

APPLE BARREL

SOFTWARE FOR THE APPLE™

TM

25 PROGRAMS

(for less than \$1²⁵ per program)

Mortgage Loan • Checkbook • Savings
Days Between Dates • Calendar • Inverser
Black Hole Chase • Demolition Derby • Luna C, T, L

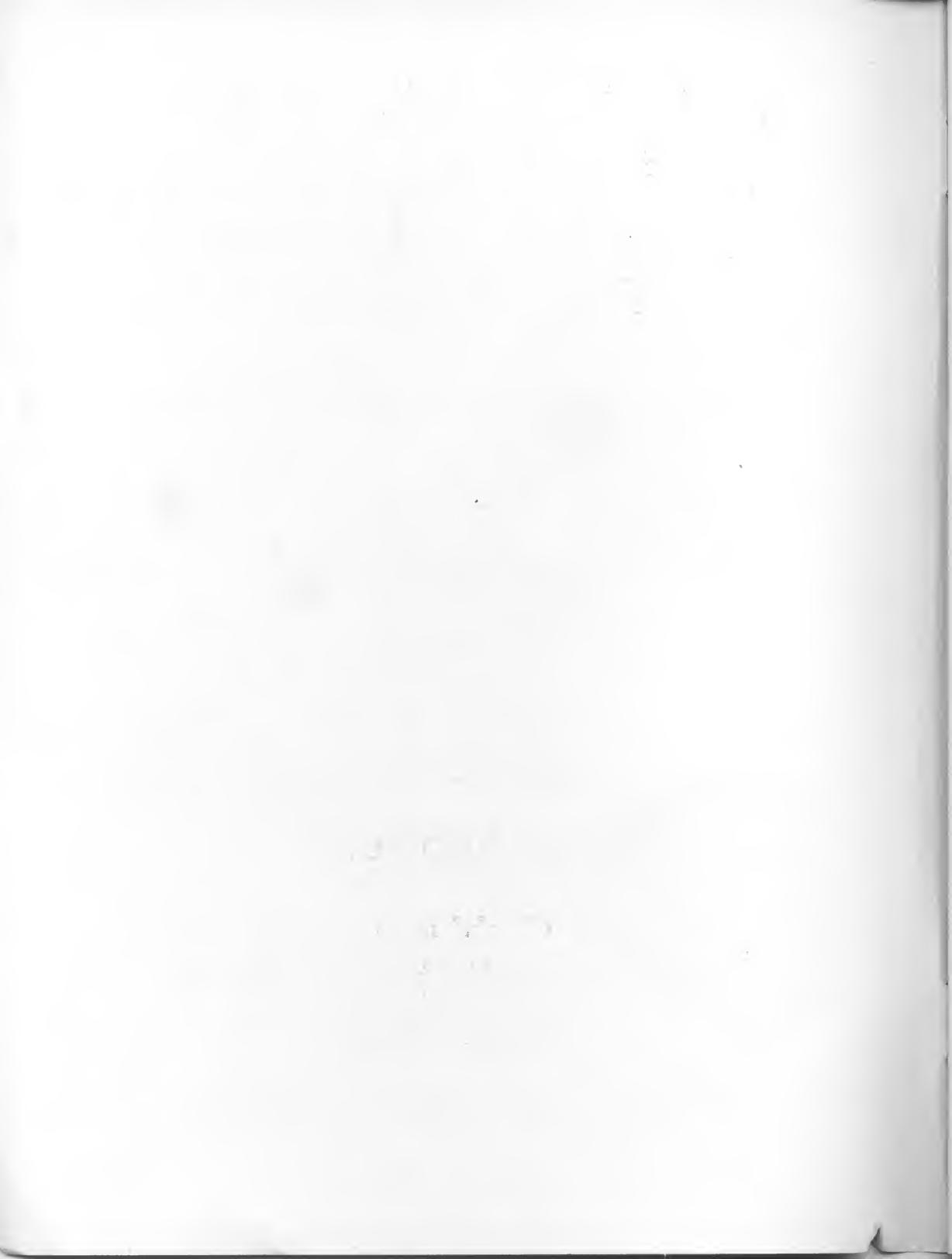
Shape Builder • Hi-Res Text Writer
Plot • Screen Print • Alien • Apple LeMans
Pacifier • Tic-Tac-Toe • Think • Dynamite
Addition, Subtraction, Multiplication, Division
Metric Conversion • Music Utility • Mountain



\$2995
DISK

CDS Corp.

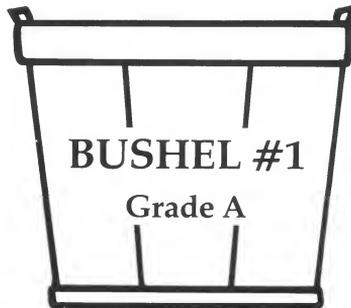
*Apple Barrel and Good to the Last Byte are trademarks of CDS Corp.
Apple is a trademark of Apple Computer, Inc.*



APPLE BARREL

SOFTWARE FOR THE APPLE™

™



APPLE BARREL SOFTWARE
is a CDS Production

COPYRIGHT NOTICE

Most computer programs have been submitted for protection under the same United States Copyright Laws that protect other types of publications.

CDS Corporation is a "publisher" of these materials under a variety of contracts with third-party authors and copyright owners.

It is a violation of the law to reproduce these materials for any purpose other than personal convenience, or for any purpose at all that would prevent the copyright owner from fully realizing his due benefits under the terms and provisions of the contract agreements.

In plain words, you cannot resell these programs to any other person, you cannot distribute copies of these programs to any other person, school, user group, business, etc. and you cannot conduct any sort of a commercial activity that uses these programs as a part of your business.

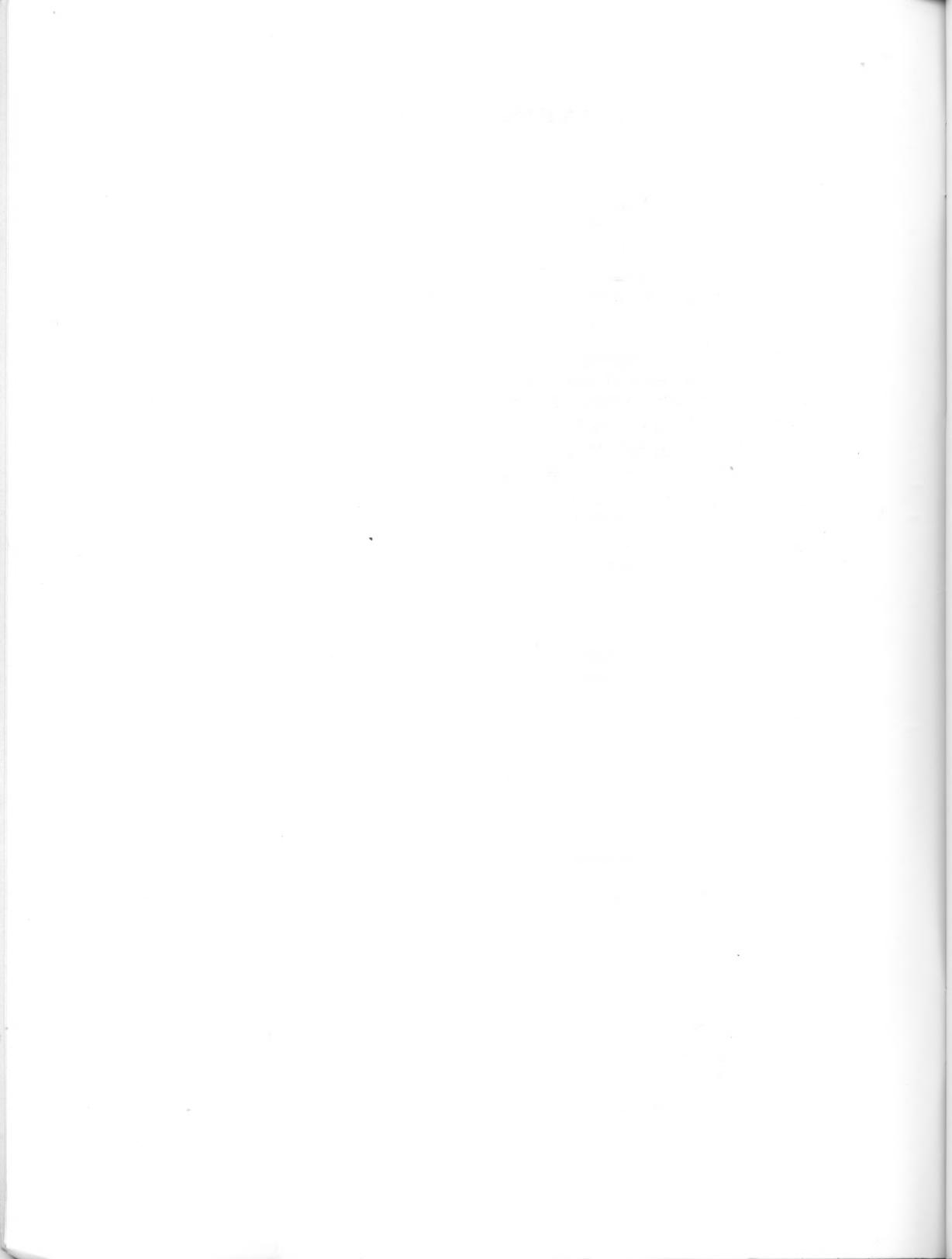
Face it -- if you pirate these programs or let someone else pirate these programs, you are depriving other **individuals** of their deserved income. Look at it this way -- if the software is good enough to copy, it's good enough to pay for. Please send any questions about this to CDS Corp., 550 North Main Street, Logan, Utah 84321 or phone (801) 753-6990.

© Copyright CDS Corp., 1979
All Rights Reserved

Although we believe these programs to be accurate, no representation is made or is to be implied as to the suitability, accuracy or fitness of any of the programs for any particular purpose. CDS Corp. shall not be liable for incidental or consequential damages resulting from the use of, performance of or supply of these programs.

TABLE OF CONTENTS

The Story of Apple Barrel	1
Software Specifications and Overview	2
Loading Apple Barrel Programs	2
What To Try When it Doesn't Load	3
Programs: Description, Instructions & Comments	
Block One	
Mortgage Loan	5
Days Between Dates	6
Calendar	7
Block Two	
Addition	7
Subtraction	7
Multiplication	7
Division	7
Metric Conversion	8
Block Three	
Apple LeMans	8
Think	9
Mountain	10
Block Four	
Black Hole Chase	10
Demolition Derby	11
Tic-Tac-Toe	12
Single Programs	
Savings	12
Checkbook	13
Dynamite	14
Luna C, T or L	15
Alien	15
Hi-Res Text Writer	17
Music Utility	18
Shape Builder	18
Plot	20
Menu Utility	21
Screen Print	21
Pacifier	22
Inverser	22
Big Letters (Hi-Res)	23
Program Modification	24
User Tips	24
Program Listings	25



THE STORY OF APPLE BARREL

Once upon a time, there was a great, wonderful and wise Apple Barrel that people would consult about business problems, school lesson, family finances and even play games with. (Who says you can't have a run-on sentence end with a preposition - or - proposition as the case may be?) This Apple Barrel was a great community resource and everyone loved it.

But as is so often the case, some bad person comes along who screws up a good thing for everybody. And so it was. A bad person named Turkey Rascal Snidely* (80 years old) came along, stole the Apple Barrel and hid it deep in a mountainside. Many years went by . . . until one day a good person, named Wilford Oscar Zuchini*, came along and freed the Apple Barrel.

We have been able to capture some of the wit and wisdom of the Apple Barrel in this software. Your next question is, of course, "Gee, where is this wonderful Apple Barrel?" Well, the Apple Barrel is alive and well in Burbank, California. If you believe that, we've got some land in Florida that we'd like to talk to you about. Enjoy your programs.

*These names have been changed to protect the innocent and the not-so-innocent.

Software Specifications & Overview

All Apple Barrel programs in Bushel #1 are written in Applesoft. The minimum recommended configuration is either a 16K Apple with a cassette tape player or a 32K Apple with a disk drive. The software will run on either an Apple II or an Apple II Plus.

Bushel #1 provides a variety of software for the new owner as well as the veteran. All of the programs can be listed and modified. The utilities can be included in your own programs. These programs have been written by some of the best talent in the "Apple Basket" and we know you'll enjoy and appreciate some of the unusual techniques. Like one gentleman who said the programs were a "pretty good buy" at \$24.95--after talking with him a little longer, we realized that he thought the programs were \$24.95 per program. We told him that all 25 were \$29.95 for the disk version and he literally *ran* to get his checkbook. We still have the feeling that he thinks we're a little crazy to sell such good software at such a great price. Maybe he's right (but we sure smile a lot).

Loading Apple Barrel From Disk

Follow these instructions to load from disk:

1. Insert the disk into the disk drive.
2. Boot as you usually do.
3. That's all you need to do, as you can see.

Loading Apple Barrel From Tape

Follow these instructions to load from tape:

1. Enter Basic as you usually do, if you are not already in Basic.
2. Press the rewind button on your tape player and completely rewind the tape.
3. Type LOAD, press the Play button on your tape player, then press RETURN. After a few seconds, the Apple will beep and load the first program.
4. When the program is loaded, the Apple will beep again and display a flashing cursor. Stop your tape player. Type RUN, then press RETURN.
5. Watch the beginning display. Press any key to stop the display.

6. To load the MENU program, type LOAD, press PLAY on your tape player, then press RETURN. After a few seconds your Apple will beep and load your program. When your program is loaded, the Apple will beep and display a flashing cursor. Type RUN, press RETURN and your MENU program will appear. Follow the MENU prompts.
7. When your selected program is loaded, type RUN, press RETURN and enjoy your program.

What To Try When It Doesn't Load

1. Check all cords, boards, etc. Wiggle everything, carefully!
2. Try different settings of your tone and/or volume controls on your tape player.
3. You may have gotten a glitch from a large fluctuation in electrical current. Try to load again.
4. Remove the cable from the earphone jack of your tape player and play the tape. You should be able to hear the leader tones and the digital program sound. If you don't, your tape deck may be faulty. Try a different tape deck.
5. Try some other software that you have run recently. If it doesn't run, your Apple has problems. Try the various things you usually try. Read your Apple manual. Send out for Pizza . . . at least your stomach will be happy (unless you don't like Pizza-- Chinese food anyone?)
6. Call your local computer dealer. He'll be glad to help you. If everything but the tape or disk works, bring it in and trade it. That is our policy--we stand behind all of our products.

MORTGAGE LOAN

Description: Mortgage Loan will compute the various factors of a loan, including payment amount, interest rate, number of payments, amount of loan, total amount paid and total interest paid.

Instructions: To use Mortgage Loan, select Block 1 from the Master Menu. This will load Mortgage Loan, Days Between Dates and Calendar. These programs have been included in a single block so that you can quickly pull the programs from RAM and thus refer quickly from one to the other in making your financial calculations and decisions. In using Mortgage Loan or the other programs, Apple Barrel will automatically supply the "\$" symbol where appropriate. If you add a comma, Applesoft will ignore anything after the comma, so do not use commas. As you may discover, if you enter a letter instead of a number, Applesoft will ignore the letter(s) and all that follows the letter(s). If the numbers that you enter do not compute, Apple Barrel will automatically switch you back to the Mortgage Loan menu and display at the top of the screen "ERROR ** DOES NOT COMPUTE". At that point you may select an option from the Mortgage Loan menu and continue. For example, if you try to compute the number of payments you need to pay off a \$40,000 loan @ 16% A.P.R. @ \$500.00 per month, Apple Barrel will switch you back to the Mortgage Loan menu and give you the error message.

Comments: To show you the effect of larger payments, take \$40,000.00 @ 16% A.P.R. -- this can be amortized in 165 payments of \$600.00 or 504 payments of \$534.00. Mortgage Loan is guaranteed to terrify you as you calculate a 30 year loan of \$75,000.00 at 18%. If the monthly payments don't scare you, look at the total amount that you will pay the bank in 30 years. Guaranteed to make strong men (and women) faint.

Space for User Notes:

DAYS BETWEEN DATES

Description: Days Between Dates calculates the number of days between two dates (just as you thought, right?).

Instructions: To load, select Block 1 and choose the Days Between Dates option. Then choose Option 1 from the next menu. Enter the first date using the following format: 2,25,1961. Then enter the second date. If you get a "???" response, press RETURN and follow the instructions on the screen. To return to the Block 1 menu, choose Option 3.

Comments: The calendar was adjusted in 1582 A.D. (it was adjusted by someone else -- we weren't there -- we're clever but not that clever -- but we're working on it), so you should try dates after that time. If you have a genuine need to work with Days Between Dates in years before 1582, we'd like to know what you're up to.

Flash! We have just been given the first example of using Days Between Dates in years before 1582 A.D. The example is told to us as follows: If I have an ancestor born July 23, 1423 A.D. who dies April 11, 1477 A.D. -- how old was he when he was destroyed by the Mongol hordes as they overran his village? Well, we took our cue from Mr. Abbot (Mr. Farnworth's personal private executive secretary in the movie "Heaven Can Wait") who replied in the following way to a similar question: "I think you'd have to define the word destroy." This seemed to confuse and irritate our historian (it didn't work in the movie either) and so we said, "Add 300 years to each date. That will give you the answer of 19627 days and all you have to do is divide 19627 by 365 and you have the number of years that your ancestor lived." Of course, there is a much faster way of doing it, but as any software house knows, the first thing people do with a program is look for holes, bugs and gaps. You'd never do that would you?

Space for User Notes:

CALENDAR

Description: Calendar will tell you what day of the week a particular date, such as your birthdate, is on.

Instructions: To load, select Block 1 from the Master Menu and choose the Calendar option. Then choose Option 2 to run the Calendar program. Enter dates in the following manner: 2,25,1961. If you get a "??" response, press RETURN and follow the instructions.

Comments: If Saturday Nite Live stays on Saturday nites and continues for another 50 years (can you see John Belushi at the age of 84?) it will have the curious experience of being on TV on the day 2,2,2222 -- i.e. February 2, in the year 2,222. Just thought you'd like to know. By the way, in case you didn't know, the comments section of this manual is totally optional. In fact, the whole manual is optional. Actually, the whole computer is optional, but you know that, we hope. Let us move on.

Space for User Notes:

ADDITION, SUBTRACTION, MULTIPLICATION, DIVISION

Description: The math programs are simple, quick and fun for the right people. When you answer 5 correctly, the difficulty increases. One of the best uses we have seen for these programs is to use them as a model for individual instruction programs written specifically for a particular learning situation.

Instructions: To load any one of these four math programs, simply select Block 2 from the master Menu. You may then select the math programs you want to run.

Comments: As various public personalities say on occasion, "No Comment."

Space for User Notes:

METRIC CONVERSION

Description: Metric Conversion is very appropriately named. You can use these 14 conversion options:

1. Centimeters to Inches
2. Inches to Centimeters
3. Meters to Feet
4. Feet to Meters
5. Kilometers to Miles
6. Miles to Kilometers
7. Degrees (C) to Degrees (F)
8. Degrees (F) to Degrees (C)
9. Liters to Ounces
10. Ounces to Liters
11. Liters to Gallons
12. Gallons to Liters
13. Kilograms to Pounds
14. Pounds to Kilograms

Instructions: Simply enter the number of the conversion that you want to make and Apple Barrel will take you from there.

Comments: Not to start an argument, but if Canada can go Metric, isn't it about time for the U.S. to make the change?

Space for User Notes:

APPLE LEMANS

Description: Apple LeMans can be as hard as the real race or as easy as a Sunday afternoon drive. You can vary the speed of your car and as you go faster the track becomes more treacherous. Apple Barrel will keep track of the high score, so you can have some fun competing with yourself or others.

Instructions: Load Apple LeMans by selecting Block 3 from the Master Menu. You maneuver your race car down the track by rotating the dial on paddle zero like the steering wheel of your car. You can speed up or slow down by turning the dial on paddle one (your speed paddle). If you turn your speed paddle (#1) all the way to the right (slowest position), when you first start, you can get the feel of your steering paddle (#0).

Comments: We discovered some interesting sound and color effects when we adjusted the channel tuning dial and turned up the volume on our color set. Depending upon your TV set, it may work for you. We'd like to hear from anyone who can beat 500 at the fastest setting.

Space for User Notes:

THINK

Description: Think is a test of your memory circuits (the ones in your head.)

Instructions: There are six rectangles across the screen numbered 1-6. The Apple Barrel has assigned a different musical tone to each rectangle. The Apple Barrel will light up a rectangle and play a musical tone at the same time. You respond by pressing the appropriate number on the keyboard. If you are correct, you get a point. If you are incorrect, you get a strike. Three strikes and you are out. The Apple Barrel will next sound two tones, then three, etc.

Comments: The in-house record is 22 tones. Good Luck.

Space for User Notes:

MOUNTAIN

Description: You are the operator of a gigantic "KABOOM" cannon. The cannon is so huge that only the top of the barrel appears on the screen (as the blue shape on the far left). You have 3 targets on the other side of the big green mountain. The targets have values of 10, 20 or 30 points. The targets change position randomly. The mountain changes size and shape each time you shoot. You only have 250 ammo charges, so try to hit the 30 point target each time. Apple Barrel will automatically keep track of your points and the number of ammo charges you have left.

Instructions: Simply select Block 3 from the Master Menu, then select Mountain from Block 3. When you are to the playing screen, simply enter your velocity (try 40) and press RETURN. Then enter your angle (try 75) and press RETURN. Adjust your angle and velocity as necessary to hit the 30 point target as often as possible.

Comments: You only have 250 units of ammo charges left from yesterday's battle. You must very carefully calculate how much charge to use on each shot, so you have enough charge to shoot clear over the mountain as many times as possible. If you tried our suggestions in the above instructions you have learned a few things already. As little as 15 units of charge will let you hit the far right target if the mountain is low.

The targets are canisters of film that contain all the terrible TV commercials that we've had to suffer through this year. And if you don't destroy them, we'll have to watch them next year too. Good luck and good shooting.

