the divots!!

4. REVERSE: REVERSE is from 101 Computer Games. The computer randomly generates a string of nine numbers in which the digits 1 through 9 each occur once. The object of the game is to arrange the digits in ascending numerical sequence by reversing groups of digits from two to nine digits long which begin with the left-most digit. This can be accomplished by "brute" force in ten moves. However, by proper application of the logic and control unit of the Mark-I biological calculator and integration located between your binaural audio receptors, it is possible to sequence the digits in less than ten moves.

5. BIORYTHM: BIORYTHM is based on the program which appeared in the March 1976 issue of Byte Magazine with embellishments as derived from the following books:

a. Is This Your Day? by George Thomman; Avon Books, $1.75, and

b. How To Live With Your Life Cycles by Barbara O'Neil and Richard Phillips; Ward-Ritchie Press, $4.95.

The user enters his/her date of birth, the day on which the plot is to begin, and how many days are to be plotted. The program computes all three cycles from the date of birth to the date the plot is to begin and then plots the cycles from that point for the number of days requested. The biorythm concept may or may not be valid science but assuming that it is, the program is accurate within established parameters.

USING TINY BASIC GAMES AND PROGRAMS

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cassette). The resultant software was created by keying-in the program in
the normal entry mode and then copying the program out to a cassette.

2. In order to use TINY BASIC Games and Programs, it is first necessary
to "bootstrap" the system with the TBX-TVCOS tape; then read in the game or
program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When the read-in
is completed, the TBX-TVCOS Option List should reappear on the TV screen.
At this point, key-in RUN(RETURN) to run the game.

3. The effect of performing the actions listed in paragraph 2 above is
the same as if the user had keyed in the game or program by hand after
keying-in a NEW command.

NOTE: The above procedure will work ONLY if the game/program read-in was
written out under Option 2 of TBX-TVCOS.

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TINY BASIC GAMES, Set 3

All of the games and programs in TINY BASIC GAMES, Set 3, were adapted
to TINY BASIC by Mr. Ted Holdahl from 101 Computer Games and/or What To Do
After You Hit Return or are original creations by Mr. Holdahl.

1. TAXMAN: TAXMAN is a game in which the player plays against the
computer. At the start, the player decides how many sequential numbers,
beginning with one, are to be generated for the current game (maximum is 50).
The numbers are generated and play begins. On each turn the player selects
one of the remaining numbers which is added to the players' total; then the
TAXMAN gets to add all the numbers in the remaining set which are factors of
the number selected by the player. (There must be a least one valid factor
of the players' number in the remaining set or the players' selection is
invalid and another choice must be made). At the end when there are no
numbers in the set for which there are factors in the set, the TAXMAN takes
all of the remaining numbers. The object is to accumulate a greater total
than the TAXMAN.

2. SNARK: The SNARK is a beastie which is hiding somewhere in a ten
by ten grid and, of course, the object is to find it. However, SNARK
can be more that a hide-and-go-seek game. The method of finding the SNARK
involves the use of symbolic logic; especially the VEN diagram. A move by
the player requires the entry of the X, Y coordinates of one of the grid
intersections and the length of the radius of a circle which has the selected
intersection as its center. (A radius of zero is used when the intersection
where the SNARK is hiding is determined). The computer responds to each move
by informing the player whether the SNARK is inside, on, or outside the
circle just specified. It is helpful to have a sheet of grid paper on hand
while playing and to draw the circles on the grid. Then, based on the clues,
observe the areas of overlap (intersection/logical AND, NOT, etc.) to determine
the SNARKS' hiding place.

3. <u>TRAP</u>: TRAP is a number guessing game where the player makes two guesses on each play and tries to trap the unknown number between the two guesses and by reducing the interval between the two guesses on successive plays and to guess the number by finally making the same guess for both input numbers.

4. <u>EXPENSIVE CLOCK</u>: CLOCK is a program written in TINY BASIC which keeps accurate time. The user supplies the starting time and the program provides a continuous display of the current time.

5. <u>NUMBER</u>: NUMBER is a number guessing game which requires the use of binary searching techniques. The player makes one guess on each turn and is informed as to whether the guess is higher than, lower than, or equal to the target number. It should be possible to find the number in six to seven guesses if the binary search technique is utilized.

6. <u>SQUARE-ROOTS</u>: SQUARE-ROOTS is not a game but is, rather, a program which will give the integer square-root of any number from +32767 to -32768. It is a bonus program in addition to the five programs normally distributed on a games tape.

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2. In order to use TINY BASIC Games and Programs, it is first necessary to "bootstrap" the system with the TBX-TVCOS tape; then read in the game or program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When the read-in is completed, the TBX-TVCOS Option List should reappear on the TV screen. At this point, key-in RUN(RETURN) to run the game.

3. The effect of performing the actions listed in paragraph 2 above is the same as if the user had keyed in the game or program by hand after keying-in a NEW command.

NOTE: The above procedure will work ONLY if the game/program read-in was written out under Option 1 of TBX-TVCOS.