Space for User Notes:

BLACK HOLE CHASE

Description: You are being chased by creatures from a black hole. A black hole is an area of outer space (Yes, outer space is west of Cleveland), where gravity is so strong that even light rays can't escape. You must pilot your spacecraft across the galaxy and away from them as fast as possible.

At the same time, you must avoid three things: (1) moving your ship into your own vapor trail -- it's radioactive, but will disappear after a while; (2) the edge of the

galaxy; (3) the stars and planets in your galaxy. The edge of the galaxy is visible at first, and then, little by little, minute by minute, the creatures make parts of the edge disappear by turning it into a black hole. Don't run into it or they'll get you.

Instructions: Use the I, J, K and M keys to move up, left, right and down through the galaxy. You can set the difficulty from 0 to 10. Zero will give you a galaxy free of obstacles to move around. If you can outrun the Black Hole Creatures for over 200 hours, they'll run out of fuel before you do and you'll be saved.

Comments: We know you were expecting a game where you could search for the 18 holes at the Burning Tree Golf Course. (They disappeared last week -- the holes not the golf course.) But that is not this game. We think it beats looking for golf holes.

Space for User Notes:

DEMOLITION DERBY

Description: Demolition Derby is a fast-moving game of strategy where two players try to force each other to run into the wall or their own trails. It looks so simple until you play someone who knows the various strategies you can use to win.

Instructions: Blue Player (on the left) uses the E, S, D and X keys to move up, left, right and down. Orange player (on the right) uses the I, J, K and M keys to move up, left, right and down. Each time you demolish your opponent by forcing him to crash, you get a point. First player to get 15 points wins.

Comments: We know that all through this manual, you have wanted to give us your comments. Well here's your chance. In the box below, please give your total, complete, candid and frank feedback. Thank you.



Space for User Notes:

TIC-TAC-TOE

Description: A description of Tic-Tac-Toe? Just two words--Beat it. It may give you a chance at the beginning of your games--take it.

Instructions: Enter the number of the square you want. The squares are numbered from left to right, top to bottom:

1	2	3
4	5	6
7	8	9

Comments: As Jethro Tull said: "Nothing To Say."

Space for User Notes:

SAVINGS

Description: Savings is a model of a savings account. You can add deposits, subtract withdrawals, add compounded interest and with every entry you make, your balance will automatically be kept current. When you want to add interest, you can specify the interest rate, the number of compounding periods per year and the length of time that you want to work with. You can figure time by number of years, partial years or broken years (3.5, 6.7, etc.). You can figure as many transactions as you want, add interest whenever you want (at whatever interest rate and compounding rate you want) and keep your current balance on display with every entry you make. When you finish using the Savings program, it will automatically save your final balance if you want it to.

Instructions: To load Savings, simply select Savings from the Master Menu. The program is completely menu-driven so just interact as appropriate. For all you billionaires out there using Apples and this wonderful software, we have good news and bad news. The good news is that you're financially rich--the bad news is that this Savings program will, in most cases, only work to \$999,999.98. (We think that if your financial dealings are over this figure that you should talk to us about some custom software.)

But what if by mistake, you put your balance over \$999,999.98? Savings will refer you to this finely written manual (or as I was told upon completing this superb piece of literature, "F-i-n-a-l-l-y written, huh?") for instructions. Well, here are the instructions: first, promise that you will never do it again; second, stand on your left foot; third, try typing RUN and press RETURN. If that doesn't work, type ODATA+000000.00 --type exactly that and nothing else, no spaces, nothing else. Then press RETURN. Then type Run Savings and press Return. If that fails, press Reset twice, Reboot and select Savings from the Master Menu.

Comments: You can calculate interest for less than one year by just using decimal fractions (e.g.: .75). You also can figure periods like 3.5 years by simply typing 3.5 (amazing, isn't it?). As you realized from the very beginning, this is a program that you can use to calculate Future Value of a particular sum of money, rocks, etc.

Space for User Notes:

CHECKBOOK

Description: Checkbook can help you keep track of the balance of your checking account. You can add deposits, subtract checks and either smile or frown depending upon what your balance is. Your final balance is automatically saved for future reference when you exit this program when returning to the Master Menu or you can zero the balance.

Instructions: To load Checkbook, simply select it from the Master Menu. Follow the next menu given. If your balance runs plus or minus \$1,000,000.00 follow these instructions--first: try typing RUN and press RETURN. If that doesn't work, type ODATA+000000.00 --only that, no spaces, nothing else. Then press RETURN. Then type Run Checkbook and press RETURN. If that fails, press Reset, Reboot and select Checkbook from the Master Menu.

Comments: Used properly, this program may save you the hassle that happens at our house once in a while--the checkbook somehow becomes overdrawn by several

hundred dollars. You know the situation--you run a balance check on your account to make sure you have enough to go to the resorts for a week and you're \$800.00 overdrawn. And then those "lively" discussions about who overdrew what. But that probably never happens at your house, does it?

Space for User Notes:

DYNAMITE

Description: Welcome to the wonderful world of Dynamite. Each of you light a stick and pretend you're the Statue of Liberty. Now douse your fuse (I said "fuse" not "booze") and read on.

There are 15 sticks of dynamite in an abandoned mine. All of them are unlit except the last one. The ghost of your dead partner has lit the last stick of dynamite and now he wants to play a little game with you.

Instructions: Each of you take turns taking sticks of dynamite from the pile, up to 3 sticks in a turn. If you take the last stick, you'll be blown up and have to take your partner's place in the mine--forever.

Comments: If you lose and get stuck in the mine, the really bad news is that Howard Cosell spends every Wednesday and Thursday in the mine with you. We realize that is unfair to you, but then again, when we think of you--maybe it's unfair to Howard! Well, you two can discuss that every Wednesday and Thursday. Good luck with the ghost of your dead partner. By the way, why did you shoot him? Oh, you say he used to listen to Howard Cosell on the radio and TV all the time? And the jury let you off because it was justifiable homicide? How true, how true.

Space for User Notes:

LUNA C, T or L

Description: Better known as Luna: Crash, Take Off or Land. No package of games would be complete without a version of this old favorite. The primary object of Luna C, T or L is to land your space craft safely on the surface of the moon.

Instructions: Use your zero paddle to control your descent to the lunar surface. Turning the dial on your zero paddle controls the amount of fuel that is burned each time you push the button on your zero paddle. For more fuel to be burned each time, turn the dial counter clockwise; less fuel, turn clockwise.

Comments: Needless to say, the more fuel you burn, the greater the upward thrust. You may even propel yourself out of the gravitational field of the moon and then who knows where. We found that if the dials were set so we burned a relatively small amount of fuel each time we pushed our burn button, we could control the descent rate fairly well. And yes, it is possible to make a perfect landing.

Space for User Notes:

ALIEN

Description: You are on the spaceship NIMROD. You have a few minutes to break the code number that will open the weapons vault. And you want to do that because the only weapon that will safely destroy the alien is the antimatter laser rifle that is stored in the weapons vault.

The alien has killed the rest of the crew and is now searching for you. He wants you for your gourmet qualities.

Instructions: The secret code is made up of numbers from 1 to 9 in any order, none repeated. Mother, the ship's computer, will allow you to decide the number of digits (from 2 to 9) in the code. If the Alien gets you before you break the code or you want to give up (you coward), you can push the ESCAPE button on the keyboard to release cyanide gas into the ship which will stop the alien and the program, allowing you to try again or stop.

When you enter numbers (and press RETURN) to break the code, Mother, the ship's computer will respond in any combination of the following 3 ways: first--no response, which means that none of the numbers in your guess is in the code; second, "#" symbol--this means that one of your numbers is in the code, but in the wrong place; third, a flashing reversed "*" symbol--this means that one of your numbers is in the code and in the right place.

Comments: For all of you analytical geniuses, prescient persons, mind-readers and byte-bogglers out there--we know you'll never go over 10 attempts to break the code, but just for fun, you should enter some wrong guesses to see the comments that are waiting for you every once in a while. We could say something about pushing ESCAPE to escape the ALIEN via cyanide gas (a very final escape), but "wisdom" dictates otherwise--and for those of you out there asking where we got some wisdom to dictate to us, we offer this answer: you can call Dial-A-Wisdom at 937-3862 for the latest in up-to-the-minute wisdom. And now you ask, "Where, oh wise person, did the word "w-i-s-d-o-m" come from?" Well, our On-The-Spot Roving (and sometimes raving) Reporter turns in this scintillatingly scented story (that is to say--we think it may have a fishy smell--but in all fairness, we'll let you be the judge.)

Story: Origin of Wisdom

Dateline: Chicago, February 31, 1967.

(Funny--I thought a dateline was something like "Hey Baby, this is Mr. Available, whatcha doin' tonight?" --but, on with the story). There was a certain wise man from Europe that recent immigrants would go to for information about American customs, traditions, government red-tape, etc. As many "Schmexperts"* are, this schmexpert was very vain and had an over-blown ego (by the way as you may know, a schmexpert is a cross between a schmuck and an expert--but, on with the story). These poor, struggling immigrants soon realized that to get along with Mr. Schmexpert, they needed to feed his ego--so they would say things like: "We're dumb and you're so smart, please help us." But with their accents and rough English it came out: "We's dumb and you's smart, etc." This routine worked so well, they called it their "we's dumb" routine. As time passed, it came to be known that when you wanted some "wisdom" you were after some knowledge. So wisdom became equated with wise use of knowledge. In honor of this tradition the Dial-A-Wisdom phone number 937-3862, spells "We's Dumb". And the group that answers, calls themselves "wisdoms". And we think that it is just fine for them to call themselves "we's dumbs", don't you?

*Robert Ringer, "Looking Out for Number One"

Space for User Notes:

HI-RES TEXT WRITER

Description: Hi-Res Text Writer will allow you to quickly add words and numbers to your Hi-Res displays. The letters and numbers are already formed and put into a shape table.

Instructions: Select Hi-Res Text Writer from the Master Menu. HRTW will give you a quick sample of the letters and numbers. To display your desired words and numbers, type 3HR\$="your text" and press RETURN. For example, if your name is John Smith and you want to display the words, GRAPHICS BY JOHN SMITH, you should type 3HR\$="GRAPHICS BY JOHN SMITH" press RETURN. Type RUN and press RETURN. Your text will be displayed 3 times. Lines 4 and 5 in the program are GOSUB 60150 and cause your text to be displayed again. To display your text once only, simply type 4 and press RETURN then type 5 and press RETURN. To have several statements begin at the left you can type 3HR\$="statement one": GOSUB 60150 and press RETURN, 4HR\$="statement two": GOSUB 60150, etc.

The Shape Table order is as follows:

A thru Z is 1 to 26. The numbers run 1=27, 2=28, 3=29, 4=30, 5=31, 6=32, 7=33, 8=34, 9=35, 0=36. The punctuation is ?=37, !=38, and . (period)=39.

The lengths of the letters, numbers and symbols are as follows:

A18 B20 C14 D15 E22 F16 G17 H15 I14 J12 K20 L8 M18 N19
O14 P15 Q20 R18 S17 T10 U12 V11 W15 X16 Y12 Z14 ONE11
TWO14 THREE14 FOUR11 FIVE14 SIX14 SEVEN11 EIGHT17 NINE14
ZERO20 ?14 !6 .(Period)7

Space for User Notes:

MUSIC UTILITY

Description: Music Utility contains various sound effects. You can use them to add a little sparkle to your programs.

Instructions: By looking at the listing of the program you can see what routine produces what sound. To hear what a particular routine sounds like, get into Basic, type 0, the routine, press RETURN, type RUN, press RETURN and the routine will play. To include them in your program, simply type the appropriate line number and the routine.

Comments: Did Lawrence Welk start this way?

Space for User Notes:

SHAPE BUILDER

Description: Shape Builder will let you begin drawing shapes by simply using the I, J, K and M keys with the space bar to maneuver the cursor to draw your shape. With this program you can create elaborate patterns, figures, etc. in just a few minutes. And if you don't like the results, you can quickly redo it.

Enter the GREAT SHAPE CONTEST!! Everyone but Farah can enter. Send in your software registration card for more details. The prize is a box of ten Dysan disks for your Apple--a \$50.00 value!

Instructions: Select Shape Builder from the Master Menu.

To Begin Drawing your Shape, simply push the I, J, K, and M keys to get the direction of the cursor to up, left, right or down, then press the space bar to draw.

To CLEAR the Screen, press the "C" key and then respond "Y" to clear the screen and start over or "N" if you decide that you do not want to clear the screen.

To RESET The Beginning Coordinates (the default coordinates are at the center of the screen--139,79), simply press the "R" key, then Y/N, of course. You then specify your new coordinates in X,Y format. For example: Instead of the default coordinates of 139,79, you could specify 100,50 which would move your starting point up and to the left.

To Change From PLOT to NOPLOT (so that you can move the cursor without drawing) press the "X" key. CAUTION: Do not do more than two NOPLOT ups at a time. If you need to do more than two NOPLOT ups at a time, go up two, right one, left one, up two, right one, left one, etc. The "X" key functions as an on-off switch, i.e. you don't have to answer Y/N when you push X, it instantly changes you from PLOT to NOPLOT or from NOPLOT to PLOT.

To Form Your Shape, push the escape key, then enter the starting address, which, in Apple Barrel is 20004, then press RETURN. When it is through forming the shape at that address, it will also tell you the length of your shape. You may then save your shape to the disk (if you want to--you don't necessarily have to) by typing BSAVE title of your shape, A20004, L and the length of your shape.

To Run Your Shape, type BLOAD title of your shape. Type ROT=0, press RETURN. Type SCALE=1, press RETURN. Type HGR, press RETURN. Type HCOLOR=3, press RETURN. Then type DRAW 1 at 139,79, press RETURN. And your shape will appear in high-res. If your experience is similiar to most people's, you will be very surprised by what your shape looks like. You can experiment with the various factors, such as scale (SCALE) = 2 instead of 1. Or you might change the rotation(ROT) to 8 instead of 0, etc.

Comments: This program will be extremely helpful to users that have already worked with the Apple in building shapes. As you can see from the opening graphic displays at the beginning of Apple Barrel, we have used this program extensively. If you are brand new at shape building, then this will be an educational experience for you. Use the Apple manual and you should have a good time.

Your shape can be up to 500 vectors with a corresponding length factor of approximately 250. If you exceed that amount, you will get an error message that says "Bad Subscript Error in 700". When this happens, you should type RUN and press RETURN and start over. For larger shapes, try splitting the shape into two parts and recombine them in high-res, or rewrite the program to handle larger shapes.

Just a few more comments: (1) Your shapes will be wider in low-res than in hi-res. Our apples at the beginning of the Apple Barrel looked more like a strawberry when we first started.

(2) The point at which you begin your shape determines how it will be positioned on the screen. For example, with the letters A,B,E,L,R and P that we used to spell APPLE BARREL, the letters B, E, L, R and P were started in the upper leftmost part of the letter. Because it was so hard to predict how and where the "A" was going to end up, we started it in the bottom leftmost point. So to line up the letters in a row the

coordinates had to be different for the A. Otherwise we got results that looked something like this:

```
A
  PPLE
  A
B RREL
```

Which was not what we had in mind, so we adjusted the "Y" coordinate (as in X,Y) appropriately.

(3) To manipulate multiple shapes at the same time, you should set up your own shape index using the instructions in the Apple manual. This is a B.Y.O.S.I. program where multiple shapes are concerned. (B.Y.O.S.I. stands for Bring Your Own Shape Index).

Space for User Notes:

PLOT

Description: Plot will plot various math equations on the screen, quickly.

Instruction: For a quick demo, simply press RETURN in response to all questions.

For some interesting examples, use the following values for X & Y and press RETURN in response to "Would you like a Y axis?" and "Would you like an X axis?"

Y max = 1	Y min = -1	X min = +13500	X max = -13500
Y max = 1	Y min = -1	X min = -1000	X max = 1000
Y max = 1	Y min = -1	X min = -13456	X max = 13456
Y max = 1	Y min = -1	X min = -3765792	X max = 3765792

To Change Equations: Answer N to "Is this the function you want?" (Y/N) Then type 1000 and your equation, press RETURN. Try $Y = \cos(X^3)$ with values of 1, -1 for Y and 1, 10 for X. Try $1000 Y = \sin(2 * X) + \cos(X)$ with Y values of 2, -2 and X values of 10, -10. No axes in either case.

Comments: We were amazed at the beauty of some of the graphics that we tried. And how nice it would have been to have this program when I took Trigonometry. Let us know what you come up with.

Space for User Notes:

MENU UTILITY

Description: The program that runs the menu and fetches programs off the disk is called "Apple Barrel Software." If you Catalog the disk, you can see it listed. In fact, you'll see a very nicely formatted disk catalog.

Instruction: If you'll refer to the program listing of Apple Barrel Software, you can see that the program can easily be used for your own programs. Be sure you're studying the right listing. There is a different listing for disk and tape.

Comments:

Space for User Notes:

SCREEN PRINT

Description: Screen Print is a handy utility that you can append to a program of your own. Screen Print will print all text that is shown on the screen.

Instructions: Append Screen Print to your program. Insert a GOSUB Command at the places that you want, and your printer will print whatever is on the screen.

Comments: There are those times when programming or using the Apple when it would be handy to have a routine to dump the screen. That is how this program came into existence.

Space for User Notes:

PACIFIER

Description: Pacifier is a random graphics display generator.

Instructions: Push any key to start a new display. Press Control C to stop.

Comments: A great little continuous graphics demo.

Space for User Notes:

INVERSER

Description: Inverser is a routine that quickly reverses the entire screen. You saw a demo of this effect at the beginning of APPLE BARREL. This routine is not really one of the "25" programs, but we thought we'd include it.

Instructions: You can use Inverser by typing BLOAD INVERSER,A whatever address you want to put it at. Then call that address to use it.

Comments: Speaking of inverting, do you know what you get when you inverse Jimmy Carter?

Space for User Notes:

BIG LETTERS

Description: Big letters is exactly that. The letters that spell APPLE BARREL at the beginning of Apple Barrel came from this alphabet.

Instructions: You can look at the letters by running Shape Builder, get into Basic, then type BLOAD A (or B, C, etc.), then use the letter as you did your shape in Shape Builder--i.e. Scale=2, HCOLOR=3, ROT=0, HGR, DRAW 1 at 100,100. The length of the Big Letters is as follows:

A AC B E7 C222 D222 E D2 F201 G224 H250 I233 J212 K217 L B0
M221 N236 O197 P B2 Q130 R F0 S188 T173 U244 V194 W250
X211 Y191 Z223

In using the table you will notice that the length of some of the letters is designated in hex. Simply insert a \$, e.g. L\$AC, instead of L234.

Comments: Because of the differences of tape and disk, these letters are available on disk but not on tape. If you are a tape user and wish to have the Big Letters, you have our permission to save the letters from a disk unit onto your own tape.

Space for User Notes:

Program Modification

1. Load the program that you want to modify.
2. Remove the tape or disk from the tape player or disk drive.
3. To display the program listing on the screen, type LIST and press RETURN and it will scroll up the screen -- or -- simply refer to the listing printed in the manual.
4. To modify the program, simply type the number of the line that you want to change, type in the line as you want it to read. When you have finished changing lines, type RUN, press RETURN and the customized version of that program will be executed.

User Tips

1. If you are using the tape version, you'll probably find that it is much more convenient to save the programs that you use frequently onto short length cassettes.
2. To save your current balance with the programs Checkbook or Savings, you'll need to save the programs onto a separate tape.

Index of Program Listings

Mortgage Loan	28
Days Between Dates	31
Calendar	31
Addition, Subtraction, Multiplication, Division	32
Metric Conversion	35
Apple LeMans	37
Think	38
Mountain	41
Black Hole Chase	43
Demolition Derby	45
Tic-Tac-Toe	47
Checkbook	49
Savings	51
Alien	53
Luna C, T or L	56
Dynamite	59
Plot	62
Pacifier	63
Shape Builder	64
Music Utility	66
Screen Print	67
Hi-Res Text Writer	68
Menu Utility	69

1

APPLE SAUCE CAKE

```

0 A = PEEK (175) + PEEK (176) * 256 - 1475
10 POKE 233,A / 256
15 POKE 232,256 * (A / 256 - PEEK (233)) + .5
20 DATA 169,32,133
21 DATA 1,169,0
22 DATA 133,0,160
23 DATA 0,177,0
24 DATA 73,127,145
25 DATA 0,230,0
26 DATA 208,246,230
27 DATA 1,165,1
28 DATA 201,64,208
29 DATA 238,96
30 HGR
35 POKE 34,20: HOME : PRINT : PRINT " PRESS ANY KEY TO SKIP TO MENU"
40 FOR X = 0 TO 28: READ N: POKE 768 + X,N: NEXT
50 SCALE= 1
60 FOR X = 1 TO 65 STEP 8
70 HCOLOR= 5
80 ROT= X
90 DRAW 7 AT 279 / 4,159 / 4
95 GOSUB 60000
100 HCOLOR= 4
110 DRAW 7 AT 279 / 4,159 / 4
115 GOSUB 60000
120 NEXT
130 HCOLOR= 5
140 DRAW 7 AT 279 / 4,159 / 4
145 GOSUB 60000
150 FOR X = 1 TO 65 STEP 8
160 HCOLOR= 6
170 ROT= X
180 DRAW 7 AT 279 * 3 / 4,159 / 4
185 GOSUB 60000
190 HCOLOR= 4
200 DRAW 7 AT 279 * 3 / 4,159 / 4
210 NEXT
220 HCOLOR= 6: DRAW 7 AT 279 * 3 / 4,159 / 4
225 GOSUB 60000
230 FOR X = 1 TO 65 STEP 8
240 HCOLOR= 1
250 ROT= X
260 DRAW 7 AT 279 / 4,159 * 3 / 4
265 GOSUB 60000
270 HCOLOR= 0
280 DRAW 7 AT 279 / 4,159 * 3 / 4
285 GOSUB 60000
290 NEXT : HCOLOR= 1: DRAW 7 AT 279 / 4,159 * 3 / 4
295 GOSUB 60000
300 FOR X = 1 TO 65 STEP 8
310 ROT= X
320 HCOLOR= 2
330 DRAW 7 AT 279 * 3 / 4,159 * 3 / 4
335 GOSUB 60000
340 HCOLOR= 0
350 DRAW 7 AT 279 * 3 / 4,159 * 3 / 4
355 GOSUB 60000
360 NEXT : HCOLOR= 2: DRAW 7 AT 279 * 3 / 4,159 * 3 / 4
365 GOSUB 60000
370 HCOLOR= 3

```

THIS IS THE GRAPHICS
DISPLAY AT THE BEGINNING
OF APPLE BARREL BUSHEL#1.

```

375 GOSUB 60000
380 FOR X = 1 TO 65 STEP 8
390 ROT= X
400 HCOLOR= 3
410 DRAW 7 AT 139,79
415 GOSUB 60000
420 HCOLOR= 0
430 DRAW 7 AT 139,79
435 GOSUB 60000
440 NEXT : HCOLOR= 3: DRAW 7 AT 139,79
445 GOSUB 60000
450 SCALE= 140
460 ROT= 0
470 FOR X = 0 TO 159
480 XDRAW 8 AT 0,X
485 GOSUB 60000
490 XDRAW 8 AT 0,159 - X
495 GOSUB 60000
500 NEXT
510 HGR
520 SCALE= 2
530 ROT= 0
535 HCOLOR= 7
540 DRAW 1 AT 25,75
545 GOSUB 60000
550 DRAW 5 AT 75,16: DRAW 5 AT 119,16
555 GOSUB 60000
560 DRAW 4 AT 165,16
565 GOSUB 60000
570 DRAW 3 AT 219,16
575 HCOLOR= 3
580 DRAW 2 AT 3,86
585 GOSUB 60000
590 DRAW 1 AT 49,145
595 GOSUB 60000
600 DRAW 6 AT 93,87: DRAW 6 AT 143,87: DRAW 3 AT 193,87
605 GOSUB 60000
610 DRAW 4 AT 239,87
615 GOSUB 60000
620 FOR X = 1 TO 1000: NEXT
630 FOR X = 1 TO 10: CALL 768: NEXT
635 GOSUB 60000
640 HCOLOR= 0: DRAW 4 AT 239,87
650 FOR X = 1 TO 10: CALL 768: NEXT
655 GOSUB 60000
660 DRAW 3 AT 193,87
670 FOR X = 1 TO 10: CALL 768: NEXT
675 GOSUB 60000
680 DRAW 6 AT 143,87
690 FOR X = 1 TO 10: CALL 768: NEXT
695 GOSUB 60000
700 DRAW 6 AT 93,87
710 FOR X = 1 TO 10: CALL 768: NEXT
715 GOSUB 60000
720 DRAW 1 AT 49,145
730 FOR X = 1 TO 10: CALL 768: NEXT
735 GOSUB 60000
740 DRAW 2 AT 3,86
750 FOR X = 1 TO 10: CALL 768: NEXT
755 GOSUB 60000
760 DRAW 3 AT 219,16
770 FOR X = 1 TO 10: CALL 768: NEXT
775 GOSUB 60000

```

```

780 DRAW 4 AT 165,16
790 FOR X = 1 TO 10: CALL 768: NEXT
795 GOSUB 60000
800 DRAW 5 AT 119,16
810 FOR X = 1 TO 10: CALL 768: NEXT
815 GOSUB 60000
820 DRAW 5 AT 75,16
830 FOR X = 1 TO 10: CALL 768: NEXT
840 DRAW 1 AT 25,75
850 FOR X = 1 TO 10: CALL 768: NEXT
855 GOSUB 60000
856 RUN
860 PRINT : PRINT "RUN APPLE BARREL SOFTWARE": END
60000 IF PEEK (- 16384) < 128 THEN RETURN
60010 GET T$
60020 GOTO 860

```

```

]
]

```

BLOCK ONE PROGRAMS

```

1 DISK = (( PEEK (994) + PEEK (1001) = 192))
2 HI = PEEK (115) + PEEK (116) * 256
10 ONERR GOTO 20
20 TEXT : HOME
30 VTAB 5
40 HTAB 9: PRINT "APPLE BARREL SOFTWARE"
50 HTAB 9: PRINT "GOOD TO THE LAST BYTE"
60 PRINT : PRINT
70 HTAB 12: PRINT "BLOCK 1 PROGRAMS"
80 PRINT : PRINT
90 PRINT "      1. MORTGAGE LOAN"
100 PRINT
110 PRINT "      2. CALENDAR & DAYS BETWEEN DATES"
120 PRINT
130 PRINT "      3. STOP"
140 PRINT : PRINT
150 POKE 34, PEEK (37)
160 INPUT "ENTER BY NUMBER ";A$
170 A = VAL (A$): IF A < 1 OR A > 3 THEN HOME : GOTO 160
180 IF A = 3 THEN 60000
190 ON A GOSUB 210,1550
200 RUN
210 ONERR GOTO 220
215 POKE 222,200
216 GOTO 220
217 VTAB 24: PRINT "PRESS ANY KEY TO GO ON. ";; GET A$
220 TEXT : HOME
225 IF PEEK (222) < > 200 AND PEEK (222) < > 255 THEN PRINT "ERROR*
*DOES NOT COMPUTE": POKE 222,200
230 VTAB 5
240 HTAB 18: PRINT "MENU" (MORTGAGE LOAN)
250 PRINT : PRINT
260 HTAB 8: PRINT "1: COMPUTE INTEREST RATE"
270 PRINT
280 HTAB 8: PRINT "2: COMPUTE PAYMENT"
290 PRINT
300 HTAB 8: PRINT "3: COMPUTE NUMBER OF PAYMENTS"
310 PRINT
320 HTAB 8: PRINT "4: COMPUTE AMOUNT OF LOAN"
330 PRINT
340 HTAB 8: PRINT "5: STOP"
350 VTAB 18: POKE 34,17
360 INPUT "ENTER NUMBER, PLEASE ";N$

```

```

370 N = VAL (N$): IF N = 0 OR N > 5 THEN HOME : GOTO 360
380 IF N = 5 THEN RUN
390 ON N GOTO 410,700,900,1030
400 HOME : GOTO 360
410 TEXT : HOME
420 VTAB 2: HTAB 10: INVERSE : PRINT "COMPUTE INTEREST RATE": NORMAL
430 VTAB 8
440 POKE 34,7
450 GOSUB 1380
460 POKE 34,8
470 GOSUB 1430
480 N = N * N1
490 POKE 34,9
500 GOSUB 1260
510 POKE 34,10
520 GOSUB 1320
530 GOSUB 580
540 PRINT : PRINT
550 F = I * 1000: PRINT "PERCENTAGE RATE= " : GOSUB 1480: PRINT "%"
560 F = I * 1200: PRINT "ANNUAL PERCENTAGE RATE= " : GOSUB 1480: PRINT "%"
"
570 GOTO 217
580 UT = PV / PMT
590 I = 1 / UT - UT / N ^ 2
600 U1 = UT * I
610 U2 = (1 + I) ^ - N
620 U3 = 1 - U2
630 U4 = U1 - U3
640 U5 = (((N / (1 / I + 1) + 1) * U2) - 1) / I
650 U6 = U4 / U5
660 I = I + U6
670 U7 = ABS (U6)
680 IF .000001 < U7 THEN 600
690 RETURN
700 TEXT : HOME : VTAB 2
710 INVERSE : HTAB 13: PRINT "COMPUTE PAYMENT": NORMAL
720 VTAB 8: POKE 34,7
730 GOSUB 1200
740 POKE 34,8
750 GOSUB 1260
760 POKE 34,9
770 GOSUB 1430
780 POKE 34,10
790 GOSUB 1380
800 PRINT : PRINT
810 N = N * N1
820 I = I / 1200
830 I1 = I + 1
840 PMT = PV * (I / (1 - I1 ^ - N))
850 PRINT "PAYMENT AMOUNT: $":F = PM: GOSUB 1480: PRINT
852 PRINT "AMOUNT ACTUALLY PAID: $":F = PM * N: GOSUB 1480: PRINT
854 PRINT "AMOUNT OF INTEREST PAID: $":F = F - PV: GOSUB 1480: PRINT
860 GOTO 217
870 F = I * 100: PRINT "DO YOU MEAN " : GOSUB 1480: PRINT "% (Y/N)? " : INPUT
"";N$
880 IF LEFT$ (N$,1) = "N" THEN 870
890 I = I * 100: RETURN
900 TEXT : HOME : VTAB 2
910 INVERSE : HTAB 7: PRINT "COMPUTE NUMBER OF PAYMENTS": NORMAL : VTAB
8
920 POKE 34,7
930 GOSUB 1200
940 POKE 34,8

```

```

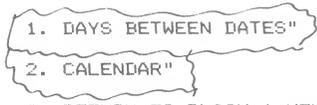
950 GOSUB 1260
960 POKE 34,9
970 GOSUB 1320
980 PRINT : PRINT : PRINT
990 I = I / 1200
1000 N = - (( LOG (1 - I * PV / PMT) / LOG (1 + I)))
1010 PRINT "NUMBER OF PAYMENTS: " ; F = N: GOSUB 1480: PRINT
1020 GOTO 217
1030 TEXT : HOME : VTAB 2
1040 INVERSE : HTAB 10: PRINT "COMPUTE AMOUNT OF LOAN": NORMAL
1050 VTAB 8: POKE 34,7
1060 GOSUB 1200
1070 POKE 34,8
1080 GOSUB 1320
1090 POKE 34,9
1100 GOSUB 1380
1110 POKE 34,10
1120 GOSUB 1430
1130 PRINT : PRINT : PRINT
1140 N = N * N1
1150 I = I / 1200
1160 PV = PMT * ((1 - (1 + I) ^ - N) / I)
1165 F = PMT * N: PRINT "AMOUNT ACTUALLY PAID: $" ; : GOSUB 1480: PRINT : REM
      GROAN
1167 F = F - PV: PRINT "AMOUNT OF INTEREST PAID: $" ; : GOSUB 1480: PRINT
1170 F = PV: PRINT "AMOUNT OF LOAN: $" ; : GOSUB 1480: PRINT
1180 GOTO 217
1190 END
1200 REM ENTER INTEREST RATE
1210 INPUT "ENTER INTEREST RATE ";N$
1220 I = VAL (N$): IF I < = 0 THEN HOME : GOTO 1210
1230 IF I < 1 THEN GOSUB 870
1240 HOME : PRINT "INTEREST RATE: " ; F = I: GOSUB 1480: PRINT "%"
1250 RETURN
1260 REM AMOUNT OF LOAN
1270 INPUT "ENTER AMOUNT OF LOAN ";N$
1280 IF LEFT$ (N$,1) = "$" THEN N$ = MID$ (N$,2)
1290 PV = VAL (N$): IF PV < = 0 THEN HOME : GOTO 1270
1300 HOME : PRINT "AMOUNT OF LOAN: $" ; F = PV: GOSUB 1480: PRINT
1310 RETURN
1320 REM ENTER AMOUNT OF PAYMENT
1330 INPUT "ENTER AMOUNT OF PAYMENT ";N$
1340 IF LEFT$ (N$,1) = "$" THEN N$ = MID$ (N$,2)
1350 PM = VAL (N$): IF PM < = 0 THEN HOME : GOTO 1330
1360 HOME : F = PM: PRINT "PAYMENT AMOUNT: $" ; : GOSUB 1480: PRINT
1370 RETURN
1380 REM INPUT NUMBER OF PAYMENTS PER YEAR
1390 INPUT "ENTER NUMBER OF PAYMENTS PER YEAR ";N$
1400 N = VAL (N$): IF N < 1 THEN HOME : GOTO 1390
1410 HOME : PRINT "NUMBER OF PAYMENTS PER YEAR: " N
1420 RETURN
1430 INPUT "ENTER NUMBER OF YEARS ";N$
1440 N1 = VAL (N$): IF N1 < = 0 THEN HOME : GOTO 1430
1450 HOME : PRINT "NUMBER OF YEARS: " N1
1460 RETURN
1470 END
1480 F1 = F * 100 + .5:F1 = INT (F1)
1490 F1$ = STR$ ( ABS (F1))
1500 IF F1 = 0 THEN F1$ = "000": GOTO 1530
1510 IF F1 < 0 THEN F1$ = "-" + F1$: GOTO 1530
1520 IF F1 < 100 THEN F1$ = "0" + F1$
1530 PRINT LEFT$ (F1$, LEN (F1$) - 2) "." RIGHT$ (F1$,2);
1540 RETURN

```

```

1550 ONERR GOTO 2410
1560 DATA SATURDAY, SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY
1570 DIM WE$(6)
1580 FOR X = 0 TO 6: READ WE$(X): NEXT
1590 REM DAY BETWEEN DATE, DAY OF WEEK
1600 REM
1610 REM
1620 REM
1630 REM
1640 REM COMPUTER DATA SYSTEMS
1650 REM 550 NORTH MAIN STREET
1660 REM LOGAN, UTAH 84321
1670 REM COPYRIGHT AUGUST
1680 REM 1979, CDS CORP.
1690 REM
1700 REM ALL RIGHTS RESERVED
1710 REM
1720 DEF FN F1(X) = 365 * YR + DA + 31 * (MO - 1) + INT ((YR - 1) / 4)
- INT (.75 * ( INT ((YR - 1) / 100) + 1)))
1730 REM DEFINE FUNCTION FOR JAN, FEB
1740 DEF FN F2(X) = 365 * YR + DA + 31 * (MO - 1) - INT (.4 * MO + 2.3
) + INT (YR / 4) - INT (.75 * ( INT (YR / 100) + 1))
1750 REM FOR REST OF YR
1760 REM
1770 REM
1780 TEXT : HOME
1790 GOTO 1820
1800 VTAB 24: PRINT "PRESS ANY KEY TO GO ON. " : GET A$
1810 HOME
1820 TEXT : VTAB 2
1830 PRINT "THESE PROGRAMS CALCULATE THE DAY OF THE"
1840 PRINT "WEEK OR NUMBER OF DAYS BETWEEN"
1850 PRINT "DATES AFTER 1582."
1860 PRINT "SAMPLE DATE ENTRY: 2,5,1961"
1870 PRINT
1880 PRINT
1890 PRINT
1900 PRINT "
1910 PRINT "
1920 PRINT "
1930 PRINT "
1940 PRINT "
1950 VTAB 16
1960 PRINT "ENTER OPTION NUMBER, PLEASE " : CALL - 958
1970 POKE 34,15
1980 INPUT "":A$: IF LEN (A$) > 1 THEN 1950
1990 N = VAL (A$): IF N < 1 OR N > 3 THEN 1950
2000 ON N GOTO 2010,2260,2420
2010 REM DAYS BETWEEN DATES
2020 VTAB 9
2030 PRINT " 1. ";
2040 INVERSE
2050 PRINT "DAYS BETWEEN DATES": NORMAL
2060 POKE 34,17: HOME
2070 MS$ = "ENTER FIRST DATE, PLEASE " : GOSUB 2450
2080 HOME
2090 PRINT "FIRST DATE: ";
2100 HTAB 15: PRINT MO", "DA", "YR
2110 IF MO < 3 THEN D1 = FN F1(X)
2120 IF MO > 2 THEN D1 = FN F2(X)
2130 POKE 34,18: HOME
2140 PRINT
2150 MS$ = "ENTER SECOND DATE, PLEASE " : GOSUB 2450

```



```

2160 IF MO < 3 THEN D2 = FN F1(X)
2170 IF MO > 12 THEN D2 = FN F2(X)
2180 HOME
2190 PRINT "SECOND DATE:";
2200 HTAB 15: PRINT MO","DA","YR
2210 PRINT
2220 PRINT "NUMBER OF DAYS BETWEEN DATES: " ABS (D2 - D1)
2230 VTAB 24: PRINT "PRESS ANY KEY TO GO ON. ";; GET A$
2240 HTAB 1
2250 GOTO 1820
2260 REM COMPUTE DAY OF WEEK
2270 VTAB 11
2280 PRINT "    2. ";
2290 INVERSE : PRINT "CALENDAR": NORMAL
2300 POKE 34,17: HOME
2310 MS$ = "ENTER DATE PLEASE ": GOSUB 2450
2320 IF MO < 3 THEN D1 = FN F1(X)
2330 IF MO > 12 THEN D1 = FN F2(X)
2340 HOME
2350 PRINT MO","DA","YR": ";
2360 DN = D1 + ( INT ( - D1 / 7 ) * 7 )
2370 DN = 7 * (D1 / 7 - INT (D1 / 7)) + .5
2380 PRINT WE$(DN).";
2390 VTAB 24: PRINT "PRESS ANY KEY TO GO ON. ";; GET A$: HTAB 1
2400 GOTO 1820
2410 IF PEEK (222) < > 255 THEN PRINT "REENTER DATE, PLEASE": RESUME

2420 RUN
2430 HTAB 20 - ( LEN (C$)) / 2: PRINT C$
2440 GOTO 210
2450 PRINT MS$;: INPUT ";;MO,DA,YR
2460 IF MO < 1 OR MO > 12 THEN PRINT "MONTH OUT OF RANGE": GOTO 2450
2470 IF DA < 1 OR DA > 31 THEN PRINT "DAY OUT OF RANGE": GOTO 2450
2480 IF YR < 100 THEN PRINT "ENTER THE FULL YEAR PLEASE": PRINT "EXAMPL
E: 2,5,1961": GOTO 2450
2490 IF YR < 1582 THEN PRINT "YEAR OUT OF RANGE": GOTO 2450
2500 RETURN
2510 REM
2520 REM
2530 REM THIS DOES NOT MEAN THAT YOUR
2540 REM POCKET CALCULATOR WILL DO AS
2550 REM MUCH AS YOUR APPLE."""""""""""
2560 REM
2570 REM

```

```
60000 HIMEM: HI
60010 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
```

```
]
]
```

```
20 TEXT : HOME
30 GOSUB 1330 (ADD, SUB, MULT, DIV)
40 DATA 12,255,3,255,10,255,3,255,8,170,7,85,8,170,10,85,8,255,7,255,0,
  0
50 READ N,L
64. DIVISION"
240 PRINT
250 PRINT "      5. METRIC CONVERSION"
260 PRINT
270 PRINT "      6. STOP"
280 PRINT : PRINT
290 POKE 34, PEEK (37)
300 HOME : INPUT "ENTER BY NUMBER ";A$
310 A = VAL (A$): IF A = 0 OR A > 6 THEN 300
320 L = 10:N = 4: GOSUB 1430
324 TEXT
330 IF A = 6 THEN 1270
340 HOME : PRINT "TYPE STOP TO RETURN TO THE MENU"
350 POKE 34,1: REM SET TOP OF PAGE
355 POKE 35,17
360 ON A GOTO 370,580,790,1010,1610
370 REM ++++++
380 PRINT : PRINT : PRINT
390 REM SET INITIAL LEVEL
400 L1 = 10:L2 = 10
410 C = 0:C1 = 0: REM SET COUNTER
420 A1 = INT ( RND (1) * L1):A2 = INT ( RND (1) * L2)
430 PRINT A1" + "A2" =";
440 INPUT A$
450 IF A$ = "STOP" THEN 120
460 S = VAL (A$): IF S = A1 + A2 THEN 510
470 GOSUB 1290
```

```

480 PRINT "";
490 PRINT A1" + "A2" =";: FLASH : PRINT A1 + A2: NORMAL : PRINT :C = 0
500 GOTO 420
510 GOSUB 1380: GOSUB 1380: GOSUB 1380
520 PRINT "RIGHT!!!!!!!!!!!!!!"
530 PRINT
540 C = C + 1: IF C < R THEN 420
550 REM DO NEXT LEVEL!!!!
560 C1 = C1 + 1
570 L1 = L1 + C1 * 10:L2 = L1:C = 0: GOTO 420
580 REM -----
590 PRINT : PRINT : PRINT
600 L1 = 10:L2 = 10
610 C = 0:C1 = 0
620 A1 = INT ( RND (1) * L1)
630 A2 = INT ( RND (1) * (A1 + 1)): REM THIS AVOIDES NEGATIVE NUMBERS
640 PRINT
650 PRINT A1" - "A2" =";
660 INPUT A$
670 IF A$ = "STOP" THEN 120
680 A = VAL (A$)
690 IF A = A1 - A2 THEN 740
700 GOSUB 1290
710 PRINT "";
720 PRINT A1" - "A2" =";: FLASH : PRINT A1 - A2: NORMAL :C = 0
730 GOTO 620
740 GOSUB 1380: GOSUB 1380: GOSUB 1380
750 PRINT "RIGHT!!!!!!!!!!!!!!"
760 C = C + 1: IF C < R THEN 620
770 C = 0:C1 = C1 + 1
780 L1 = L1 + 5 * C1: GOTO 620
790 REM *****
800 PRINT : PRINT : PRINT
810 L1 = 10:L2 = 10
820 C = 0:C1 = 0
830 A1 = INT ( RND (1) * L1)
840 A2 = INT ( RND (1) * L2)
850 PRINT
860 PRINT A1" * "A2" =";
870 INPUT A$
880 IF A$ = "STOP" THEN 120
890 A = VAL (A$)
900 IF A = A1 * A2 THEN 950
910 GOSUB 1290
920 PRINT "";
930 PRINT A1" X "A2" =";: FLASH : PRINT A1 * A2: NORMAL :C = 0
940 GOTO 830
950 GOSUB 1380: GOSUB 1380: GOSUB 1380
960 PRINT "RIGHT!!!!!!!!!!!!!!"
970 C = C + 1: IF C < R THEN 830
980 C = 0:C1 = C1 + 1
990 IF L1 = L2 THEN L1 = L1 * 10: GOTO 830
1000 L2 = L2 * 10: GOTO 830
1010 REM //////////////////////////////////////
1020 PRINT : PRINT : PRINT
1030 L1 = 10:L2 = 10
1040 C = 0:C1 = 0
1050 A1 = INT ( RND (1) * L1)
1060 A2 = INT ( RND (1) * L2)
1070 IF A2 = 0 THEN 1060: REM THIS AVOIDS A RATHER STICKY SITUATION
1080 P = A1 * A2
1090 PRINT
1100 PRINT P" / "A2" =";