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TINY BASIC GAMES, Set 4

All of the games and programs in TINY BASIC GAMES, Set 4, were adapted to TINY BASIC by Mr. Ted Holdahl from 101 Computer Games and/or What To Do After You Hit Return or are original creations by Mr. Holdahl.

1. HAMURABI: HAMURABI is a pseudo-management game in which the player manages the resources of the ancient kingdom of Sumaria. The player makes classic decisions on the sale and purchase of land, amount of land to be planted and quantity of resources to be allocated to feed the populace. The original author states: "The object of the game is to discover the object of the game!!"

2. FACTOR: FACTOR is a bonus program which will compute the factors of any number up to 32767.

3. STARS: STARS is a number guessing game in which the clues supplied by the computer, based upon the players' guess, are STARS. The quantity of STARS awarded to a guess are relative to the proximity of the players' guess to the target number. The closer the guess, the more STARS are awarded.

4. 23 MATCHES: 23-MATCHES is a game of strategy and skill in which the player attempts to out-manuever the computer. The object of the game is to force the apponent to take the last match from a pile of 23-MATCHES. At each turn, the player may remove 1, 2, or 3 matches from the pile. The computer can be beaten. Have fun figuring out how.

5. BATUM: BATUM is a super-bonus game which is, in some respects, similar to 23-MATCHES. The differences are in the areas of the starting number which is randomly-generated and in the range of numbers which can be removed from the pile which is also randomly-generated. Figure out how to beat the computer at 23-MATCHES: then try BATUM to refine your skill.

6. 20-QUESTIONS: 20-QUESTIONS is a different kind of number guessing game. The player makes a guess; then asks if the guess is higher than, equal to, or lower than the target number. The hooker? You may only ask one of the three questions on each turn. The object is to discover the number in less than 20-QUESTIONS.

7. BLACK-JACK: BLACK-JACK is an excellent version of the casino game. The computer is the dealer and it uses a single deck. (This makes decisions about whether or not to draw much simpler if you keep track of which cards have been played). As the dealer, the computer stands on 17 or more draws to 15 and tosses a random number as to whether or not to draw to 16. The program automatically computes the value of the players' hand both ways when it contains an Ace. Up to nine players may play at the same time (in turn, of course) so this can be a very good party game.

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2. In order to use TINY BASIC Games and Programs, it is first necessary to "bootstrap" the system with the TBX-TVCOS tape; then read in the game or program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When the read-in in completed, the TBX-TVCOS Option List should reappear on the TV screen. At this point, key-in 6; :TINY BASIC will appear on the screen. Key-in RUN(cr) to run the game. When finished with the game, hit the ESCAPE key, start the cassette recorder and key-in Option 1 (Read TINY BASIC cassette). Do this for each of the games/programs you intend to utilize.

3. The effect of performing the actions listed in paragraph 2 above is the same as if the user had keyed in the game or program by hand after keying-in a NEW command.

NOTE: The above procedure will work ONLY if the game/program read-in was written out under Option 1 of TBX-TVCOS.

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TINY BASIC GAMES, Set 5

The programs in TINY BASIC GAMES, Set 5, with the exception of SPACEBATTLE, were adapted to TINY BASIC EXTENDED from DEC's 101 COMPUTER GAMES and People's Computer Company's WHAT TO DO AFTER YOU HIT RETURN by Louis Hutton, K7YZZ, Bellevue, WA. SPACEBATTLE is an original creation by Dr. Mark Yoseloff, E. Brunswick, N.J.

All of the programs in this set can be run in a 10K system. Of course, they are all self-documenting (just read them in and LST them). In most cases, the games are self-explanatory. However, in some cases, the directions are lengthy and difficult to remember...because of this, the directions are duplicated here.

1. BOMBER: In this fairly simple game, you are the pilot of a World-War II bomber. You may choose which side you wish to fly for; what kind of bomber you want to fly; and where you are going. The random number generator (RN) takes over and the outcome of the mission is determined by "Lady Luck".

2. LUNAR LANDER: You are landing on the moon and have taken over manual control 500 feet above a good landing spot. You have a downward velocity of 50 ft/sec; 120 units of fuel remain.

Here are the rules:

A. After each second, the height, velocity, and remaining fuel will be reported.

B. After the report, a (?) will appear. Enter the number of units of fuel you wish to burn during the next second. Each unit of fuel will slow your decent by 1 ft/sec.

(more)

C. The maximum thrust of your engine is 30 ft/sec or 30 units of fuel/sec.

D. When you contact the lunar surface, you engine will automatically shut off.

E. You will be given a report of your landing speed and remaining fuel.

F. If you run out of fuel, the (?) will no longer appear. However, your second-by-second report will continue until you contact the lunar surface. How you control your fuel, velocity of decent and engine thrust will help YOU not   make one more "crater" while attempting LUNAR LANDER.