```

```

1110 INPUT A$
1120 IF A$ = "STOP" THEN 120
1130 A = VAL (A$): IF A = A1 THEN 1190
1140 GOSUB 1290
1150 PRINT ""
1160 PRINT P / "A2" ="; FLASH : PRINT A1: NORMAL
1170 C = 0
1180 GOTO 1050
1190 GOSUB 1380: GOSUB 1380: GOSUB 1380
1200 PRINT "RIGHT!!!!!!!!!!!!!"
1210 C = C + 1: C1 = C1 + 1
1220 IF C < R THEN 1050
1230 C = 0
1240 IF L1 = L2 THEN L1 = L1 * 10: GOTO 1050
1250 L2 = L2 * 10: GOTO 1050
1260 END
1270 HIMEM: HI
1275 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
1280 END
1290 REM RASBERRY
1300 FOR T = 1 TO 50: D = PEEK ( - 16336): NEXT
1310 RETURN
1320 END
1330 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208
: POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
1340 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166:
POKE 785,0: POKE 786,76: POKE 787,3: POKE 788,3:
1350 CC = 2 ^ (1 / 12)
1360 POKE 789,96:
1370 RETURN
1380 REM RANDOM "BLIP"
1390 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
1400 RETURN
1410 REM SCALE NOTE PLAYER
1420 REM ASSUMES N=114 AS A=440
1430 ON N GOTO 1440,1450,1460,1470,1480,1490,1500,1510,1520,1530,1540,15
50,1560
1440 POKE 0,192: GOTO 1600
1450 POKE 0,181: GOTO 1600
1460 POKE 0,171: GOTO 1600
1470 POKE 0,162: GOTO 1600
1480 POKE 0,153: GOTO 1600
1490 POKE 0,144: GOTO 1600
1500 POKE 0,136: GOTO 1600
1510 POKE 0,128: GOTO 1600
1520 POKE 0,121: GOTO 1600
1530 POKE 0,114: GOTO 1600
1540 POKE 0,107: GOTO 1600
1550 POKE 0,101: GOTO 1600
1560 POKE 0,96: GOTO 1600
1570 REM PLAY SCALE
1580 FOR N = 1 TO 13: GOSUB 1430: NEXT
1590 RETURN
1600 POKE 1,L: CALL 771: RETURN
1610 TEXT : HOME
1620 PRINT
1630 HTAB 11: PRINT "METRIC CONVERSION"
1640 PRINT
1650 PRINT "YOU MAY CONVERT:"
1660 PRINT
1670 PRINT "1. CENTIMETERS TO INCHES"
1680 PRINT "2. INCHES TO CENTIMETERS"
1690 PRINT "3. METERS TO FEET"

```

```

1700 PRINT "4. FEET TO METERS"
1710 PRINT "5. KILOMETERS TO MILES"
1720 PRINT "6. MILES TO KILOMETERS"
1730 PRINT "7. DEGREES (C) TO DEGREES (F)"
1740 PRINT "8. DEGREES (F) TO DEGREES (C)"
1750 PRINT "9. LITERS TO OUNCES"
1760 PRINT "10. OUNCES TO LITERS"
1770 PRINT "11. LITERS TO GALLONS"
1780 PRINT "12. GALLONS TO LITERS"
1790 PRINT "13. KILOGRAMS TO POUNDS"
1800 PRINT "14. POUNDS TO KILOGRAMS"
1810 PRINT "15. RETURN TO MENU"
1820 PRINT : POKE 34, PEEK (37)
1830 ONERR GOTO 2330
1840 INPUT "ENTER BY NUMBER ";A$
1850 POKE 216,0
1860 IF A$ = "" THEN HOME : GOTO 1840
1870 A = VAL (A$): IF A < 1 OR A > 15 THEN HOME : GOTO 1840
1880 IF A = 15 THEN 120
1890 TEXT : HOME
1900 VTAB 12: POKE 34, PEEK (37): HOME
1910 ON A GOTO 1920,1960,1980,2000,2030,2060,2090,2120,2150,2180,2210,22
40,2270,2300
1920 INPUT "ENTER NUMBER OF CENTIMETERS ";A
1930 PRINT A" CENTIMETERS = "A / 2.54" INCHES"
1940 VTAB 24: PRINT "PRESS SPACE TO GO ON. "": GET A$
1950 RUN 1610
1960 INPUT "ENTER NUMBER OF INCHES ";A
1970 PRINT A" INCHES = "A * 2.54" CENTIMETERS": GOTO 1940
1980 INPUT "ENTER NUMBER OF METERS ";A
1990 PRINT A" METERS = "A / .3048" FEET": GOTO 1940
2000 INPUT "ENTER NUMBER OF FEET ";A
2010 PRINT A" FEET = "A * .3048" METERS"
2020 GOTO 1940
2030 INPUT "ENTER NUMBER OF KILOMETERS ";A
2040 PRINT A" KILOMETERS = "A / 1.609344" MILES"
2050 GOTO 1940
2060 INPUT "ENTER NUMBER OF MILES ";A
2070 PRINT A" MILES = "A * 1.609344" KILOMETERS"
2080 GOTO 1940
2090 INPUT "ENTER DEGREES (C) ";A
2100 PRINT A" DEGREES (C) = "9 * A / 5 + 32" DEGREES (F)"
2110 GOTO 1940
2120 INPUT "ENTER DEGREES (F) ";A
2130 PRINT A" DEGREES (F) = "5 / 9 * (A - 32)" DEGREES (C)"
2140 GOTO 1940
2150 INPUT "ENTER NUMBER OF LITERS ";A
2160 PRINT A" LITERS = "A / .0295737296" OUNCES"
2170 GOTO 1940
2180 INPUT "ENTER NUMBER OF OUNCES ";A
2190 PRINT A" OUNCES = "A * .0295737296" LITERS"
2200 GOTO 1940
2210 INPUT "ENTER NUMBER OF LITERS ";A
2220 PRINT A" LITERS = "A / 3.785411784" GALLONS"
2230 GOTO 1940
2240 INPUT "ENTER NUMBER OF GALLONS ";A
2250 PRINT A" GALLONS = "A * 3.785411784" LITERS"
2260 GOTO 1940
2270 INPUT "ENTER NUMBER OF KILOGRAMS ";A
2280 PRINT A" KILOGRAMS = "A / .45359237" POUNDS"
2290 GOTO 1940
2300 INPUT "ENTER NUMBER OF POUNDS ";A
2310 PRINT A" POUNDS = "A * .45359237" KILOGRAMS"

```

```

2320 GOTO 1940
2330 TEXT : HOME : VTAB 12: END

]
]

1 HI = PEEK (115) + PEEK (116) * 256
2 DISK = ( PEEK (994) + PEEK (1001)) = 192
10 TEXT : HOME
14 VTAB 5
20 HTAB 9: PRINT "APPLE BARREL SOFTWARE"
30 HTAB 9: PRINT "GOOD TO THE LAST BYTE"
35 PRINT
37 POKE 216,0
40 HTAB 12: PRINT "BLOCK 3 PROGRAMS"
50 PRINT : PRINT : PRINT
60 PRINT "      1. APPLE LEMANS"
70 PRINT "      2. THINK"
80 PRINT "      3. MOUNTAIN"
90 PRINT "      4. STOP"
100 PRINT : PRINT : PRINT
110 POKE 34, PEEK (37)
120 INPUT "ENTER BY NUMBER ";A$
130 IF A$ = "" THEN HOME : GOTO 120
140 I = VAL (A$)
150 IF I < 1 OR I > 4 THEN HOME : GOTO 120
160 ON I GOTO 1000,1790,3320
170 HIMEM: HI
180 IF DISK THEN PRINT : PRINT "RUN APPLE BARREL SOFTWARE"
190 TEXT : HOME : VTAB 12: END
1000 IF INT ( PEEK (804) / 2) = PEEK (805) THEN 1020
1010 POKE 803,0: POKE 804,0: POKE 805,0
1020 TEXT : HOME : VTAB 5
1030 PRINT "APPLE LEMANS CAN BE AS HARD AS THE REAL"
1040 PRINT "RACE OR AS EASY AS A SUNDAY AFTERNOON"
1050 PRINT "DRIVE."
1060 PRINT
1070 PRINT "TURN THE DIAL ON PDL (0) LIKE THE"
1080 PRINT "STEERING WHEEL ON YOUR CAR. TURN"
1090 PRINT "PDL (1) TO CONTROL THE SPEED OF THE"
1100 PRINT "CAR."
1110 PRINT
1120 PRINT "TO START THE RACE, LINE UP YOUR CAR (+)"
1130 PRINT "WITH THE FLASHING LIGHT SYMBOL."
1140 PRINT
1150 VTAB 24: PRINT "PRESS SPACE TO GO ON. ";; GET A$
1160 TEXT : HOME
1170 HTAB 14: PRINT "*****"
1180 HTAB 14: PRINT "X           X"
1190 HTAB 14: PRINT "X STARTING X"
1200 L = INT ( PDL (1) / 255 * 7) + 5 + INT ( RND (1) * 3)
1210 HTAB 14: PRINT "X   AREA   X"
1220 HTAB 14: PRINT "X           X"
1230 HTAB 14: PRINT "X   TURN   X"
1240 HTAB 14: PRINT "X   YOUR   X"
1250 HTAB 14: PRINT "X PADDLE X"
1260 HTAB 14: PRINT "X   TILL   X"
1270 HTAB 14: PRINT "X   BELL   X"
1280 HTAB 14: PRINT "X RINGS. X"
1290 HTAB 14: PRINT "X           X"
1300 HTAB 14: PRINT "X*****X"
1310 FLASH
1320 M = 0

```

APPLE LEMANS

```

1330 HTAB 39 / 2: PRINT " ": NORMAL
1340 REM LOOP TIL START (YES, I DO KNOW THAT "TILL" IS NOT CORRECT)
1350 E = INT ( PDL (0) * 38 / 255 + 1)
1360 IF E = 19 THEN 1410
1370 HTAB E: PRINT "+";
1380 IF INT ( PDL (0) * 38 / 255 + 1) = E THEN 1380
1390 HTAB E: PRINT " ";
1400 GOTO 1350
1410 PRINT CHR$( 7);
1420 HTAB 19: FLASH : PRINT "+";
1430 NORMAL
1440 HTAB 14: PRINT "X";: HTAB 25: PRINT "X"
1450 REM SELECT INITIAL DIRECTION,LENGTH
1460 P = 14:C = 19
1470 XD = 0
1480 L = 10: REM BEYOND THIS YOU HAVE NO PROMISE
1490 REM TOP OF LOOP
1500 FOR X = 1 TO L
1510 HTAB P: PRINT "X" X";
1520 M = M + 1
1530 FOR T = 0 TO PDL (1): NEXT
1540 C = C + INT ((( PDL (0) / 255 * 40 + 1) - 19) / 7)
1550 IF C < = P OR C > = P + 11 THEN 1670
1560 HTAB C: FLASH : PRINT "+": NORMAL
1570 P = P + XD
1580 IF P < 1 THEN P = 1
1590 IF P > 28 THEN P = 28
1600 NEXT
1610 IF ABS (XD) = 1 THEN XD = 0: GOTO 1650
1620 XD = INT ( RND (1) * 3 + 1) - 2
1630 IF P = 1 AND X < = 0 AND RND (1) < .5 THEN 1620
1640 IF P = 28 AND X > = 0 AND RND (1) < .5 THEN 1620
1650 L = INT ( PDL (1) / 255 * 7) + 5
1660 GOTO 1490
1670 PRINT : PRINT "CRASH"
1680 PRINT "YOUR SCORE: "M
1690 HS = PEEK (803) + PEEK (804) * 256
1700 PRINT "HIGH SCORE: "HS
1710 IF HS < M THEN 1750
1720 INPUT "DO YOU WANT TO TRY AGAIN? (Y/N) ";A$
1730 IF LEFT$( A$,1) = "Y" THEN 1160
1740 RUN
1750 H1 = M / 256
1760 H2 = (H1 - INT (H1)) * 256 + .5
1770 POKE 803,H2: POKE 804,H1: POKE 805,H1 / 2
1780 GOTO 1720
1790 TEXT : HOME
1800 VTAB 5
1810 PRINT "THINK IS A MEMORY TEST PROGRAM (YOURS."
1820 PRINT "NOT THE APPLE'S). THE APPLE WILL PLAY"
1830 PRINT "AND LIGHT UP NUMBERED RECTANGLES AT THE"
1840 PRINT "SAME TIME. YOU REPEAT BACK THE SAME"
1850 PRINT "SEQUENCE USING THE NUMBERS ON THE APPLE"
1860 PRINT "KEYBOARD."
1870 PRINT
1880 PRINT "YOU CAN VARY THE LENGTH OF THE TONES"
1890 PRINT "PLAYED BY SETTING YOUR SPEED FROM 1 TO"
1900 PRINT "255, 1 IS THE FASTEST, 255 IS THE SLOW--"
1910 PRINT "EST. TRY 150 TO START."
1920 IF INT ( PEEK (801) / 2) = PEEK (802) THEN 1940
1930 POKE 800,0: POKE 801,0: POKE 802,0
1940 PRINT : PRINT
1945 DIM A(40): REM IF YOU CAN REMEMBER MORE THAN THIS---

```

```

1950 HTAB 5: INPUT "SPEED? ":L
1960 IF L < 1 OR L > 255 THEN PRINT "1 TO 255, PLEASE": GOTO 1950
1970 GOSUB 2920
1990 GR : COLOR= 11
2000 HLIN 0,7 AT 7
2010 VLIN 7,20 AT 3
2020 VLIN 7,20 AT 4
2030 COLOR= 13
2040 VLIN 7,20 AT 9
2050 VLIN 7,20 AT 10
2060 VLIN 7,20 AT 15
2070 VLIN 7,20 AT 14
2080 HLIN 9,15 AT 13
2090 COLOR= 14
2100 HLIN 17,23 AT 7
2110 HLIN 17,23 AT 20
2120 VLIN 7,20 AT 20
2130 COLOR= 6
2140 VLIN 7,20 AT 25
2150 VLIN 7,20 AT 31
2160 PLOT 26,9
2170 PLOT 26,10
2180 PLOT 27,11
2190 PLOT 27,12
2200 PLOT 28,13
2210 PLOT 28,14
2220 PLOT 29,15
2230 PLOT 29,16
2240 PLOT 30,17
2250 PLOT 30,18
2260 COLOR= 15
2270 VLIN 7,20 AT 33
2280 PLOT 34,13
2290 PLOT 35,12: PLOT 35,14
2300 PLOT 35,11: PLOT 35,15
2310 PLOT 36,11: PLOT 36,15
2320 PLOT 36,10: PLOT 36,16
2330 PLOT 37,10: PLOT 37,16
2340 PLOT 37,9: PLOT 37,17
2350 PLOT 38,9: PLOT 38,17
2360 PLOT 38,8: PLOT 38,18
2370 PLOT 39,8: PLOT 39,18
2380 PLOT 39,7: PLOT 39,19
2390 PLOT 39,20
2400 COLOR= 5
2410 HLIN 2,6 AT 39
2420 HLIN 8,12 AT 39
2430 HLIN 14,18 AT 39
2440 HLIN 20,24 AT 39
2450 HLIN 26,30 AT 39
2460 HLIN 32,36 AT 39
2470 HOME
2480 FOR X = 1 TO 6
2490 HTAB 5 + (X - 1) * 6: PRINT X:
2500 NEXT
2510 PRINT
2520 FOR X = 1 TO 40
2530 A(X) = INT ( RND (1) * 6) + 1
2540 NEXT
2550 ST = 0
2560 SC = 0
2570 VTAB 23: PRINT "STRIKES="ST: HTAB 20: PRINT "SCORE="SC
2580 FOR X = 1 TO SC + 1

```

```

2590 POKE - 16368,0
2600 C = A(X)
2610 GOSUB 2790
2620 NEXT
2630 REM YOUR TURN
2640 FOR X = 1 TO SC + 1
2650 VTAB 24: HTAB 1: GET A#
2655 IF A# = "" THEN RUN
2660 A = VAL (A#): IF A = 0 OR A > 6 THEN 2650
2670 IF A < > A(X) THEN 2740
2680 C = A: GOSUB 2790
2690 NEXT
2700 PRINT "": FOR T = 1 TO 1000: NEXT
2710 SC = SC + 1
2720 IF SC > 40 THEN PRINT "PERFECT!": GOTO 3250
2730 GOTO 2570
2740 GOSUB 2880
2750 ST = ST + 1
2760 FOR T = 1 TO 1000: NEXT
2770 IF ST < 3 THEN 2570
2780 GOTO 3200
2790 REM BEEP AND SHOW
2800 COLOR= 12
2810 C1 = 2 + 6 * (C - 1)
2820 HLIN C1,C1 + 4 AT 39
2830 N = C * 2 - (C > 4)
2840 GOSUB 3020
2850 COLOR= 5: HLIN C1,C1 + 4 AT 39
2860 RETURN
2870 GOTO 2870
2880 REM RASBERRY
2890 FOR T = 1 TO 50:D = PEEK ( - 16336): NEXT
2900 RETURN
2910 END
2920 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208
: POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
2930 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166:
POKE 785,0: POKE 786,76: POKE 787,3: POKE 788,3:
2940 CC = 2 ^ (1 / 12)
2950 POKE 789,96:
2960 RETURN
2970 REM RANDOM "BLIP"
2980 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
2990 RETURN
3000 REM SCALE NOTE PLAYER
3010 REM ASSUMES N=114 AS A=440
3020 ON N GOTO 3030,3040,3050,3060,3070,3080,3090,3100,3110,3120,3130,31
40,3150
3030 POKE 0,192: GOTO 3190
3040 POKE 0,181: GOTO 3190
3050 POKE 0,171: GOTO 3190
3060 POKE 0,162: GOTO 3190
3070 POKE 0,153: GOTO 3190
3080 POKE 0,144: GOTO 3190
3090 POKE 0,136: GOTO 3190
3100 POKE 0,128: GOTO 3190
3110 POKE 0,121: GOTO 3190
3120 POKE 0,114: GOTO 3190
3130 POKE 0,107: GOTO 3190
3140 POKE 0,101: GOTO 3190
3150 POKE 0,96: GOTO 3190
3160 REM PLAY SCALE
3170 FOR N = 1 TO 13: GOSUB 3020: NEXT

```

```

3180 RETURN
3190 POKE 1,L: CALL 771: RETURN
3200 HOME
3210 PRINT "THREE STRIKES! YOU'RE OUT!"
3220 HS = PEEK (800) + PEEK (801) * 256
3230 PRINT "FINAL SCORE= "SC" HIGH SCORE= "HS
3240 IF HS < SC THEN 3280
3250 INPUT "DO YOU WANT TO PLAY AGAIN? ":A$
3260 IF LEFT$ (A$,1) = "Y" THEN 1950
3270 GOTO 10
3280 H1 = SC / 256
3290 H2 = (H1 - INT (H1)) * 256 + .5
3300 POKE 800,H2: POKE 801,H1: POKE 802,H1 / 2
3310 GOTO 3250
3320 GOSUB 4280
3330 ONERR GOTO 4150
3340 GOSUB 4200
3350 DEF FN T(O) = X / (V * COS (O))
3360 DEF FN CO(X) = X * 3.141592654 / 180
3370 DEF FN W(X) = V * FN T(O) * SIN (O) - 4.9 * FN T(O) ^ 2
3380 SHOTS = 250:SCORE = 0:C1 = 0
3390 SCORE = SCORE + C1
3400 IF SH = 0 THEN 4160
3410 C1 = 0
3420 GR
3430 COLOR= 12
3440 MAX = INT ( RND (1) * 20) + 15
3450 FOR X = 0 TO 3
3460 VLIN MAX - (3 - X),39 AT X + 14
3470 VLIN MAX - (3 - X),39 AT 14 - X
3480 NEXT
3490 COLOR= 2
3500 FOR X = 0 TO 6
3510 HLIN 0.4 AT 39 - X
3520 NEXT
3530 REM NOW WE SET TARGETS
3540 COLOR= 1
3550 HLIN 22,25 AT 39
3560 HLIN 28,31 AT 39
3570 HLIN 34,37 AT 39
3580 A1 = INT ( RND (1) * 3) + 1
3590 A2 = INT ( RND (1) * 3) + 1: IF A1 = A2 THEN 3590
3600 A3 = INT ( RND (1) * 3) + 1: IF A1 = A2 OR A1 = A3 OR A2 = A3 THEN
3600
3610 A1 = A1 * 10:A2 = A2 * 10:A3 = A3 * 10
3620 HOME : VTAB 21: HTAB 2: PRINT SHOTS:
3630 HTAB 10: PRINT "SCORE="SCORE:
3640 VTAB 21: HTAB 24: PRINT A1:
3650 HTAB 30: PRINT A2:
3660 HTAB 36: PRINT A3: POKE 33,15: POKE 34,21
3670 INPUT "CHARGE ":V: INPUT "ANGLE? ":O
3680 IF O < 1 OR O > 89 THEN PRINT "ANGLE IS OUT OF RANGE": GOTO 3670
3690 IF V < 1 THEN PRINT "CHARGE MUST BE GREATER THAN ZERO!": GOTO 3670

3695 IF SH < V THEN PRINT "(POP)": GOTO 3670
3697 SH = SH - V
3700 O = FN CO(O)
3710 X = 0
3720 Y = FN W(X)
3730 COLOR= 15
3740 X1 = X + 4:Y1 = Y + 2
3750 Y1 = 39 - Y1
3760 X1 = INT (X1):Y1 = INT (Y1)

```

```

3770 IF Y1 > 39 THEN 3980
3780 IF X1 > 39 THEN 3880
3790 IF Y1 < 0 THEN 3870
3800 IF SCR N( X1,Y1) = 12 THEN 3900
3810 IF SCR N( X1,Y1) = 1 THEN 3980
3820 L = 10
3830 IF Y1 < 0 THEN POKE 0,25: GOTO 3850
3840 POKE 0,Y1 / 39 * 230 + 25
3850 POKE 1,L: CALL 771
3860 PLOT X1,Y1
3870 X = X + 1: GOTO 3720
3880 GOTO 4120
3900 REM HIT BARRIER
3910 FOR X = 0 TO 15
3920 COLOR= X
3930 PLOT X1,Y1
3940 GOSUB 4210
3950 NEXT
3960 COLOR= 0: PLOT X1,Y1
3970 GOTO 3390
3980 REM MAYBE YES, MAYBE NO
3990 IF Y1 > 39 THEN Y1 = 39
4000 E = SCR N( X1,Y1)
4010 IF X1 > = 22 AND X1 < = 25 THEN C1 = A1:L1 = 22:L2 = 25
4020 IF X1 > = 28 AND X1 < = 31 THEN C1 = A2:L1 = 28:L2 = 31
4030 IF X1 > = 34 AND X1 < = 37 THEN C1 = A3:L1 = 34:L2 = 37
4040 IF E < > 1 THEN 4120
4050 REM YES
4060 COLOR= 2
4070 HLN L1,L2 AT 39
4080 FOR X = 1 TO 5
4085 L = 4
4090 N = 1: GOSUB 4230:N = 13: GOSUB 4230
4100 NEXT
4110 GOTO 3390
4120 REM NO
4130 GOSUB 4190
4140 GOTO 3390
4150 IF PEEK (222) < > 255 THEN RESUME
4160 TEXT : HOME
4170 VTAB 10: PRINT "YOUR FINAL SCORE: ";SC
4180 INPUT "DO YOU WANT TO TRY AGAIN? (Y/N) ";A$: IF LEFT$ (A$,1) < >
"Y" THEN RUN
4185 GOTO 3340
4190 GOTO 2880
4200 GOTO 2920
4210 GOTO 2970
4220 REM
4230 GOTO 3020
4240 REM PLAY SCALE
4250 FOR N = 1 TO 13: GOSUB 4230: NEXT
4260 RETURN
4270 POKE 1,L: CALL 771: RETURN
4280 TEXT : HOME : VTAB 5
4290 HTAB 16:A$ = "MOUNTAIN": GOSUB 4570
4300 PRINT : PRINT : PRINT
4310 A$ = "THE OBJECT OF THIS GAME IS TO HIT A"
4320 GOSUB 4570
4330 A$ = "SERIES OF TARGETS WITH YOUR " + CHR$ (34) + "KABOOM" + CHR$
(34): GOSUB 4570
4340 A$ = "GUN. YOU CONTROL THE VELOCITY AND THE": GOSUB 4570
4350 A$ = "ANGLE OF THE PROJECTILE.": GOSUB 4570
4360 PRINT

```

```

4370 A$ = "THE TARGETS ARE WORTH 10, 20, OR 30": GOSUB 4570
4380 A$ = "POINTS AND CHANGE AT RANDOM.": GOSUB 4570
4390 VTAB 20:A$ = "PRESS ANY KEY TO GO ON. ": GOSUB 4570
4400 GET A$
4410 HOME : VTAB 8
4420 A$ = "BETWEEN YOU AND THE TARGETS THERE IS A"
4430 GOSUB 4570
4440 A$ = "MOUNTAIN WHOSE HEIGHT CHANGES AT "
4450 GOSUB 4570
4460 A$ = "RANDOM. YOU MUST SHOOT OVER THE "
4470 GOSUB 4570
4480 A$ = "MOUNTAIN TO REACH THE TARGET."
4490 GOSUB 4570
4500 PRINT
4510 A$ = "YOU ONLY HAVE 250 AMMO CHARGES.": GOSUB 4570
4520 A$ = "SO TRY TO HIT THE 30 POINT TARGET WITH"
4530 GOSUB 4570
4540 A$ = "EACH SHOT."
4550 GOSUB 4570
4560 PRINT : PRINT : PRINT :A$ = "PRESS ANY KEY TO BEGIN": GOSUB 4570: GET
A$: RETURN
4570 FOR X = 1 TO LEN (A$)
4580 PRINT MID$ (A$,X,1):P = PEEK ( - 16336) + PEEK ( - 16336) + PEEK
( - 16336) + PEEK ( - 16336)
4590 NEXT : PRINT : RETURN
]
]

```

```

10 HI = PEEK (115) + PEEK (116) * 256
20 DISK = ( PEEK (994) + PEEK (1001)) = 192
30 TEXT : HOME
40 PRINT : PRINT : PRINT
50 HTAB 9: PRINT "APPLE BARREL SOFTWARE"
60 HTAB 9: PRINT "GOOD TO THE LAST BYTE"
70 PRINT
80 HTAB 12: PRINT "BLOCK 4 PROGRAMS"
90 PRINT : PRINT : PRINT
100 PRINT " 1. BLACK HOLE CHASE"
110 PRINT " 2. DEMOLITION DERBY"
120 PRINT " 3. TIC TAC TOE"
130 PRINT " 4. STOP"
140 PRINT : PRINT : PRINT
150 POKE 34, PEEK (37)
160 INPUT "ENTER BY NUMBER ":I$
170 I = VAL (I$): IF I < 1 OR I > 4 THEN HOME : GOTO 160
180 ON I GOTO 220,1390,2240
190 HIMEM: HI
200 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
210 END
220 GOSUB 1060
230 TEXT : HOME : VTAB 3
240 HTAB 12: PRINT "BLACK HOLE CHASE"
250 PRINT : PRINT
260 PRINT " YOU ARE BEING CHASED BY CREATURES"
270 PRINT "FROM A BLACK HOLE. YOU MUST PILOT YOUR"
280 PRINT "SPACECRAFT ACROSS THE GALAXY AND AWAY"
290 PRINT "FROM THEM AS FAST AS POSSIBLE. AT THE "
300 PRINT "SAME TIME, YOU MUST AVOID MOVING YOUR"
310 PRINT "SHIP INTO YOUR OWN VAPOR TRAIL (WHICH IS)":
320 PRINT "RADIOACTIVE AND DISAPPEARS AFTER A"
330 PRINT "WHILE) AND AVOID HITTING THE END OF THE"
340 PRINT "GALAXY. THE EDGE OF THE GALAXY IS VIS-"

```

```

350 PRINT "IBLE AT FIRST, AND THEN LITTLE BY LITTLE";
360 PRINT "THE CREATURES MAKE PARTS OF THE EDGE"
370 PRINT "DISAPPEAR BY TURNING IT INTO A BLACK"
380 PRINT "HOLE--SO DON'T RUN INTO THE HOLE OR"
390 PRINT "THEY'LL GET YOU."
400 VTAB 24: PRINT "PRESS SPACE TO GO ON. ";: GET A$
410 HOME
420 VTAB 5
430 PRINT "USE THE I, J, K, AND M KEYS TO MOVE"
440 PRINT "UP, LEFT, RIGHT AND DOWN THROUGH THE"
450 PRINT "GALAXY. YOU CAN SET THE DIFFICULTY LEVEL";
460 PRINT "FROM 0 TO 10. ZERO WILL GIVE YOU A "
470 PRINT "GALAXY WITHOUT ANY OBSTACLES TO MOVE"
480 PRINT "AROUND. LEVELS OF DIFFICULTY (1-10) WILL";
490 PRINT "GIVE YOU AN INCREASING NUMBER OF PLANETS";
500 PRINT "AND STARS TO MOVE YOUR SHIP AROUND. IF"
510 PRINT "YOU CAN OUTFRAN THE BLACK HOLE CREATURES"
520 PRINT "FOR 200 HOURS, THEY'LL RUN OUT OF FUEL"
530 PRINT "BEFORE YOU DO AND YOU'LL BE SAVED!"
540 PRINT
550 INPUT "DIFFICULTY LEVEL (0-10)? ";D
560 IF D < 0 OR D > 10 THEN 550
570 DEF FN R(X) = INT ( RND (1) * X + 1)
580 OR
590 COLOR= 15: HLIN 0,39 AT 0: VLIN 0,39 AT 39: HLIN 0,39 AT 39: VLIN 0,
39 AT 0
600 S = 0
610 IF D > 0 THEN 920
620 REM
630 X = 20:Y = 20
640 COLOR= 7
650 PLOT X,Y
660 XD = FN R(3) - 2
670 IF XD = 0 THEN 660
680 YD = 0
690 IF PEEK ( - 16384) > 127 THEN 820
700 IF X + XD > 39 OR X + XD < 0 THEN 900
710 IF Y + YD > 39 OR Y + YD < 0 THEN 900
720 X = X + XD
730 Y = Y + YD
740 COLOR= 0: PLOT FN R(40) - 1, FN R(40) - 1
750 IF SCRNB( X,Y) < > 0 THEN 900
760 COLOR= 7
770 GOSUB 1110
780 S = S + 1
790 IF S = 2000 THEN PRINT : PRINT "YOU HAVE OUT RUN THE CREATURES!": GOTO
1360
800 PLOT X,Y
810 GOTO 690
820 GET A$
830 X1 = XD:Y1 = YD
840 XD = 0:YD = 0
850 IF A$ = "J" THEN XD = - 1: GOTO 690
860 IF A$ = "K" THEN XD = 1: GOTO 690
870 IF A$ = "M" THEN YD = 1: GOTO 690
880 IF A$ = "I" THEN YD = - 1: GOTO 690
890 XD = X1:YD = Y1: GOTO 690
900 PRINT "CRASH"
910 GOTO 1340
920 REM SET OBSTRUCTIONS
930 FOR X = 1 TO 10 * D
940 COLOR= FN R(15)
950 X1 = FN R(37) + 1

```

```

960 Y1 = FN R(37) + 1
970 IF X1 = 20 AND Y1 = 20 THEN 950
980 GOSUB 1110
990 PLOT X1,Y1
1000 NEXT
1010 GOTO 620
1020 REM RASBERRY
1030 FOR T = 1 TO 50:D = PEEK ( - 16336): NEXT
1040 RETURN
1050 END
1060 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208
: POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
1070 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166:
POKE 785,0: POKE 786,76: POKE 787,3: POKE 788,3:
1080 CC = 2 ^ ( 1 / 12)
1090 POKE 789,96:
1100 RETURN
1110 REM RANDOM "BLIP"
1120 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
1130 RETURN
1140 REM SCALE NOTE PLAYER
1150 REM ASSUMES N=114 AS A=440
1160 ON N GOTO 1170,1180,1190,1200,1210,1220,1230,1240,1250,1260,1270,12
80,1290
1170 POKE 0,192: GOTO 1330
1180 POKE 0,181: GOTO 1330
1190 POKE 0,171: GOTO 1330
1200 POKE 0,162: GOTO 1330
1210 POKE 0,153: GOTO 1330
1220 POKE 0,144: GOTO 1330
1230 POKE 0,136: GOTO 1330
1240 POKE 0,128: GOTO 1330
1250 POKE 0,121: GOTO 1330
1260 POKE 0,114: GOTO 1330
1270 POKE 0,107: GOTO 1330
1280 POKE 0,101: GOTO 1330
1290 POKE 0,96: GOTO 1330
1300 REM PLAY SCALE
1310 FOR N = 1 TO 13: GOSUB 1160: NEXT
1320 RETURN
1330 POKE 1,L: CALL 771: RETURN
1340 D = 10 - D
1350 IF D = 0 THEN Q = S: GOTO 1360
1360 PRINT "YOUR SCORE IS "S"."
1370 INPUT "DO YOU WANT TO PLAY AGAIN? (Y/N) ";A$: IF LEFT$(A$,1) = "Y
" THEN RUN 550
1380 RUN
1390 REM
1400 TEXT : HOME
1410 VTAB 4
1420 HTAB 12: PRINT "DEMOLITION DERBY"
1430 PRINT : PRINT
1440 PRINT "DEMOLITION DERBY IS A FAST-MOVING GAME"
1450 PRINT "OF STRATEGY WHERE TWO PLAYERS TRY TO"
1460 PRINT "FORCE EACH OTHER TO RUN INTO THE WALL OR";
1470 PRINT "THEIR OWN TRAIL.": PRINT
1480 PRINT "BLUE PLAYER ON THE LEFT USES THE E, S, D";
1490 PRINT "AND X KEYS TO MOVE UP, LEFT, RIGHT AND"
1500 PRINT "DOWN. ORANGE PLAYER ON THE RIGHT USES"
1510 PRINT "THE I, J, K, AND M KEYS TO MOVE UP,"
1520 PRINT "LEFT, RIGHT AND DOWN. EACH TIME YOU "
1521 PRINT "DEMOLISH YOUR OPPONENT BY FORCING HIM TO";
1522 PRINT "CRASH, YOU GET A POINT! (WOW!). FIRST"

```

```

1523 PRINT "PLAYER TO GET 15 POINTS WINS!"
1530 VTAB 24: PRINT "PRESS SPACE TO GO ON. " : GET A$
1540 XS = 0:YS = 0: GOSUB 1060
1550 HOME
1560 VTAB 21: HTAB 10: PRINT XS: HTAB 30: PRINT YS:
1570 GR : COLOR= 15: HLIN 0,39 AT 0: HLIN 0,39 AT 39: VLIN 0,39 AT 39: VLIN
0,39 AT 0
1580 X1 = 4:Y1 = 20
1590 D1 = 1:E1 = 0
1600 X2 = 35:Y2 = 20
1610 D2 = - 1:E2 = 0
1620 P1 = 12:P2 = 2:L = 4
1630 COLOR= 6: PLOT X1,Y1
1640 N = P1: GOSUB 2220
1650 COLOR= 9: PLOT X2,Y2
1660 N = P2: GOSUB 2220
1670 Q = PEEK ( - 16384): IF Q < 128 THEN 1780
1680 GET A$
1690 IF A$ = "E" THEN D1 = 0:E1 = - 1:P1 = 1: GOTO 1780
1700 IF A$ = "S" THEN D1 = - 1:E1 = 0:P1 = 5: GOTO 1780
1710 IF A$ = "X" THEN D1 = 0:E1 = 1:P1 = 9: GOTO 1780
1720 IF A$ = "D" THEN D1 = 1:E1 = 0:P1 = 10: GOTQ 1780
1730 IF A$ = "I" THEN D2 = 0:E2 = - 1:P2 = 13: GOTO 1780
1740 IF A$ = "J" THEN D2 = - 1:E2 = 0:P2 = 2: GOTO 1780
1750 IF A$ = "M" THEN D2 = 0:E2 = 1:P2 = 7: GOTO 1780
1760 IF A$ = "K" THEN D2 = 1:E2 = 0:P2 = 3
1770 IF PEEK ( - 16384) > 127 THEN 1670
1780 REM
1790 X1 = X1 + D1:Y1 = Y1 + E1
1800 X2 = X2 + D2:Y2 = Y2 + E2
1810 IF X1 < 0 OR X1 > 39 THEN 1980
1820 IF X2 < 0 OR X2 > 39 THEN 2040
1830 IF Y1 < 0 OR Y1 > 39 THEN 1980
1840 IF Y2 < 0 OR Y2 > 39 THEN 2040
1850 IF SCRN( X1,Y1) < > 0 THEN 1880
1860 IF SCRN( X2,Y2) < > 0 THEN 1930
1870 GOTO 1630
1880 REM X CRASH
1890 IF SCRN( X2,Y2) < > 0 THEN 2100
1900 COLOR= 15
1910 PLOT X1,Y1
1920 YS = YS + 1: GOTO 2140
1930 REM Y CRASH
1940 IF SCRN( X1,Y1) < > 0 THEN 2100
1950 COLOR= 15
1960 PLOT X2,Y2
1970 XS = XS + 1: GOTO 2140
1980 REM X OVERFLOW
1990 IF X1 < 0 THEN X1 = 0
2000 IF X1 > 39 THEN X1 = 39
2010 IF Y1 < 0 THEN Y1 = 0
2020 IF Y1 > 39 THEN Y1 = 39
2030 GOTO 1900
2040 REM Y OVERFLOW
2050 IF X2 < 0 THEN X2 = 0
2060 IF X2 > 39 THEN X2 = 39
2070 IF Y2 < 0 THEN Y2 = 0
2080 IF Y2 > 39 THEN Y2 = 39
2090 GOTO 1950
2100 REM TIED CRASHES
2110 COLOR= 5: PLOT X1,Y1
2120 XS = XS + 1:YS = YS + 1
2130 IF XS = 15 OR YS = 15 THEN PRINT

```

```

2135 IF XS = 15 AND YS = 15 THEN HOME : PRINT "IT'S A TIE!": GOTO 2190
2140 IF XS = 15 THEN PRINT "BLUE PLAYER WINS!!!": GOTO 2190
2150 IF YS = 15 THEN HOME : PRINT "ORANGE PLAYER WINS!!!": GOTO 2190
2160 FOR X = 1 TO 1000: NEXT X
2170 GOTO 1560
2180 GOTO 1020
2190 INPUT "DO YOU WANT TO PLAY AGAIN? (Y/N) ";A$: IF LEFT$(A$,1) = "Y
" THEN RUN 1390
2200 GOTO 30
2210 GOTO 1110
2220 GOTO 1160
2230 GOTO 115 IN A ROW."
2300 VTAB 9
2310 PRINT "THE BOARD IS NUMBERED:"
2320 PRINT
2330 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "
2340 NORMAL
2350 HTAB 14: PRINT " 1 "": INVERSE : PRINT " " "": NORMAL : PRINT " 2 "":
INVERSE : PRINT " " "": NORMAL : PRINT " 3"
2360 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "": NORMAL
2370 HTAB 14: INVERSE : PRINT " " "": NORMAL
2380 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "": NORMAL
2390 HTAB 14: PRINT " 4 "": INVERSE : PRINT " " "": NORMAL : PRINT " 5 "":
INVERSE : PRINT " " "": NORMAL : PRINT " 6"
2400 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "": NORMAL
2410 HTAB 14: INVERSE : PRINT " " "": NORMAL
2420 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "": NORMAL
2430 HTAB 14: PRINT " 7 "": INVERSE : PRINT " " "": NORMAL : PRINT " 8 "":
INVERSE : PRINT " " "": NORMAL : PRINT " 9"
2440 HTAB 14: PRINT " " "": INVERSE : PRINT " " "": NORMAL : PRINT " " "":
INVERSE : PRINT " " "": NORMAL
2450 HTAB 1
2460 VTAB 24: PRINT "PRESS SPACE TO START GAME "": GET A$
2470 GOSUB 3700
2480 X = 1:O = 2
2490 T = 0
2500 REM TIC TAC TOE
2510 REM
2520 REM
2530 GR
2540 COLOR= 15
2550 HLIN 0,39 AT 13
2560 HLIN 0,39 AT 26
2570 VLIN 0,39 AT 13
2580 VLIN 0,39 AT 26
2590 HOME
2600 PRINT "ENTER YOUR MOVE "": GET A$
2605 IF A$ = CHR$( 27) OR A$ = CHR$( 3) THEN 30
2610 L = 8:N = 8
2620 GOSUB 1160
2630 PRINT
2640 M = VAL (A$): IF A(M) < > 0 THEN 2590
2650 IF M > 9 OR M = 0 THEN 2590
2660 HOME : PRINT "YOUR MOVE: "M
2670 IF S1 THEN 2480
2680 A(M) = X
2690 GOSUB 2840
2700 REM NOW IT'S MY TURN

```

```

2710 IF T = 0 THEN 2730
2720 GOTO 3100
2730 REM TURN=0
2740 IF A(5) = 0 THEN M = 5:A(M) = 0: GOSUB 2840: GOTO 2760
2750 M = 1:A(M) = 0: GOSUB 2840
2760 PRINT "MY MOVE: ";
2770 PRINT M + 1
2780 N = 13:L = 8: GOSUB 1160
2790 FOR X1 = 0 TO 1000: NEXT
2800 T = 1
2810 SE = 0
2820 GOSUB 3420: IF S1 THEN 3660
2830 GOTO 2590
2840 ON A(M) GOTO 2850,2950
2850 REM X
2860 GOSUB 3030
2870 REM DRAW AN X
2880 COLOR= 2
2890 FOR X2 = 0 TO 4
2900 PLOT CX - X2,CY + X2
2910 PLOT CX + X2,CY + X2
2920 PLOT CX - X2,CY - X2
2930 PLOT CX + X2,CY - X2
2940 NEXT : RETURN
2950 REM DRAW AN O
2960 GOSUB 3030
2970 COLOR= 13
2980 HLINE CX - 4,CX + 4 AT CY - 4
2990 HLINE CX - 4,CX + 4 AT CY + 4
3000 VLINE CY - 4,CY + 4 AT CX + 4
3010 VLINE CY - 4,CY + 4 AT CX - 4
3020 RETURN
3030 REM COMPUTE X1,Y1
3040 M = M - 1
3050 Y1 = INT (M / 3)
3060 X1 = INT (3 * (M / 3 - Y1) + .5)
3070 CX = 7 + X1 * 13
3080 CY = 7 + Y1 * 13
3090 RETURN
3100 REM OTHER THAN 1
3110 SE = X: GOSUB 3420
3120 IF S1 THEN PRINT "YOU WIN": GOTO 3770
3130 IF RND (1) < .05 THEN 3160
3140 SE = 0: GOSUB 3570
3150 IF R < > 0 THEN M = R: GOTO 3400
3160 IF RND (1) < .05 THEN 3190
3170 SEARCH = X: GOSUB 3570
3180 IF R < > 0 THEN M = R: GOTO 3400
3190 IF RND (1) < .10 THEN 3210
3200 IF (A(1) = X AND A(9) = X) OR (A(3) = X AND A(7) = X) THEN P = 4 +
2 * (A(4) < > 0): IF A(P) = 0 THEN M = P: GOTO 3400
3210 IF RND (1) < .5 THEN 3280
3220 IF A(2) = X AND A(4) = X AND A(1) = 0 THEN M = 1: GOTO 3400
3230 IF A(4) = X AND A(8) = X AND A(7) = 0 THEN M = 7: GOTO 3400
3240 IF A(8) = X AND A(6) = X AND A(9) = 0 THEN M = 9: GOTO 3400
3250 IF A(2) = X AND A(6) = X AND A(3) = 0 THEN M = 3: GOTO 3400
3260 IF A(4) = X AND A(6) = X AND A(1) = 0 THEN M = 1: GOTO 3400
3270 IF A(2) = X AND A(7) = X AND A(1) = 0 THEN M = 1: GOTO 3400
3280 IF A(6) = X AND A(1) = X AND A(2) = 0 THEN M = 2: GOTO 3400
3290 IF A(8) = X AND A(3) = X AND A(9) = 0 THEN M = 9: GOTO 3400
3300 IF A(8) = X AND A(1) = X AND A(7) = 0 THEN M = 7: GOTO 3400
3310 IF A(2) = X AND A(9) = X AND A(3) = 0 THEN M = 3: GOTO 3400
3320 REM CHECK FOR DRAW