3. SPACEBATTLE: SPACEBATTLE is a mini-"Star Trek" that is well written and fairly easy to play. As usual, it's the Enterprise against the Klingons in a never-ending battle for "truth, justice and the Earthman's way"...(harumph!!) The directions for SPACEBATTLE are listed below:

You command the Enterprise against a Klingon. All ranges are in kilometers; bearings are in degrees. Commands and weapons are:

1. Fire Phaser
2. Fire Torpedo
3. Fire Missile
4. Move to Fire
5. Move to base
6. Increase Shield
7. Refuel
8. Self-Destrust
9. Displays (shown in following example):

WEAPON AVAILABLE		RANGE	BEARING
1. Phaser	.20	000-500	000-180
2. Torpedo	4	200-1000	090-180
3. Missile	2	400-1600	000-090

Hit RETURN when ready.

Remember...don't shoot until you see the 'green's of their eyes' and keep your phasers in 'phase!!'

4. MATADOR: Another game of skill with you pitted against a bull in the "computer arena". The directions for MATADOR are as follows:

A. On each pass of the bull, you may try:
0 - Veronica (Dangerous inside-move of the cape);
1 - Less dangerous outside move of the cape;
2 - Ordinary swirl of the cape.

B. Instead of 0 through 2 above, you may try to kill the bull on any turn with
4 - Over the horns; or
5 - In the chest.

The "crowd" will determine what award you deserve...posthumously, if necessary. The braver you are, the better the award you will receive. The job done by the Picadores and Toreadores will enhance your chances.

5. <u>DICE</u>: A fairly straight-forward version of CRAPS. You place your bet and the computer rolls the dice for you.

The first throw is your point unless, of course, you get CRAPS (e.g., 1 X 1; 1 X 2; or 6 X 6) in which case you loose immediately. If you throw a seven or eleven, you win immediately.

After the first throw...if you get a seven, sing "Sayonara" to your bet. If you make your point, YOU WIN. "Bon Chance".

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2. In order to use TINY BASIC Games and Programs, it is first necessary to "bootstrap" the system with the TBX-TVCOS tape; then read in the game or program using TBX-TVCOS Option 1 (Read TINY BASIC cassette). When the read-in is completed, the TBX-TVCOS Option List should reappear on the TV screen. At this point, key-in 6; :TINY BASIC will appear on the screen. Key-in RUN(cr) to run the game. When finished with the game, hit the EXCAPE kay, start the cassette recorded and key-in Option 1 (Read TINY BASIC cassette). Do this for each of the games/programs you intend to utilize.

3. The effect of performing the actions listed in paragraph 2 above is the same as if the user had keyed in the game or program by hand after keying-in a NEW command.

NOTE: The above procedure will work ONLY if the game/program read-in was written out under Option 1 of TBX-TVCOS.

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TINY BASIC GAMES, Set 6

TINY BASIC GAMES, Set 6, has been put together by popular demand. One of the best uses to which a computer can be put is to educate children. TINY BASIC GAMES, Set 6, contains five programs which are designed to aid the student in learning arithmetic. CHIEF was adapted to TINY BASIC from DEC's 101 COMPUTER GAMES by Louis Hutton, K7YZZ, Bellevue, WA; MR. QUIZZER is an original program by Dr. Mark Yoseloff, E. Brunswick. N.J.; ADDITION, SUBTRACTION and MULTIPLICATION are original programs by Walter White, Personal Computing Company, Frazer, PA.

1. CHIEF: In CHIEF, the user is asked to select a number, perform some specific operation on it and feed the result back to the CHIEF. The CHIEF will then tell the original number and is prepared to "pow-wow" the issue if the user is wrong.

2. MR. QUIZZER: MR. QUIZZER is a math drill program which offers four levels of problems ranging from simple addition through much tougher addition, subtraction, multiplication and division...complete with encouragement from MR. QUIZZER.

You have the option of chosing a level at which you wish to begin; the option to change levels is given also.

This program enables a student to rise from one level to another more difficult level...who knows? It may help the "older" students to brush-up a bit also!!

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3. <u>ADDITION</u> and
4. <u>SUBTRACTION</u>: ADDITION and SUBTRACTION are rigorous math drills. Each run generates 100 problems. The program keeps score and issues a "grade" at the end of the drill based upon the student's performance. You will be asked if you want instructions and may decide. Hit RETURN to continue the program. You may then choose whether you want a one, two or three digit problem in the category you choose. You will then be shown the actual problem to be solved.

At the end of the drill you will receive a "grade" and may ask for another drill.

5. <u>MULTIPLICATION</u>: MULTIPLICATION presents the multiplication tables to the student, lets him drill on them three times and then generates a problem for solution. As in 3 and 4, above, a grade will be given based upon the student's performance. When the student selects a number X through Y, please remember that the number must be equal or greater than X and equal to or less than Y.

This program will list the number of tries you take (limit is three) in determing anwer...then will give the correct answer if the student hasn't answered in that time. The student must type in the correct answer before going on to the next problem.