```

```

3330 FOR X1 = 1 TO 9
3340 IF A(X1) = 0 THEN 3360
3350 NEXT : PRINT "THE GAME IS A DRAW":N = 1:L = 255: GOSUB 1160: GOTO 3
780
3360 M = INT ( RND ( 1 ) * 9 ) + 1
3370 IF A(M) < > 0 THEN 3360
3380 GOTO 3400
3390 END
3400 A(M) = 0: GOSUB 2840: GOTO 2760
3410 END
3420 REM SEARCH1
3430 DATA 1,2,3
3440 DATA 4,5,6
3450 DATA 7,8,9
3460 DATA 1,4,7
3470 DATA 2,5,8
3480 DATA 3,6,9
3490 DATA 1,5,9
3500 DATA 3,5,7
3510 RESTORE
3520 S1 = 0
3530 FOR X1 = 1 TO 8
3540 READ A,B,C
3550 IF A(A) = SE AND A(B) = SE AND A(C) = SE THEN S1 = 1: RETURN
3560 NEXT
3570 REM SEARCH2
3580 RESTORE
3590 R = 0
3600 FOR X1 = 1 TO 8
3610 READ A,B,C
3620 IF A(A) = SE AND A(B) = SE AND A(C) = 0 THEN R = C: RETURN
3630 IF A(A) = SE AND A(C) = SE AND A(B) = 0 THEN R = B: RETURN
3640 IF A(B) = SE AND A(C) = SE AND A(A) = 0 THEN R = A: RETURN
3650 NEXT : RETURN
3660 PRINT "I WIN"
3670 L = 100
3680 N = 13: GOSUB 1160:N = 8: GOSUB 1160:N = 10: GOSUB 1160:N = 8: GOSUB
1160:N = 5: GOSUB 1160:N = 8: GOSUB 1160:N = 10: GOSUB 1160:N = 8: GOSUB
1160:N = 1: GOSUB 1160: GOTO 3780
3690 GOTO 1020
3700 GOTO 1060
3710 GOTO 1110
3720 GOTO 1160
3730 REM PLAY SCALE
3740 FOR N = 1 TO 13: GOSUB 3720: NEXT
3750 RETURN
3760 POKE 1,L: CALL 771: RETURN
3770 L = 100:N = 13: GOSUB 3720:N = 1: GOSUB 3720:N = 13: GOSUB 3720:N =
1: GOSUB 3720:N = 5: GOSUB 3720:N = 1: GOSUB 3720:N = 8: GOSUB 3720:
N = 5: GOSUB 3720:N = 1: GOSUB 3720
3780 INPUT "DO YOU WANT TO PLAY AGAIN? (Y/N) ";A$
3790 S1 = 0: FOR T = 0 TO 9:A(T) = 0: NEXT
3800 IF LEFT$(A$,1) = "Y" THEN 2470
3810 GOTO 30
]
]
0 DATA +000000.00
1 ONERR GOTO 210
10 REM DO NOT UNDER ANY CIRCUMSTANCE
20 REM REMOVE,RENUMBER,OR RETYPE LINE 0!!!!!!
30 REM PROGRAM WILL DIE A HORRIBLE DEATH

```

CHECKBOOK

```

40 DISK = ( PEEK (994) + PEEK (1001) = 192)
50 Z = PEEK (103) + PEEK (104) * 256 + 5: REM POINTS TO START OF DATA S
   TATEMENT
60 N$ = CHR$ ( PEEK (Z)): IF N$ < > "+" AND N$ < > "--" THEN 60000
180 TEXT : HOME
190 RESTORE
200 READ B
210 TEXT : HOME : VTAB 5
220 GOSUB 10000
230 VTAB 10
240 HTAB 5: PRINT "1: ENTER DEPOSIT(S)"
250 PRINT
260 HTAB 5: PRINT "2: ENTER CHECK(S)"
270 PRINT
280 HTAB 5: PRINT "3: QUIT"
290 PRINT : PRINT
300 POKE 34, PEEK (37)
310 HOME : INPUT "ENTER BY NUMBER ";A$
320 A = VAL (A$): IF A < 1 OR A > 3 THEN 310
325 TEXT
330 ON A GOTO 340,470,40000
340 HOME
350 HTAB 13: INVERSE : PRINT "ENTER DEPOSITS"
360 NORMAL : PRINT " PRESS <RETURN> ALONE TO RETURN TO MENU"
370 POKE 34,3: HOME
380 GOSUB 10000
390 HTAB 21: INPUT "DEPOSIT? ";A1$
400 IF LEFT$ (A1$,1) = "$" THEN A1$ = MID$ (A1$,2)
410 IF A1$ = "" THEN 210
420 A2 = VAL (A1$)
430 IF A2 < 0 THEN PRINT : PRINT "ENTER A ";; FLASH : PRINT "DEPOSIT";:
   NORMAL : PRINT " PLEASE!": PRINT : GOTO 380
435 A1 = INT (A2 * 100 + .5) / 100
440 A1 = VAL ( STR$ (A1))
445 B = B + A1
450 IF ABS (B) > 999999.99 THEN PRINT "BALANCE TOO LARGE--LUCKY!!": GOTO
   50000
460 GOTO 380
470 HOME
480 HTAB 14: INVERSE : PRINT "ENTER CHECKS": NORMAL
490 PRINT " PRESS <RETURN> ALONE TO RETURN TO MENU"
500 POKE 34,3: HOME
510 GOSUB 10000
520 HTAB 22: INPUT "CHE
580 IF ABS (B) > 999999.99 THEN PRINT "BALANCE TOO SMALL": GOTO 50000
590 GOTO 510
10000 PRINT "BALANCE= $";
10005 IF B < 0 THEN PRINT "--";
10010 PRINT INT ( ABS (B))".":
10020 B1 = ABS (B)
10030 B2 = B1 - INT (B1)
10040 B2 = INT ((100 * B2 + .5) / 100)
10050 B2$ = SEN (B2$) = 1 THEN B2$ = ".00"
40080 IF LEN (B2$) = 2 THEN B2$ = B2$ + "0"
40090 Q$ = STR$ (B1)
40100 C = LEN (Q$)
40110 C1 = 6 - C
40120 IF C1 = 0 THEN 40160
40130 FOR X = 1 TO C1
40140 Q$ = "0" + Q$
40150 NEXT
40160 IF B < 0 THEN Q$ = "--" + Q$
40170 IF B > = 0 THEN Q$ = "+" + Q$

```

```

40180 Q1$ = Q$ + Q2$
40190 FOR X = 1 TO LEN (Q1$)
40200 POKE Z + X - 1, ASC ( MID$ (Q1$,X))
40210 NEXT
40220 IF DISK THEN 55000
40230 TEXT : HOME : VTAB 10
40240 PRINT "PREPARE TAPE FOR RECORDING AND"
40250 PRINT "PRESS ANY KEY. " : GET A$
40260 SAVE : END
50000 GOTO 60020
55000 PRINT "SAVE CHECKBOOK": PRINT "RUN APPLE BARREL SOFTWARE"
60000 REM BAD PERSON YOU!
60010 PRINT "LINE 0 HAS BEEN DAMAGED!"
60020 PRINT "SEE INSTRUCTION BOOKLET FOR INSTRUCTIONS":
60040 GOTO 30000

```

```

J
J

```

```

0 DATA +000000.00
10 ONERR GOTO 210
20 REM DO NOT UNDER ANY CIRCUMSTANCE
30 REM REMOVE,RENUMBER,OR RETYPE LINE 0!!!!
40 REM PROGRAM WILL DIE A HORRIBLE DEATH
50 DISK = ( PEEK (994) + PEEK (1001) = 192)
60 Z = PEEK (103) + PEEK (104) * 256 + 5: REM POINTS TO START OF DATA S
TATEMENT
70 N$ = CHR$ ( PEEK (Z)): IF N$ < > "+" AND N$ < > "-" THEN 1070
180 TEXT : HOME
190 RESTORE
200 READ B
210 TEXT : HOME : VTAB 5
220 GOSUB 640
230 VTAB 10
240 HTAB 5: PRINT "1: ENTER DEPOSIT(S)"
250 PRINT
260 HTAB 5: PRINT "2: ENTER WITHDRAWL(S)"
270 PRINT
280 HTAB 5: PRINT "3: ADD INTEREST"
281 PRINT
282 HTAB 5: PRINT "4: QUIT"
290 PRINT : PRINT
295 POKE 34, PEEK (37)
300 INPUT "ENTER BY NUMBER ";A$
310 REM
320 A = VAL (A$): IF A < 1 OR A > 4 THEN HOME : GOTO 300
330 ON A GOTO 340,490,2000,780
340 TEXT : HOME
350 HTAB 13: INVERSE : PRINT "ENTER DEPOSITS"
360 NORMAL : PRINT " PRESS <RETURN> ALONE TO RETURN TO MENU"
370 POKE 34,3: HOME
380 GOSUB 640
390 HTAB 21: INPUT "DEPOSIT? ";A1$
400 IF LEFT$ (A1$,1) = "$" THEN A1$ = MID$ (A1$,2)
410 IF A1$ = "" THEN 210
420 A2 = VAL (A1$)
430 IF A2 < 0 THEN PRINT : PRINT "ENTER A " : FLASH : PRINT "DEPOSIT":
NORMAL : PRINT " PLEASE!": PRINT : GOTO 380
440 A1 = INT (A2 * 100 + .5) / 100
450 A1 = VAL ( STR$ (A1))
460 B = B + A1
470 IF ABS (B) > 999999.99 THEN PRINT "BALANCE TOO LARGE--LUCKY!": GOTO
1060

```

SAVINGS

```

480 GOTO 380
490 TEXT : HOME
500 HTAB 12: INVERSE : PRINT "ENTER WITHDRAWLS": NORMAL
510 PRINT " PRESS <RETURN> ALONE TO RETURN TO MENU"
520 POKE 34,3: HOME
530 GOSUB 640
540 HTAB 22: IN GOTO 530
590 A1 = INT (A2 * 100 + .5) / 100
600 A1 = VAL ( STR$ (A1))
610 B = B - A1
620 IF ABS (B) > 999999.99 THEN PRINT "BALANCE TOO SMALL": GOTO 1060
630 GOTO 530
640 PRINT "BALANCE= $";
650 IF B < 0 THEN PRINT "-";
660 PRINT INT ( ABS (B))". ";
670 B1 = ABS (B)
680 B2 = B1 - INT (B1)
690 B2 = INT ((100 * B2 + .5)) / 100
700 B2$ = STR$ (B2)
710 Q2$ = ".00"
870 IF LEN (Q2$) = 2 THEN Q2$ = Q2$ + "0"
880 Q$ = STR$ (Q1)
890 C = LEN (Q$)
900 C1 = 6 - C
910 IF C1 = 0 THEN 950
920 FOR X = 1 TO C1
930 Q$ = "0" + Q$
940 NEXT
950 IF B < 0 THEN Q$ = "-" + Q$
960 IF B > = 0 THEN Q$ = "+" + Q$
970 Q1$ = Q$ + Q2$
980 FOR X = 1 TO LEN (Q1$)
990 POKE Z + X - 1, ASC ( MID$ (Q1$,X))
1000 NEXT
1010 IF DISK THEN 60000
1020 TEXT : HOME : VTAB 10
1030 PRINT "PREPARE TAPE FOR RECORDING AND"
1040 PRINT "PRESS ANY KEY. ";; GET A$
1050 SAVE : END
1060 GOTO 1090
1070 REM BAD PERSON YOU!
1080 PRINT "LINE 0 HAS BEEN DAMAGED!"
1090 PRINT "SEE INSTRUCTION BOOKLET FOR INSTRUCTIONS";
1110 GOTO 750
2000 REM ADD INTEREST
2010 TEXT : HOME
2020 VTAB 5
2030 HTAB 14: INVERSE : PRINT "ADD INTEREST": NORMAL
2040 PRINT : PRINT
2050 INPUT "ENTER INTEREST RATE PER YEAR ";; I
2060 INPUT "ENTER NUMBER OF COMPOUNDING PERIODS PER YEAR ";; I1
2073 INPUT "ENTER NUMBER OF YEARS ";; N
2075 I = I / I1
2077 PRINT : PRINT : PRINT "OLD ";; GOSUB 640
2080 B = B * (1 + I / 100) ^ N
2090 B = VAL ( STR$ ( INT (B * 100 + .5) / 100))
2095 PRINT : PRINT
2100 PRINT "NEW ";; GOSUB 640
2105 PRINT
2120 VTAB 24: PRINT "PRESS SPACE TO GO ON. ";; GET A$; GOTO 210
60000 PRINT "SAVE SAVINGS": PRINT "RUN APPLE BARREL SOFTWARE"

```

1

```
1 DISK = ( PEEK (994) + PEEK (1001)) = 192
2 HI = PEEK (115) + PEEK (116) * 256
10 GOSUB 1660
20 ONERR GOTO 1540
30 GOSUB 780
40 DIM N(9)
50 REM GENERATE SECRET CODE
60 CO = 0
70 A$ = "":IQ$ = ""
80 INPUT "NUMBER OF DIGITS IN THE CODE? ";C$
90 IQ = VAL (C$): IF IQ < 2 OR IQ > 9 THEN PRINT "BETWEEN 2 AND 9, PLEA
    SE": GOTO 80
100 FOR X = 1 TO IQ
110 N = INT ( RND (1) * 9 + 1)
120 IF N(N) THEN 110
130 N(N) = 1
140 A$ = A$ + STR$ (N)
150 IQ$ = IQ$ + CHR$ (95)
160 NEXT
170 HOME
180 PRINT
190 PRINT
200 HTAB 3
210 FOR X = 1 TO 9:N(X) = 0: NEXT
220 IF CO = 10 THEN SPEED= 100: POKE 34, PEEK (37): PRINT "THE ALIEN TO
    OK ONE LOOK AT YOU AND WENT BACK FOR SOME MEAT TENDERIZER.
    YOU'D BETTER HURRY UP.": FOR T = 1 TO 1000: NEXT : HOME : PRINT " "
    :: POKE 34,0: SPEED= 255
230 IF CO = 15 THEN SPEED= 100: POKE 34, PEEK (37): PRINT "THE ALIEN HA
    S GONE OUT FOR PIZZA. IF THAT DOESN'T KILL HIM, HE'LL BE BACK
    TO EAT YOU WITHIN 5 MINUTES.": FOR T = 1 TO 1000: NEXT : HOME : PRINT
    " " :: POKE 34,0: SPEED= 255
240 IF CO = 20 THEN SPEED= 100: PRINT : PRINT : VTAB 22: POKE 34, PEEK
    (37): PRINT "THE ALIEN IS NIBBLING ON YOUR LEFT LEG!": FOR T = 1 TO
    1000: NEXT : HOME : PRINT " " :: POKE 34,0: SPEED= 255
250 IF CO = 25 THEN SPEED= 100: PRINT : PRINT : VTAB 22: POKE 34, PEEK
    (37): PRINT "THE ALIEN IS NOW CHEWING ON YOUR RIGHT LEG! IF YOU WAN
    T TO STOP, YOU CAN PRESS <ESC>.";
260 IF CO = 25 THEN PRINT " BUT WE'RE GETTING OFF THIS SHIP! GOOD LUCK!
    !": FOR T = 1 TO 2000: NEXT : HOME : PRINT " " :: POKE 34,0: SPEED=
    255
265 IF CO = 30 THEN TEXT : HOME : VTAB 10: PRINT "THE ALIEN GOT YOU!": PRINT
    "MOTHER TUMS IS MAKING AN EMERGENCY": PRINT "FLIGHT.": PRINT "(POOR
    ALIEN)": GOTO 1540
270 PRINT IQ$:
280 HTAB 3
290 REM NOW WE GET THE GUESS
300 B1$ = ""
310 FOR X = 1 TO IQ + 1
320 GET B$
330 T = PEEK ( - 16336) + PEEK ( - 16336) + PEEK ( - 16336) + PEEK ( -
    16336) + PEEK ( - 16336) + PEEK ( - 16336)
340 IF B$ = CHR$ (27) THEN PRINT "CYANIDE--SIZZLE": GOTO 1540
350 IF X = IQ + 1 THEN 500
360 IF B$ = CHR$ (24) THEN HTAB 3: GOTO 270
370 IF B$ = CHR$ (8) THEN 440
380 IF B$ < "1" OR B$ > "9" THEN PRINT CHR$ (7):: GOTO 320
390 IF N( VAL (B$)) = 1 THEN PRINT CHR$ (7):: GOTO 320
400 N( VAL (B$)) = 1
410 PRINT B$:
420 B1$ = B1$ + B$
```

ALIEN

```

430 NEXT
440 IF X = 1 THEN 320
450 PRINT CHR$ (8) CHR$ (95) CHR$ (8);
460 N( VAL ( RIGHT$ (B1$,1))) = 0
470 B1$ = MID$ (B1$,1, LEN (B1$) - 1)
480 X = X - 1
490 GOTO 320
500 IF B$ = CHR$ (24) THEN 200
520 IF B$ = CHR$ (8) THEN 440
530 IF B$ = CHR$ (13) THEN 550
540 PRINT CHR$ (7);: GOTO 320
550 REM EVALUATE
555 CO = CO + 1
560 R = 0:P = 0
570 FOR X = 1 TO IQ
580 S$ = MID$ (A$,X,1)
590 FOR C = 1 TO IQ
600 IF S$ = MID$ (B1$,C,1) THEN 630
610 NEXT
620 C = 0
630 IF X = C THEN P = P + 1: GOTO 650
640 IF C < > 0 THEN R = R + 1
650 NEXT X
660 PRINT " ";
670 IF P = 0 THEN 710
680 FLASH
690 FOR N = 1 TO P: PRINT "*";
700 NEXT : NORMAL
710 IF R = 0 THEN 740
720 FOR N = 1 TO R: PRINT "#";
730 NEXT
740 REM
750 PRINT
760 IF P = IQ THEN 1560
770 GOTO 190
780 TEXT : HOME
790 VTAB 5
800 HTAB 18: PRINT "ALIEN"
810 PRINT
820 A$ = "YOU ARE ON THE SPACESHIP NIMROD. YOU"
830 GOSUB 1510
840 A$ = "HAVE A FEW MINUTES TO BREAK THE CODE"
850 GOSUB 1510
860 A$ = "NUMBER THAT WILL OPEN THE WEAPONS"
870 GOSUB 1510
880 A$ = "VAULT SO THAT YOU CAN GET OUT AN ANTI-"
890 GOSUB 1510
900 A$ = "MATTER LASER RIFLE - THE ONLY WEAPON"
910 GOSUB 1510
920 A$ = "THAT WILL SAFELY DESTROY THE ALIEN."
930 GOSUB 1510
940 PRINT
950 A$ = "THE ALIEN HAS KILLED THE REST OF THE"
960 GOSUB 1510
970 A$ = "CREW AND IS NOW SEARCHING FOR YOU. "
980 GOSUB 1510
990 A$ = "HE WANTS YOU FOR YOUR GOURMET QUALITIES."
1000 GOSUB 1510
1010 FOR T = 1 TO 500: NEXT
1020 GOSUB 1620
1030 PRINT
1040 VTAB 24: PRINT "PRESS SPACE TO GO ON. ": GET A$: HOME
1050 VTAB 5

```

```

1060 A$ = "THE SECRET CODE IS MADE UP OF NUMBERS"
1070 GOSUB 1510
1080 A$ = "FROM 1 TO 9 IN ANY ORDER, NONE REPEAT-."
1090 GOSUB 1510
1100 A$ = "ED. MOTHER, THE SHIP'S COMPUTER, WILL"
1110 GOSUB 1510
1120 A$ = "ALLOW YOU TO DECIDE THE NUMBER OF"
1130 GOSUB 1510
1140 A$ = "DIGITS (2 TO 9) IN THE CODE."
1150 GOSUB 1510
1160 VTAB 24: PRINT "PRESS SPACE TO GO ON. ";; GET A$: HOME
1170 VTAB 5
1180 A$ = "ONE LAST WORD: IF THE ALIEN GETS YOU"
1190 GOSUB 1510
1200 A$ = "BEFORE YOU BREAK THE CODE, YOU CAN"
1210 GOSUB 1510
1220 A$ = "PUSH THE <ESC> BUTTON FOR CYANIDE GAS"
1230 GOSUB 1510
1240 A$ = "WHICH WILL KILL YOU AND THE ALIEN AT"
1250 GOSUB 1510
1260 A$ = "THE SAME TIME."
1270 GOSUB 1510
1280 VTAB 24: PRINT "PRESS SPACE TO GO ON. ";; GET A$: HOME
1290 VTAB 5
1300 PRINT " AFTER YOU ENTER YOUR GUESS AND PRESS"
1310 PRINT "<RETURN>, THE COMPUTER WILL EVALUATE"
1320 PRINT "YOUR GUESS AS FOLLOWS:"
1330 PRINT : PRINT
1340 PRINT " #: -THIS MEANS ONE OF YOUR NUMBERS"
1350 PRINT " IS IN THE CODE, BUT IN THE"
1360 PRINT " WRONG PLACE."
1370 PRINT : PRINT
1380 PRINT " ";
1390 FLASH : PRINT "*";
1400 NORMAL
1410 PRINT " : -THIS MEANS ONE OF YOUR NUMBERS"
1420 PRINT " IS BOTH IN THE CODE AND IN THE"
1430 PRINT " RIGHT PLACE."
1440 PRINT : PRINT
1450 PRINT "NO SYMBOLS MEANS THAT NO NUMBER IN YOUR"
1460 PRINT "GUESS IS IN THE CODE."
1470 PRINT : PRINT "PRESS ANY KEY TO GO ON. ";; GET A$
1480 TEXT : HOME : VTAB 5
1490 RETURN
1500 STOP
1510 FOR X = 1 TO LEN (A$)
1520 PRINT MID$ (A$,X,1);: GOSUB 1710
1530 NEXT : PRINT : RETURN
1540 SPEED= 255: GOTO 1590
1550 REM
1560 FLASH : PRINT "YOU HAVE THE WEAPON! THE ALIEN IS "
1570 PRINT "OUT OF ORDER-PERMANENTLY!"
1580 PRINT : NORMAL
1590 INPUT "DO YOU WANT TO PLAY AGAIN? (Y/N) " : A$
1600 IF LEFT$ (A$,1) < > "N" THEN 50
1610 GOTO 60000
1620 REM
1630 FOR T = 1 TO 50:D = PEEK ( - 16336): NEXT
1640 RETURN
1650 END
1660 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208
: POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
1670 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166:

```

```

POKE 785,0: POKE 786,76: POKE 787,3: POKE 788,3:
1680 CC = 2 ^ (1 / 12)
1690 POKE 789,96:
1700 RETURN
1710 REM RANDOM "BLIP"
1720 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
1730 RETURN
1740 REM SCALE NOTE PLAYER
1750 REM ASSUMES N=114 AS A=440
1760 ON N GOTO 1770,1780,1790,1800,1810,1820,1830,1840,1850,1860,1870,18
80,1890
1770 POKE 0,192: GOTO 1930
1780 POKE 0,181: GOTO 1930
1790 POKE 0,171: GOTO 1930
1800 POKE 0,162: GOTO 1930
1810 POKE 0,153: GOTO 1930
1820 POKE 0,144: GOTO 1930
1830 POKE 0,136: GOTO 1930
1840 POKE 0,128: GOTO 1930
1850 POKE 0,121: GOTO 1930
1860 POKE 0,114: GOTO 1930
1870 POKE 0,107: GOTO 1930
1880 POKE 0,101: GOTO 1930
1890 POKE 0,96: GOTO 1930
1900 REM PLAY SCALE
1910 FOR N = 1 TO 13: GOSUB 1760: NEXT
1920 RETURN
1930 POKE 1,L: CALL 771: RETURN
60000 REM
60020 PRINT
60030 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
60040 TEXT : HOME : VTAB 12

```

```

]
]

```

LUNA C, T O R L

```

1 POKE - 16298,0
2 HI = PEEK (115) + PEEK (116) * 256
3 DESK = ( PEEK (994) + PEEK (1001)) = 192
10 HIMEM: 8192
20 POKE 790,1: POKE 791,0: POKE 792,4: POKE 793,0: POKE 794,36: POKE 795
,36: POKE 796,44: POKE 797,44: POKE 798,44: POKE 799,44: POKE 800,36
: POKE 801,45: POKE 802,62: POKE 803,46: POKE 804,53: POKE 805,53: POKE
806,53
30 POKE 807,53: POKE 808,54: POKE 809,54: POKE 810,54: POKE 811,54: POKE
812,62: POKE 813,63: POKE 814,63: POKE 815,63: POKE 816,63: POKE 817
,39: POKE 818,36: POKE 819,36: POKE 820,54: POKE 821,54: POKE 822,46
: POKE 823,45
40 POKE 824,54: POKE 825,55: POKE 826,55: POKE 827,55: POKE 828,63: POKE
829,45: POKE 830,45: POKE 831,39: POKE 832,44: POKE 833,44: POKE 834
,36: POKE 835,45: POKE 836,45: POKE 837,45: POKE 838,61: POKE 839,63
: POKE 840,55
50 POKE 841,46: POKE 842,46: POKE 843,46: POKE 844,46: POKE 845,61: POKE
846,63: POKE 847,63: POKE 848,0
60 POKE 232,22: POKE 233,3
70 TEXT : HOME : NORMAL : SPEED= 255
80 REM LUNAR
90 GOSUB 1520
100 L = 9: GOSUB 1760
110 HGR
120 HOME : POKE 34,20: HOME
130 HCOLOR= 2
140 HPLOT 20,20 TO 20,80

```

```

150 H PLOT 21,20 TO 21,80
160 H PLOT TO 80,80
170 H PLOT 100,40 TO 100,80
180 H PLOT 101,40 TO 101,80
190 H PLOT TO 140,80
200 H PLOT TO 140,40
210 H PLOT 141,40 TO 141,80
220 H PLOT 160,40 TO 160,80
230 H PLOT 161,40 TO 161,80
240 H PLOT 160,40 TO 200,80
250 H PLOT 200,80 TO 160,40
260 H PLOT 200,80 TO 200,40
270 H PLOT 220,80 TO 240,40
280 H PLOT 221,80 TO 241,40
290 H PLOT 240,40 TO 259,80
300 H PLOT 239,40 TO 258,80
310 H PLOT 230,60 TO 250,60
320 FOR X = 1 TO 1000: NEXT
330 ROT= 0: SCALE= 1: FOR C = 1 TO 100 STEP 2
340 HCOLOR= 3
350 DRAW 1 AT C,C
360 IF C / 9 < > INT ( C / 9 ) THEN 390
370 L = 9:N = 1: GOSUB 1610:L = 5:N = 13: GOSUB 1610
380 GOTO 400
390 FOR X = 1 TO 100: NEXT
400 HCOLOR= 0: DRAW 1 AT C,C
410 NEXT
420 GOSUB 1030
430 HCOLOR= 1: REM GREEN CHEESE BORDER
440 FOR X = 0 TO 4
450 H PLOT X,X TO X,159 - X
460 H PLOT X,X TO 279 - X,X
470 H PLOT X,159 - X TO 279 - X,159 - X
480 H PLOT 279 - X,159 - X TO 279 - X,X
490 NEXT
500 HTAB 3
510 PRINT "FUEL    VEL    DIST    BURN    TIME"
520 POKE 34,21
530 REM SET INITIAL CONDITIONS
540 DEF FN B(W) = INT ( PDL (0) / 256 * 10)
550 FUEL = 120:VEL = - 50:DIST = 500:TIME = 0:BURN = FN B(0)
560 REM UPDATE CONDITIONS
570 IF FUEL < 0 THEN FUEL = 0
580 VTAB 22: HTAB 3: PRINT FUEL " ";
590 HTAB 11: PRINT VEL " ";
600 HTAB 18: PRINT DIST " ";
610 HTAB 26
620 IF FUEL = 0 THEN 640
630 IF PEEK ( - 16287 ) > 127 THEN F = 1: INVERSE : GOTO 650
640 F = 0
650 PRINT BURN:; NORMAL
660 HTAB 34: PRINT TIME " "
670 BURN = FN B(0)
680 REM DRAW
690 HCOLOR= 3
700 DRAW 1 AT TI * 2 + 6,144 - DIST / 600 * 120
710 IF INT ( TIME / 2 ) < > TIME / 2 THEN 740
720 N = 1:L = 9: GOSUB 1610:L = 4:N = 13: GOSUB 1610
730 GOTO 750
740 FOR X = 1 TO 100: NEXT
750 IF FUEL < BURN THEN B1 = FUEL
760 IF F THEN B1 = BURN: GOTO 780
770 B1 = 0

```

```

780 REM
790 FUEL = FUEL - B1
800 B1 = B1 * 5
810 ACC = B1 - 5
820 OD = DIST
830 DIST = INT (DIST + VEL + ACC / 8)
840 VEL = VEL + ACC
850 HCOLOR= 0
860 DRAW 1 AT TI * 2 + 6,144 - OD / 600 * 120
870 TI = TI + .5
880 IF DIST < = 0 THEN 920
890 IF DIST > = 675 THEN 940
900 GOTO 560
910 END
920 IF VEL = 0 AND DIST = 0 THEN 940
930 ROT= 16: HCOLOR= 3: DRAW 1 AT TI * 2 + 11,143
940 REM PRINT FINAL CONDITIONS
950 VTAB 22
960 HTAB 3: PRINT FUEL" ";
970 HTAB 11: PRINT VEL" ";
980 HTAB 18: PRINT DIST" ";
990 HTAB 26: PRINT BURN" ";
1000 HTAB 34: PRINT TIME" ";
1010 POKE 0,31:L = 0: GOSUB 1770: GOSUB 1770: GOSUB 1770: GOSUB
1770
1020 GOTO 1780
1030 POKE 34,20: HOME
1080 FOR X = 1 TO 5000: NEXT
1090 TEXT : HOME
1100 PRINT : PRINT
1110 HTAB 14: PRINT "INSTRUCTIONS"
1120 PRINT : PRINT
1130 PRINT " YOU ARE THE PILOT OF A NEW MODEL XXY3"
1140 PRINT "LUNAR VEHICLE. THE CRAFT HAS DEVELOPED"
1150 PRINT "A MINOR PROBLEM--THE GUIDANCE COMPUTER"
1160 PRINT "HAS FAILED. YOU MUST NOW ATTEMPT TO"
1170 PRINT "LAND ON THE LUNAR SURFACE FOR REPAIR"
1180 PRINT "WORK."
1190 PRINT
1200 PRINT " YOU CONTROL THE CRAFT BY BURNING FUEL"
1210 PRINT "AT REGULAR PERIODS. IF YOU BURN TOO"
1220 PRINT "MUCH FUEL, YOU MAY BE SHOT OUT OF THE"
1230 PRINT "MOON'S GRAVITY AND INTO THE COLD, DARK"
1240 PRINT "REACHES OF SPACE. IF YOU BURN TOO "
1250 PRINT "LITTLE FUEL, YOU WILL REACH THE LUNAR"
1260 PRINT "SURFACE-FOREVER."
1270 VTAB 24: PRINT "PRESS ANY KEY TO GO ON. "": GET A$
1280 HOME
1290 VTAB 4
1300 PRINT " THE AMOUNT OF FUEL TO BE BURNED"
1310 PRINT "IS CONTROLLED BY TURNING PADDLE 0. YOU"
1320 PRINT "MAY BURN AS MUCH AS 9 UNITS PER 1/2"
1330 PRINT "SECOND OR AS LITTLE AS 0 UNITS PER 1/2"
1340 PRINT "SECOND. PRESSING THE PADDLE 0 PUSHBUTTON";
1350 PRINT "WILL IGNITE THE FUEL."
1360 PRINT : PRINT
1370 PRINT "PRESS SPACE TO BEGIN COUNTDOWN "": GET A$
1380 HOME : VTAB 12
1390 PRINT "TIME REMAINING:";
1400 FOR X = 9 TO 1 STEP - 1
1410 HTAB 20: PRINT X;
1420 FOR CX = 1 TO 1000: NEXT : NEXT
1430 CALL 62450

```

```

1440 POKE - 16304,0
1450 HOME : POKE 34,20: HOME
1460 ROT= 0
1470 RETURN
1480 END
1490 TEXT : HOME : VTAB 12
1500 END
1510 END
1520 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208
: POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
1530 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166:
POKE 785,0: POKE 786,76: POKE 787,3: POKE 788,3:
1540 POKE 789,96:
1550 RETURN
1560 REM RANDOM "BLIP"
1570 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
1580 RETURN
1590 REM SCALE NOTE PLAYER
1600 REM ASSUMES N=115 AS A=440
1610 ON N GOTO 1620,1630,1640,1650,1660,1670,1680,1690,1700,1710,1720,17
30,1740
1620 POKE 0,192: GOTO 1770
1630 POKE 0,182: GOTO 1770
1640 POKE 0,173: GOTO 1770
1650 POKE 0,164: GOTO 1770
1660 POKE 0,155: GOTO 1770
1670 POKE 0,147: GOTO 1770
1680 POKE 0,139: GOTO 1770
1690 POKE 0,132: GOTO 1770
1700 POKE 0,124: GOTO 1770
1710 POKE 0,115: GOTO 1770
1720 POKE 0,110: GOTO 1770
1730 POKE 0,103: GOTO 1770
1740 POKE 0,96: GOTO 1770
1750 REM PLAY SCALE
1760 FOR N = 1 TO 13: GOSUB 1610: NEXT
1770 POKE 1,L: CALL 771: RETURN
1780 TEXT : HOME
1790 VTAB 10
1800 IF DIST > 0 THEN 1910
1810 IF FUEL = 120 THEN PRINT "SENSORS REPORT THAT YOU DID NOT BURN ANY
FUEL DURING THE LAST RUN. YOU MUST PRESSTHE BUTTON BEFORE ANY FUEL W
ILL BE USED.": GOTO 1860
1820 IF VEL = 0 AND DIST = 0 THEN PRINT "A PERFECT LANDING!!!!!!!!!!!!!!
!!!!!!!!!!!!": GOTO 1860
1821 IF DIST < 0 AND VEL > - 3 THEN PRINT "A GOOD LANDING!": GOTO 186
0
1830 IF DIST > - 3 AND VEL > - 5 THEN PRINT "CLOSE--VERY CLOSE": GOTO
1860
18INT "YOUR CRAFT HAS BEEN BEEN DAMAGED BY A PA
SSING EARTH-MARS SHUTTLE. YOU MAY TRY AGAIN AFTER YOU SETTLE THE COU
RT COSTS.": GOTO 1860
1930 PRINT "SENSORS SHOW YOUR NEXT DESTINATION TO BEPLUTO. HAVE A GOOD T
RIP.": GOTO 1860
2000 HIMEM: HI
2005 PRINT
2010 IF DE THEN PRINT "RUN APPLE BARREL SOFTWARE"
2020 END

```

```

]
]

```

DYNAMITE

```
1 HI = PEEK (115) + PEEK (116) * 256
```

```

2 DISK = ( PEEK (994) + PEEK (1001)) = 192
5 POKE - 16298,0
10 GOSUB 870
20 DEF FN R(X) = INT ( RND (1) * X + 1)
30 TEXT : HOME
40 VTAB 5
50 HTAB 16: PRINT "DYNAMITE"
60 PRINT
70 PRINT "WELCOME TO DYNAMITE! THE GAME IS VERY"
80 PRINT "SIMPLE. THERE ARE 15 STICKS OF DYNAMITE"
90 PRINT "IN AN ABANDONED MINE. ALL OF THEM ARE"
100 PRINT "UNLIT EXCEPT THE LAST ONE. THE GHOST"
110 PRINT "OF YOUR DEAD PARTNER HAS LIT THE LAST"
120 PRINT "STICK OF DYNAMITE AND NOW HE WANTS TO"
130 PRINT "PLAY A GAME WITH YOU (HA HA)."

```

```

610 IF D > M THEN PRINT "IS "M"." : GOTO 570
620 IF D > N THEN PRINT "THERE AREN'T THAT MANY TO TAKE!": GOTO 570
630 N = N - D: IF N = 0 THEN 650
640 GOTO 370
650 TEXT : HOME : VTAB 12
660 HTAB 16: PRINT "YOU LOSE"
665 POKE - 16302,0
667 FOR X = 1 TO 20: POKE - 16304,0: FOR TZ = 0 TO 180: NEXT : POKE -
16303,0: FOR TZ = 0 TO 180: NEXT : NEXT
670 INPUT "DO YOU WANT TO PLAY AGAIN? (Y/N) ":A$
680 IF LEFT$(A$,1) = "Y" THEN G = G + 1: GOTO 330
685 GOTO 10000
690 TEXT : HOME : VTAB 12: PRINT "I LOSE. YOU GET ALL THE GOLD, PARTNER!"
": GOTO 670
700 STOP
710 PRINT
720 REM UPDATE SCREEN
730 TEXT : HOME
740 VTAB 10
750 FOR X = 1 TO N
760 PRINT "*":: GOSUB 920
770 NEXT
780 PRINT
790 IF N = 1 THEN 820
800 PRINT "THERE ARE "N" STICKS IN THE PILE."
810 RETURN
820 PRINT "THERE IS 1 STICK IN THE PILE.": RETURN
830 REM RASBERRY
840 FOR T = 1 TO 50:D = PEEK ( - 16336): NEXT
850 RETURN
860 END
870 POKE 771,173: POKE 772,48: POKE 773,192: POKE 774,136: POKE 775,208:
POKE 776,4: POKE 777,198: POKE 778,1: POKE 779,240:
880 POKE 780,8: POKE 781,202: POKE 782,208: POKE 783,246: POKE 784,166: POKE
785,0: POKE 786,76: POKE 787,3: POKE 788,3:
890 CC = 2 ^ (1 / 12)
900 POKE 789,96:
910 RETURN
920 REM RANDOM "BLIP"
930 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
940 RETURN
950 REM SCALE NOTE PLAYER
960 REM ASSUMES N=114 AS A=440
970 ON N GOTO 980,990,1000,1010,1020,1030,1040,1050,1060,1070,1080,1090,
1100
980 POKE 0,192: GOTO 1140
990 POKE 0,181: GOTO 1140
1000 POKE 0,171: GOTO 1140
1010 POKE 0,162: GOTO 1140
1020 POKE 0,153: GOTO 1140
1030 POKE 0,144: GOTO 1140
1040 POKE 0,136: GOTO 1140
1050 POKE 0,128: GOTO 1140
1060 POKE 0,121: GOTO 1140
1070 POKE 0,114: GOTO 1140
1080 POKE 0,107: GOTO 1140
1090 POKE 0,101: GOTO 1140
1100 POKE 0,96: GOTO 1140
1110 REM PLAY SCALE
1120 FOR N = 1 TO 13: GOSUB 970: NEXT
1130 RETURN
1140 POKE 1,L: CALL 771: RETURN
10000 HIMEM: HI

```

```
10010 PRINT
10020 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
10030 TEXT : HOME : VTAB 12: END
```

```
]
]
```

PLOT

```
1 HCOLOR= 3
10 DISK = ( PEEK (994) + PEEK (1001)) = 192
20 HI = PEEK (115) + PEEK (116) * 256
30 HIMEM: 8192
35 Q0 = 0
40 REM HI-RES FUNCTION
50 REM PLOTTER
60 REM STICK FUNCTION IN LINE 1000
70 TEXT : HOME
80 VTAB 3: PRINT "FOR QUICK DEMO, PRESS RETURN IN ANSWER TO ALL QUESTIO
  NS.": VTAB 8
90 PRINT "THE CURRENT FUNCTION LOOKS LIKE THIS:"
100 LIST 1000,1499
110 POKE 34, PEEK (37)
120 INPUT "IS THIS THE FUNCTION YOU WANT? (Y/N) ":A$
130 IF LEFT$ (A$,1) = "N" THEN 1520
140 HGR
150 POKE 34,20: HOME
160 INPUT "ENTER Y MAXIMUM ":Q1$
170 Q1 = VAL (Q1$): IF Q1$ = "" THEN Q1 = 1
180 INPUT "ENTER Y MINIMUM ":Q2$
190 Q2 = VAL (Q2$)
200 IF Q2$ = "" THEN Q2 = - 1
210 IF Q2 > = Q1 THEN PRINT "MINIMUM IS GREATER THAN MAXIMUM-PLEASE R
  E-ENTER": GOTO 160
220 INPUT "ENTER X MINIMUM ":Q3$
230 Q3 = VAL (Q3$): IF Q3$ = "" THEN Q3 = - 10
240 INPUT "ENTER X MAXIMUM ":Q4$
250 Q4 = VAL (Q4$): IF Q4$ = "" THEN Q4 = 10
260 IF Q2 > = Q1 THEN PRINT "MINIMUM IS GREATER THAN MAXIMUM-PLEASE R
  E-ENTER": GOTO 220
270 IF Q2 < = 0 AND Q1 > = 0 THEN INPUT "WOULD YOU LIKE A Y AXIS ?":A
  $: IF LEFT$ (A$,1) = "Y" THEN Q0 = 1
275 IF LEFT$ (A$,1) < > "Y" THEN Q0 = 0
280 IF Q3 < = 0 AND Q4 > = 0 THEN INPUT "WOULD YOU LIKE AN X AXIS? ":
  A$: IF LEFT$ (A$,1) = "Y" THEN QX = 1
285 IF LEFT$ (A$,1) < > "Y" THEN QX = 0
290 IF QX THEN 1590
300 IF Q0 THEN 1800
310 REM DO THE PLOT
320 QX = 0
330 FOR X = Q3 TO Q4 STEP (Q4 - Q3) / 279
340 GOSUB 1000
350 QY = Y - Q2
360 IF QY < 0 THEN PRINT "PLOT AT "X" IS OUT OF THE AREA":Q0 = 0: GOTO
  420
370 QY = QY / (Q1 - Q2) * 159
380 QY = 159 - QY
390 IF QY < 0 THEN 360
400 IF NOT Q0 THEN HPLLOT QX,QY:Q0 = 1
410 IF Q0 THEN HPLLOT TO QX,QY
420 QX = QX + 1
430 NEXT
440 INPUT "ANOTHER PLOT? (Y/N) ":A$
450 IF LEFT$ (A$,1) = "Y" THEN 30
460 GOTO 2000
```

```

1000 Y = COS (X)
1500 RETURN
1520 REM NO, I WANT SOMETHING ELSE
1530 TEXT : HOME
1540 VTAB 4
1550 PRINT "ENTER YOUR FUNCTION BY TYPING 1000,"
1551 PRINT "THEN YOUR FUNCTION. 1000 IS THE"
1552 PRINT "LINE NUMBER OF THE PROGRAM. DO NOT"
1553 PRINT "USE LINE NUMBERS OVER 1499. DO NOT"
1554 PRINT "USE VARIABLES BEGINNING WITH Q. PRESS"
1555 PRINT "RETURN AFTER ENTERING 1000 AND YOUR"
1556 PRINT "FUNCTION. THEN TYPE RUN AND PRESS"
1557 PRINT "RETURN. "
1580 DEL 1000,1499
1590 REM DRAW X AXIS, TICS
1600 HCOLOR= 3
1610 QA = ABS (Q2) / (Q1 - Q2)
1620 QZ = 159 - QA * 160
1630 HPLOT 0,QZ TO 279,QZ
1640 INPUT "WOULD YOU LIKE 'TICS' ON THE X AXIS? ";A$
1650 IF LEFT$(A$,1) < > "Y" THEN 300
1660 INPUT "ENTER 'TIC' INTERVAL ";QT
1670 IF QT < = 0 THEN PRINT "OUT OF RANGE": GOTO 1660
1680 IF Q3 < = 0 AND Q4 > = 0 THEN 1760
1690 FOR QW = Q3 TO Q4 STEP QT
1700 QN = (QW - Q3) / (Q4 - Q3)
1710 QY = QN * 279
1720 HCOLOR= 3
1730 HPLOT QY,QZ - 3 * (QZ > = 3) TO QY,QZ + 3 * (Q1 < = 156)
1740 NEXT
1750 GOTO 300
1760 REM COMPUTE "DIFFERENT" START
1770 QL = ABS (Q3 / QT):QL = INT (QL):QL = QL * QT:QL = - QL
1780 FOR QW = QL TO Q4 STEP QT
1790 GOTO 1700
1800 REM DRAW Y AXIS,ETC
1810 HCOLOR= 3
1820 QA = ABS (Q3) / (Q4 - Q3)
1830 QZ = QA * 280
1840 HPLOT QZ,0 TO QZ,159
1850 INPUT "WOULD YOU LIKE 'TICS' ON THE Y AXIS ";A$
1860 IF LEFT$(A$,1) < > "Y" THEN 310
1870 INPUT "ENTER 'TIC' INTERVAL ";QT
1880 IF QT < = 0 THEN PRINT "OUT OF RANGE": GOTO 1870
1890 IF Q2 < = 0 AND Q1 > = 0 THEN 1960
1900 FOR QW = Q2 TO Q1 STEP QT
1910 QN = (QW - Q2) / (Q1 - Q2)
1920 QY = 159 - QN * 159
1930 HPLOT QZ - 3 * (QZ > = 3),QY TO QZ + 3 * (QZ < = 296),QY
1940 NEXT
1950 GOTO 310
1960 REM DIFFERENT START
1970 QL = ABS (Q2 / QT):QL = INT (QL):QL = QL * QT:QL = - QL
1980 FOR QW = QL TO Q1 STEP QT
1990 GOTO 1910
2000 PRINT
2010 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
2020 TEXT : HOME : VTAB 12

```

```

J
J

```

PACIFIER

```

1 DISK = ( PEEK (994) + PEEK (1001)) = 192

```

```

5 HI = PEEK (115) + PEEK (116) * 256
10 ONERR GOTO 280
30 HIMEM: 8192
40 HGR
45 POKE 34,20: HOME
46 PRINT : PRINT "          PRESS ANY KEY FOR NEW PATTERN"
47 PRINT "          PRESS <CTRL-C> TO STOP"
50 XC = 280 / 2 - 1
60 YC = 159 / 2: REM CHOOSE CENTERS
70 DEF FN R(X) = INT ( RND (1) * X + 1)
80 X = FN R(XC):Y = FN R(YC)
90 HCOLOR= 3
100 XD = FN R(3) - 2: REM PICK A NEW DIRECTION
110 IF FN R(100) < 3 THEN 40
115 IF PEEK ( - 16384) > 127 THEN GET W$: GOTO 40
120 YD = FN R(3) - 2
130 L = FN R(XC / 2)
140 FOR N = 1 TO L
150 IF X + XD < 0 THEN 100
160 IF X + XD > XC THEN 100
170 X = X + XD
180 IF Y + YD < 0 THEN 100
190 IF Y + YD > YC THEN 100
200 Y = Y + YD
210 HPLOT X,Y
220 HPLOT 279 - X,Y
230 HPLOT X,159 - Y
240 HPLOT 279 - X,159 - Y
250 NEXT
260 GOTO 100
280 TEXT : HOME
285 IF PEEK (222) < > 255 THEN PRINT "BAD ERROR!": END
300 HIMEM: HI
301 PRINT
610 IF DISK THEN PRINT "RUN APPLE BARREL SOFTWARE"
620 TEXT : HOME : VTAB 12

```

```

J
J

```

SHAPE BUILDER

```

0 TEXT : HOME
1 GOSUB 5000
2 POKE 20000,1: POKE 20001,0: POKE 20002,4: POKE 20003,0: POKE 232,32: POKE
  233,78
5 HIMEM: 8192
10 GOTO 290
30 REM SHAPE BUILDER
40 REM COPYRIGHT
50 REM
60 REM
70 REM *****
80 REM
90 REM
100 REM BUILD SHAPE
110 A(MA) = 255
120 INPUT "ENTER STARTING ADDRESS ":A
125 A1 = A
130 TR = 0:D1 = 0
140 FOR X = 0 TO MAX
150 C = A(X)
155 IF C = 0 THEN 1000
160 IF C = 255 THEN 270
170 IF TR + 8 ^ D1 * C > 255 THEN 230

```

```

180 TR = TR + 8 ^ D1 * C
190 D1 = D1 + 1
210 NEXT
220 STOP
230 POKE A,TR
240 A = A + 1
250 TR = 0:D1 = 0
260 GOTO 170
270 POKE A,TR: POKE A + 1,0: PRINT "LENGTH: "A - A1 + 2: END
280 REM ENTER SHAPE
290 GR : REM INIT LORES
300 DIM A(500)
310 HOME
320 COLOR= 15
330 X = 20:Y = 20
340 REM SET UP INITAL MODES
350 C$ = "PLOT ":D$ = "UP ":C = 1:D = 0
360 O = SCRNX(X,Y): COLOR= 2: PLOT X,Y
370 VTAB 23: PRINT C$,D$:: HTAB 1
380 GET A$
390 F = PEEK ( - 16336) + PEEK ( - 16336)
400 IF A$ = CHR$ (27) THEN 110
410 IF A$ = "X" THEN 500
420 IF A$ = "C" THEN 540
430 IF A$ = "I" THEN 570
440 IF A$ = "M" THEN 580
450 IF A$ = "J" THEN 590
460 IF A$ = "K" THEN 600
470 IF A$ = " " THEN 610
480 IF A$ = "R" THEN 720
490 PRINT "": GOTO 370
500 C = NOT C
510 IF C THEN C$ = "PLOT "
520 IF NOT C THEN C$ = "NOPLOT"
530 GOTO 370
540 VTAB 23: PRINT "CLEAR? ": GET A$
550 IF A$ < > "Y" THEN HTAB 1: GOTO 370
560 RUN 290
570 D$ = "UP ":D = 0: GOTO 370
580 D$ = "DOWN ":D = 2: GOTO 370
590 D$ = "LEFT ":D = 3: GOTO 370
600 D$ = "RIGHT":D = 1: GOTO 370
610 REM ACTUATE
611 IF D = 0 AND Y = 0 THEN 360
612 IF D = 1 AND X = 39 THEN 360
613 IF D = 2 AND Y = 39 THEN 360
614 IF D = 3 AND X = 0 THEN 360
620 COLOR= 0: PLOT X,Y
630 COLOR= 15
640 IF C THEN PLOT X,Y
650 ON D GOTO 670,680,690
660 Y = Y - 1: GOTO 700
670 X = X + 1: GOTO 700
680 Y = Y + 1: GOTO 700
690 X = X - 1
700 TY = 4 * C + D:A(MA) = TY:MA = MA + 1
710 GOTO 360
720 VTAB 23: PRINT "RESET? ": GET A$
730 IF A$ < > "Y" THEN HTAB 1: GOTO 370
740 HOME : GR
750 INPUT "ENTER X,Y ":X,Y
760 IF X < 0 OR Y < 0 OR X > 39 OR Y > 39 THEN 750
766 MAX = 0: REM SMART, HUH?

```

```

770 HOME
780 GOTO 340
1000 IF D1 = 0 THEN 160
1020 IF A(X + 1) < 4 AND A(X + 1) < > 0 THEN 160
1025 IF A(X + 1) = 0 THEN D1 = 2:X = X + 1: GOTO 1030
1026 D1 = 1
1030 POKE A,TR:A = A + 1:TR = 0: GOTO 210
5000 VTAB 5
5010 PRINT "SHAPE BUILDER WILL HELP YOU TO QUICKLY"
5020 PRINT "DRAW SHAPES IN YOUR PROGRAMS. FULL"
5030 PRINT "DETAILS ARE IN YOUR MANUAL."
5040 PRINT
5050 PRINT "YOUR DIRECTION KEYS ARE I, J, K, AND M."
5060 PRINT "WHICH PERFORM THE USUAL FUNCTIONS. "
5070 PRINT "(I. E. READ THE MANUAL.)"
5080 PRINT
5090 PRINT "TO CHANGE FROM PLOT TO NOPLOT USE THE "
5100 PRINT "X KEY. THE C KEY WILL CLEAR THE SHAPE SO";
5110 PRINT "YOU MAY START OVER. R WILL RESET THE "
5120 PRINT "COORDINATES TO ALLOW YOU TO BEGIN THE "
5130 PRINT "SHAPE AT A POINT OTHER THAN THE CENTER."
5140 PRINT
5145 PRINT "RESPOND TO ALL QUESTIONS (Y/N)": PRINT
5150 PRINT "PRESS SPACE TO GO ON. ";: GET A$: RETURN

```

```

]
]

```

MUSIC UTILITIES

```

10 REM THESE ARE THE MUSIC UTILITIES
20 REM USED TO DEATH IN THE REST OF THE
30 REM PROGRAMS. IF YOU WANT TO USE THEM,
40 REM YOU MAY EITHER
50 REM 1) STRIP THEM OFF THE REST OF THE PROGRAMS
60 REM 2) USE THEM HERE.
70 REM
80 REM ALL YOU HAVE TO DO TO USE THE THING IS
90 REM TYPE SOMETHING LIKE THIS IN YOUR
100 REM MASTERPIECE--
110 REM
120 REM 10 GOSUB 60040
130 REM IT IS PREFERABLE THAT THE ABOVE LINE BE
140 REM USED EARLY IN THE PROGRAM. IF YOU DO
150 REM NOT DO THIS GOSUB, SOME AWFUL THINGS
160 REM CAN HAPPEN.
170 REM
180 REM 1. YOUR DISK MAY BE GARBAGED.
190 REM 2. YOUR TEMPER MAY BLOW A FUSE
200 REM 3. THE REST OF YOUR PROGRAM MAY BE
210 REM RUINED.
220 REM 4. YOU MAY GIVE UP COMPUTER PROGRAMMING
230 REM 5. THE WORLD MAY COME TO AN END
240 REM
250 REM OF THE ABOVE, OPTIONS 1, 2, AND 3 ARE MOST LIKELY.
260 REM OPTION 1 HAS HAPPENED TO ME, SO BE CAREFUL!!
265 REM
270 REM THE SUBROUTINES ARE AS FOLLOWS:
280 GOSUB 60000: REM A RASBERRY-BRONX CHEER, WHATEVER
290 REM GOSUB 60090: REM A RANDOM "BLIP"
300 REM GOSUB 60140: REM SCALE NOTE PLAYER
310 REM FOR THE ABO POKE 788,3:
60060 CC = 2 ^ (1 / 12)
60070 POKE 789,96:
60080 RETURN

```

```

60090 REM RANDOM "BLIP"
60100 POKE 0, RND (1) * 50 + 50: POKE 1,8: CALL 771
60110 RETURN
60120 REM SCALE NOTE PLAYER
60130 REM ASSUMES N=114 AS A=440
60140 DN N GOTO 60150,60160,60170,60180,60190,60200,60210,60220,60230,60
240,60250,60260,60270
60150 POKE 0,192: GOTO 60310
60160 POKE 0,181: GOTO 60310
60170 POKE 0,171: GOTO 60310
60180 POKE 0,162: GOTO 60310
60190 POKE 0,153: GOTO 60310
60200 POKE 0,144: GOTO 60310
60210 POKE 0,136: GOTO 60310
60220 POKE 0,128: GOTO 60310
60230 POKE 0,121: GOTO 60310
60240 POKE 0,114: GOTO 60310
60250 POKE 0,107: GOTO 60310
60260 POKE 0,101: GOTO 60310
60270 POKE 0,96: GOTO 60310
60280 REM PLAY SCALE
60290 FOR N = 1 TO 13: GOSUB 60140: NEXT
60300 RETURN
60310 POKE 1,L: CALL 771: RETURN

```

```

]
]

```

SCREEN PRINT

```

10 TEXT : HOME : VTAB 5: PRINT "SCREEN PRINT": PRINT : PRINT "REFER TO M
ANUAL BEFORE USING.": DEL 10,10
63000 REM SCREEN DUMP
63010 REM SLOT DEFAULTS TO 1 UNLESS SPECIFIED
63020 REM BY TYPING "63100 SL=(SLOT NUMBER"
63030 REM IF YOU ARE USING SOME NON-INTELLEAGENT
63040 REM DEVICE SUCH AS THE "SIMPLE SERIAL
63050 REM INTERFACE" DESCRIBED IN THE APPLE
63060 REM REFERENCE MANUAL, TYPE
63070 REM "63100 SL=0:AD= (ADDRESS TO INIT PRINTER)"
63080 REM TYPE "GOSUB 63120" TO BEGIN DUMP."
63090 REM REM REM REM REM REM REM REM REM
63100 SL = 1
63110 RETURN
63120 REM ACCESS HERE
63130 GOSUB 63100
63140 IF SL > 0 THEN PR# SL: GOTO 63160
63150 POKE 54,AD / 256: POKE 55,256 * ((AD / 256) - INT (AD / 256)) + .
5
63160 REM NOW WE DUMP THE SCREEN
63170 MARGIN = 3: REM NUMBER OF CR'S GENERATED
63180 IF MA = 0 THEN 63200
63190 FOR X = 1 TO MA: PRINT : NEXT
63200 REM SET FOR SCREEN DUMP
63210 FOR Y = 1 TO 24
63220 FOR X = 1 TO 40
63230 E = SCRN( X - 1,2 * (Y - 1)) + 16 * SCRN( X - 1,2 * (Y - 1) + 1)
63240 IF E < 64 THEN E = E + 128
63250 IF E < 128 THEN E = E + 64
63260 E = E - 128
63270 PRINT CHR$( E);
63280 NEXT : PRINT : NEXT
63290 PR# 0
63300 IF PEEK (994) + PEEK (1001) = 192 THEN CALL 1002
63310 RETURN

```

J
J

HI-RES TEXT WRITER

```
0 L = PEEK (175) + PEEK (176) * 256 - 653
1 POKE 233,L / 256: POKE 232,256 * (L / 256 - PEEK (233)) + .5
2 GOSUB 60000
3 HR$ = " ABC ETC 1234567890": GOSUB 60150
4 GOSUB 60150
5 GOSUB 60150
6 GOSUB 60150
7 POKE 34,20: HOME : PRINT "SEE MANUAL FOR INSTRUCTIONS"
8 PRINT "RE-BOOT FOR MENU"
10 END
59999 END
60000 REM THIS IS THE NEAT LITTLE ROUTINE
60010 REM INITIALIZE IT WITH "GOSUB 60000"
60020 REM FEED IT WITH HR$
60030 REM ALSO WITH TENDER LOVING CARE
60040 REM GOSUB 60000
60050 REM HR$="HI THERE!!!!!"
60060 REM GOSUB 60200
60070 REM PRINTS "HI THERE" ON THE SCREEN
60080 REM HR$ = "HI THERE %" WILL NOT PRINT A CARRIAGE RETURN
60090 HIMEM: 8192
60100 SCALE= 1: ROT= 0: HCOLOR= 3
60110 HGR
60120 HP = 1: REM 32 TO THE LINE
60130 HL = 1: REM 16 TO THE SCREEN
60140 RETURN
60150 HK$ = RIGHT$ (HR$,1)
60160 IF HK$ = "%" THEN HN% = 1:HR$ = LEFT$ (HR$, LEN (HR$) - 1)
60170 IF HK$ < > "%" THEN HN% = 0
60180 FOR HX = 1 TO LEN (HR$)
60190 HQ$ = MID$ (HR$,HX,1)
60200 IF HQ$ = " " THEN 60250
60210 IF HQ$ < "A" THEN 60310
60220 IF HQ$ > "Z" THEN HQ$ = "?": GOTO 60310
60230 HN = ASC (HQ$) - 64
60240 DRAW HN AT (HP - 1) * 10,(HL - 1) * 9
60250 HP = HP + 1: IF HP = 29 THEN HP = 1:HL = HL + 1
60260 IF HN = 23 THEN HN = 0
60270 NEXT
60280 IF NOT HK THEN HL = HL + 1: IF HL = 24 THEN HL = 1
60290 IF NOT HK THEN HP = 1
60300 RETURN
60310 REM HANDLE NUMBERS, !?.
60320 IF HQ$ = "." THEN HN = 39: GOTO 60240
60330 IF HQ$ = "!" THEN HN = 38: GOTO 60240
60340 IF HQ$ < "0" OR HQ$ > "9" THEN HQ$ = "?": GOTO 60310
60345 IF HQ$ = "0" THEN HN = 36: GOTO 60240
60350 HN = ASC (HQ$) - 22: GOTO 60240
```

J
J

*

```
0300- A9 20 LDA ##20
0302- 85 01 STA #01
0304- A9 00 LDA ##00
0306- 85 00 STA #00
0308- A0 00 LDY ##00
```

```

030A- B1 00 LDA ($00),Y
030C- 49 7F EOR #$7F
030E- 91 00 STA ($00),Y
0310- E6 00 INC $00
0312- D0 F6 BNE $030A
0314- E6 01 INC $01
0316- A5 01 LDA $01
0318- C9 40 CMP #$40
031A- D0 EE BNE $030A
031C- 60 RTS
031D- 4A LSR
031E- 4A LSR
031F- 09 C0 .ORA ##C0
0321- 85 3F STA $3F
0323- A9 5D LDA ##5D

```

*

]
]

MENU UTILITY

```

10 HOME
20 REM DISK MENU
30 ONERR GOTO 50100
40 DIM A$(40),V$(40)
50 REM IF YOU HAVE MORE PROGRAMS THAN
60 REM THIS, USE THIS PROGRAM TWICE.
70 CENTER = 1: REM 1 WILL CENTER, 0 WILL LEFT JUSTIFY
80 FOR X = 1 TO 5
90 READ CO$(X)
100 NEXT
110 FOR G = 1 TO 40
120 READ A$(G)
130 READ V$(G)
140 NEXT
150 TEXT : HOME
160 PRINT : PRINT
170 PR# 0
180 FOR X = 1 TO 5
190 IF LEN (CO$(X)) = 0 THEN 220
200 IF CE THEN N = 20 - LEN (CO$(X)) / 2
210 IF CE AND LEN (CO$(X)) < 40 THEN HTAB N
220 PRINT CO$(X)
230 NEXT
240 PRINT
250 FOR X = 1 TO G - 1
260 PRINT " " "X" "A$(X)
270 PRINT " " "V$(X)
280 IF X / 5 = INT (X / 5) THEN GOSUB 50000
290 NEXT
300 PRINT : PRINT
310 POKE 34, PEEK (37): IF ZF THEN INPUT "":A$: GOTO 330
320 PRINT "PRESS RETURN TO RESTART, OR": INPUT "ENTER BY NUMBER ":A$
330 REM
340 IF VAL (A$) = 0 THEN RUN
350 A = VAL (A$)
360 IF A < = 0 THEN HOME : GOTO 310
370 IF A = > G THEN HOME : GOTO 310
380 TEXT : HOME
390 VTAB 12
400 PRINT "REWIND TAPE AND PRESS SPACE "": GET A$
401 PRINT
405 PRINT "PRESS PLAY BUTTON ON TAPE"
410 PRINT "NOW LOOKING FOR "A$(A)". "

```

```

430 GOSUB 40000
440 IF A = 1 THEN LOAD
445 PRINT "NOW SKIPPING "A$(1)". "
450 GOSUB 40040
460 GOSUB 40000
470 PRINT "NOW SKIPPING MENU"
480 GOSUB 40040
490 N = 2
500 N1 = A - N
510 GOSUB 40000
520 IF N1 = 0 THEN LOAD
530 PRINT "NOW SKIPPING "A$(N)". "
540 GOSUB 40040
550 N = N + 1: GOTO 500
40000 REM FIND THE LEADER
40010 GOSUB 45000
40020 IF TT = 0 THEN 40010
40030 RETURN
40040 REM WAIT THROUGH A PROGRAM
40050 GOSUB 45000
40060 IF TT > 1 THEN 40050
45000 T1 = PEEK (49248) > 127:TT = 0
45010 FOR X = 1 TO 20
45020 TN = PEEK (49248) > 127
45030 IF TN < > T1 THEN TT = TT + 1:T1 = TN
45040 NEXT : RETURN
45999 STOP
50000 IF X = G - 1 OR G - 1 < = 10 THEN RETURN
50010 PRINT
50020 VTAB 22: POKE 34, PEEK (37)
50030 PRINT "PRESS RETURN FOR MORE ,OR": INPUT "ENTER BY NUMBER ":A$
50040 A = VAL (A$)
50050 IF A < > 0 THEN 330
50060 ZF = 0
50070 POKE 34,7: HOME : POKE 34,9: HOME
50080 RETURN
50090 STOP
50100 IF PEEK (222) = 42 THEN 150
50110 IF PEEK (222) = 255 THEN 150
50120 PRINT "CUTE--REALLY CUTE": RUN
60000 DATA APPLE BARREL SOFTWARE
60010 DATA GOOD TO THE LAST BYTE
60020 DATA COPYRIGHT 1979 CDS CORP.
60030 DATA
60040 DATA MASTER MENU
60050 REM HERE ON OUT WE HAVE TITLES
60060 DATA APPLESAUCE CAKE,(GRAPHICS INTR DATA CHECKBOOK
60180 DATA
60190 DATA PACIFIER
60200 DATA
60210 DATA LUNA C T OR L
60220 DATA
60230 DATA DYNAMITE
60240 DATA
60250 DATA SHAPE BUILDER
60260 DATA
60270 DATA SCREEN PRINT
60280 DATA
60290 DATA PLOT
60300 DATA
60310 DATA MUSIC UTILITY
60320 DATA
60330 DATA ALIEN

```



AVAILABLE FROM: