

LA 99^{ers}

Topics

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TERRIES' LAST CORNER

This was not the way I had intended to return to the helm of this newsletter, but que sera sera. When I extended my hand in unconditional friendship, I did not expect the knife in the back.

The long saga of my father's declining health came to an end January 14th, my parents 62nd wedding anniversary. We feel he held on to give mama that day.

My mother unfortunately went through a rough March, but trooper that she is has survived it and is now in cardiac rehabilitation at 89+.

My son and grandchildren are in the midst of a "Mr. Mom" scenario, and doing quite well.

Me, well I am doing a landrush business for both Honda motors and Unocal. My mother's home is 46 miles NE from my apartment, my son's home is 103.5 miles south of my mother's home, and it is 75 miles north back to my place. The car I purchased February 5th has 4300 miles on it today April 16. To be honest, it did go round trip Los Angeles Tucson.

I am a bit sad about the end of my 99/4A experience and this club, but I sure can make use of the time. I do plan to attend the "FESTS. FAIRS, FAIRES" as I am able. Might even make Ottawa this year, mom's health permitting.

I really had a lot to say prior and subsequent to the Chicago fair. Time and tide didn't wait.

Tucson showed how the dedication of a few can triumph. We all can take lessons from them.

Friendships developed over these last years will continue to flourish. My deepest thanks to those who sent their wishes during my time of anguish. My good friend Barry Traver is also facing these emotions during this time of his father's serious illness. He too needs your thoughts and prayers.

Our good friend in Melbourne, Peter Gleed is also having "a bit of a go of it". I recently received a backlog of "The Melbourne Times". Peter's "Hi Down There" series now has a co-writer. GS has been joined by GSR. Hopefully these will be caught up in this issue. They are great, show lots of heart, and mean alot to one who knew both George Steffen and Guy Stefan Romano.

In the event anyone wants to reach me directly, please use my residence address; 148C South Maple Drive, Beverly Hills, Ca. 90212. The club Post Office box has been moved far distant from me with a forwarding notice for all received mail, therefore my mail too unfortunately is beyond my easy reach.

To my friends and foes, adios.

LA 99^{ers} COMPUTER GROUP • P.O. BOX 67A79 • LOS ANGELES CA 90067

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RAMBLIN' THOUGHTS FROM THE PRESIDENT

HERE I SIT LOOKING LIKE A COUCH POTATO WATCHING TV, STARING AT A BLANK TI WRITER EDITOR SCREEN; THINKING AND WONDERING ABOUT WHAT I AM SUPPOSED TO WRITE ABOUT. HOW DID IT HAPPEN? HOW DID I GET IN TO THIS PREDICAMENT? I NEVER WROTE ANYTHING BEFORE IN MY SHORT (SHORT?) SPAN OF TIME ON THIS GREAT EARTH THAT GOD HAS GIVEN US. ONLY IN SCHOOL FOR BOOK REPORTS AND A FEW LETTERS TO FRIENDS.

IT ALL STARTED AT A BOARD MEEETING WHEN ONE OF MY FRIENDS ANNOUNCED HIS RESIGNATION AS PRESIDENT OF THIS USER GROUP. I ASKED A QUESTION AND THD NEXT THING I KNEW I WAS VOTED IN AS PRESIDENT OF THE CLUB. NOW AS THE PRESIDENT I WISH TO THANK EVERYBODY FOR STAYING WITH THE TI COMMUNITY AFTER OUR PARENT CO. DECIDED TO ABANDON US. BUT WITH EACH OTHERS HELP WE WILL GO FORTH FOR MANY YEARS TO COME WITH NEW SOFTWARE AND HARDWARE AS WE HAVE IN THE PAST.

IT CAN ONLY GET BETTER WITH THE HELP OF OUR MANY FREINDS AND THEIR FINE TALENTS. WE HAVE ALREADY GONE FARTHER THAN ANYBODY EXPECTED US TO GO. I WOULD LIKE TO THINK I HAVE MADE A LOT OF NEW FRINDS IN THIS CLUB, LOCALLY AND IN OTHER STATES AND COUNTRIES AS WELL. I PERSONALLY WISH TO THANK ALL THE NEW PEOPLE WHO JUST JOINED US FOR THE FIRST TIME AND ALL THE RENEWALS ALSO FOR STAYING WITH US. WE TRULLY WISH THEM A VERY WARM WELCOME TO THE TI COMMUNITY.

WE ARE HERE TO SERVE YOU. IF YOU HAVE ANY QUESTIONS PLEASE DO NOT BE AFRAID TO ASK THEM OF ANYBODY. WE WILL ANSWER THEM ..IF WE CAN AND GIVE YOU AN HONEST ANSWER OR WHEN POSSIBLE COME TO YOUR HOUSE AND HELP YOU (IF DISTANCE PERMITS.) IF WE CAN'T HELP YOU WE USUALLY CAN RECOMMEND SOMEONE OR REFER YOU TO SOMEONE WHO CAN. WHEN I FIRST JOINED THE CLUB I WAS SCARED AND A COMPLETE COMPUTER ILLITERATE. I STILL AM IN A WAY BUT I LEARN NEW THINGS EVERY DAY. IT NEVER CEASES TO AMAZE ME THE THINGS THAT WE CAN DO WITH A COMPUTER. EVEN WITH MY LIMITED KNOWLEDGE IT HAS BEEN AN ADVANTAGE AND AN ADVENTURE IN MY EVERY DAY JOB. PLEASE WRITE US AND LET US KNOW IN WHAT WAY OR UNIQUE WAY THAT YOU USE YOUR COMPUTER. YOU MAY BE DOING SOMTHING THAT COULD BE USEFUL TO THE REST OF US.

I HAVE BEEN TOLD TO DUMP MY SYSTEM. "DON'T PUT ANY MORE MONEY IN TO IT. GET A DIFFERENT ONE. GET A FASTER ONE." ALL OF THIS SOUNDS LIKE GOOD ADVICE. THEN I ASK MYSELF, "WHY SHOULD I? IT DOES EVERY THING I WANT A COMPUTER TO DO RIGHT NOW. AFTER ALL I HAVE A LOT OF TIME AND MONEY INVESTED." THERE MAY BE A DAY WHEN I WILL NEED A DIFFERENT COMPUTER BUT IT DOSN'T LOOK LIKE IT WILL BE IN THE NEAR FUTURE.

MY TIME IS UP FOR NOW. LOOKING FOWARD TO NEXT MONTH.

YOUR PRESIDENT
EDGAR MAY

MEMBERSHIP NOTES by Harold Jeffries

We are very pleased to welcome into our membership:
Ray B. Hollier and the MOArk User Group

Our membership has increased in the last 6 months by approximately 12 members. It makes us realize there are dedicated TI 99ers in this world yet. Come join at our meeting and bring a guest with you!!!

BACK TO BASIC - LOAN ANALYSIS AND PRINTER =====

by Tom Freeman

Among the many ways I have found my TI to be so useful over the last few years is the adaptability of Basic. Even though I am an adept assembly language programmer, and there is certainly no way to beat the speed of assembly for large programs especially when there is a lot of screen I/O, Basic cannot be surpassed for the ease with which one can just "figure out" something. Got a problem? Write a quick program to solve it! The following program is illustrative of this. I wrote most of it some years ago when I was interested in knowing how much equity I was getting in my home mortgage. I quickly revised and enhanced it last night so that it does much of what I used the module "Home Budget Management" for, and it has print capabilities! When I bought my first house I wanted a printout of the loan payments for the life of the loan. I had to send off to some company in another city that had a mainframe computer and paid \$5 (1970 dollars!) for it. Here you have the same thing for free! Of course it can be used for car loans too.

Please note that the program listing includes the remark character (!) and 3 numbers at the end of each line. You do NOT need to type these in. They are for use with my Checksum program to ensure accuracy of typing. [For those of you not familiar with that program, it is available through the LA99er library, on a utility disk which contains many other useful programs as well. The cost including an instruction booklet is \$8.00 plus P and H. Micropendium uses Checksum on all the basic programs it publishes]

The program has two main sections. The first will calculate for you the size of the monthly payment (or any other frequency) based on the size of the loan and the length of the repayment period. The result will be given to the next higher cent. The second section will print to the screen or a printer a table of payments based on figures from the first section; which can be changed, or you can go directly to the second section and input the numbers there if you know them. Line 120 allows the choice. Note that I allow upper or lower case responses when letters are called for (VALIDATE with a string allows only the characters listed, or enter) and in this case just check directly at the end of the line for P or p.

Line 130 then displays the items that have to be inputted, and line 140 accepts the data. Frequency of payment defaults to 1, since monthly is the most common. If you pay a long quarterly you would type 4 here, etc. In this line the validation word NUMERIC, as opposed to DIGIT, allows a decimal point as well as numerals. Lines 150-170 actually compute the payment, based on the following formula: (L = size of loan, I = interest per pay period, n = total number of repayment periods. P = payment)

$$P = \frac{LI}{1 - \frac{1}{(1+I)^N}}$$

(I can't get a superscript for the N to print properly - that part is (1+I) raised to the Nth power). Written in proper computer syntax, this would read $P=L*I/(1-1/(1+I)^N)$. For

some reason the computer can't handle the interim calculations in the proper order and tells me there is a numeric overflow, so I divided up the steps and that seemed to work. [I got this formula from a book, but it can be derived. See the end of the article if you are really interested in this!] Note that line 150 rewrites the interest rate to correspond to the repayment period AND make it an actual decimal. Line 180 allows you to input the data again before the result is printed. Note the little trick at the end of the line. The character typed in is converted to an ASCII number. All lower case characters have a number which is 32 higher than the corresponding upper case character. In binary notation they all have a 1 bit in the 3rd position from the left, otherwise they are identical. In binary this is 00100000. By performing the Boolean operator OR on the number therefore, all upper case characters are converted to lower case, and lower case are left unchanged. Hence I can check for the lower case only - 110 is "n" and so the program returns to line 130. Line 190 displays the result and allows back again, using the same logic in line 200 as in 180. If you go to the second section of the program with "P" you will still be allowed the option of printing to the screen or a printer.

Now for the second section, which details each payment. Line 210 displays the previous data, if you went through section 1, as defaults, and you may accept them all or change any one. [For instance, I increased the loan payment on my house to make it pay off in 20 years instead of 30, and I also rounded off to an even dollar.] Line 220 allows for data input. Note that you may wish to print less than a full list. Also there is a provision for an extra number of days in the first repayment period, since some loans are arranged to pay on the same day each period. Usually this amount of interest is prepaid as a "cost" of the loan, but it may not be so this was included just in case. With home loans where initially the payments go almost completely to interest (!) more than a few days would negatively amortize the loan in the first period. Line 230 was put in to keep the default of the original loan size in case of going back to print on printer. Line 240 allows you to correct the input, 250 does some quick interim calculations, 260 allows for the start date of the first payment (2 digit figures for month and year), and 270 allows for output to the screen or the printer. Line 280 is the printer name - change it if yours is different. Lines 290 to 310 are image statements to make the output neater - it can also be done with tabs but this is easier, especially since decimal points can be lined up.

If you haven't used the IMAGE statement before, here is a quick lesson. A line with an IMAGE statement on it can have only one, and nothing else. It is ignored by the program flow and used only when a "PRINT USING" or "DISPLAY USING" statement is encountered. It should be a mirror image of what you wish to see with each sequence of # signs used for a single string, number, or variable to be printed. Non # characters are printed as is, and in the same position. When a period is encountered in a numeric variable, the number is converted to decimal, with the number of places equal to the number of # signs after the period. The first use in the program of the IMAGE is in line 320. Note the syntax - if you are printing to a file or device a comma must

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follow the file number, and a colon after the USING XXX. The variable list must be separated by commas, not semi-colons, and if a comma follows the last one the next variable will be placed in the next position. Otherwise each PRINT USING will start using the IMAGE at the beginning again. If there are too many variables for the IMAGE then an error will result.

If your output is to the screen, only the amount of interest and principal of each payment, plus the remaining balance, will be printed on each line (alternating with the date of the payment). This begins in line 410. Line 420 begins the loop. The current interest to be paid is calculated by multiplying the interest (I2) times the present balance (L) and rounding to the nearest penny. [The extra interest of the first period, if any, as added.] Line 430 puts the year into a string form, with a leading "0" if necessary (IMAGE will not do this with a numeric variable, and the years from 2000 to 2009 would look funny as 0 to 9 as opposed to 00 to 09). Line 440 calculates the amount left from the payment for principal, and then the new balance. In the case of the last payment, which may be greater than the balance left, the payment is appropriately reduced in line 450 so the balance is zero. [This will mess up the defaults if you go back to print again for hard copy, but it can always be changed back and it will only happen with the final payment.] Finally lines 460 and 470 print out this periods figures, and keep track the total interest paid for printing at the end. Lines 480 to 500 allow you to stop the printing process with any key press and to restart it. The CALL SOUND in 490 is a cheap delay loop. Then line 520 resets the month and year (if necessary) and line 520 loops back. After the loop is finished, the total interest is printed and you are allowed the choice of going back to print on printer.

Lines 320 to 400 do same as in the last paragraph but for hard copy output. Because there is not a line limit of 28, more data, including the date, can be put on the same line, so the program statements differ slightly, but the logic is the same. Just for fun line 380 prints some of the data on the screen, but without scrolling, so you can watch it change (literally, the balance decreasing!). I have used this section to print 12 months at a time. The final balance is used as the start figure for the next year.

Have fun with this - you may actually find it useful!

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100 ! LOAN ANALYSIS PROGRAM
BY   TOM FREEMAN
    515 ALMA REALDRIVE
    PACIFIC PALISADES, CA90272
!159
110 F=1 :: DISPLAY AT(10,2)E
RASE ALL:"LOAN ANALYSIS AND
PRINTER":TAB(7);"BY TOM FR
EEMAN":TAB(7);"COPYRIGHT 1
990" !218
120 DISPLAY AT(20,1):"TYPE P
TO PRINT PAYMENTS OR PRESS
ENTER TO CALCULATE THEPAYMEN
T" :: ACCEPT AT(24,9)VALIDAT
E("Pp"):ANS$ :: IF ANS$="P"
OR ANS$="p" THEN 210 !220
130 DISPLAY AT(1,1)ERASE ALL
:"SIZE OF LOAN":"FREQ. OF PA
YMENTS(MO) 1":"INTEREST RATE
(YR)": "NUMBER OF PAYMENTS" !
150
140 ACCEPT AT(1,14)VALIDATE(
NUMERIC):L :: LL=L :: ACCEPT
AT(2,23)SIZE(-2):F :: ACCEP
T AT(3,19)VALIDATE(NUMERIC):
I :: ACCEPT AT(4,20)VALIDATE
(NUMERIC):N !049
150 I1-I*F/1200 !221
160 I2=(1+I1)*N !238
170 P=L*I1/(1-1/I2):: P=INT(
100*P)/100 :: PP=P :: LL=L !
108
180 DISPLAY AT(10,7):"CORREC
T? (Y/N) Y" :: ACCEPT AT(10,
22)SIZE(-1)VALIDATE("YNo").
ANS$ :: ANS=ASC(ANS$):: ANS-
ANS OR 32 :: IF ANS=110 THEN
130 !248
190 DISPLAY AT(12,1):"EACH P
AYMENT IS: $":STR$(P):: "DO
THIS AGAIN A":"PRINT PAYMENT
S P":"OR STOP? S P" :: ACCE
PT AT(16,13)SIZE(-1)VALIDATE
("PAspas"):ANS$ :: ANS=ASC(A
NS$):: ANS=ANS OR 32 !086
200 IF ANS=115 THEN STOP ELS
E IF ANS=97 THEN 130 !168
210 DISPLAY AT(1,1)ERASE ALL
:"SIZE OF LOAN":LL:"FREQ. OF
PAYMENTS(MO)":F:"SIZE OF PA
YMENT":P:"INTEREST RATE(YR)"
:I:"HOW MANY TO PRINT":N:"NO
DAYS TO START 0" !051
220 ACCEPT AT(1,14)SIZE(-10)
:L :: ACCEPT AT(2,23)SIZE(-2
):F :: ACCEPT AT(3,17)SIZE(-
7):P :: ACCEPT AT(4,19)SIZE(
-5):I :: ACCEPT AT(5,19)SIZE
(-3):N :: ACCEPT AT(6,18)SIZ
E(-2):D !138

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230 LL=L !162
240 DISPLAY AT(10,7):"CORREC
T? (Y/N) Y" :: ACCEPT AT(10,
22)SIZE(-1)VALIDATE("Ynyn"):
ANS$ :: ANS-ASC(ANS$):: ANS-
ANS OR 32 :: IF ANS=110 THEN
210 !072
250 I1=INT(I*L*D/365+.5)/100
:: I2=I*F/1200 !110
260 DISPLAY AT(12,1):"DATE T
O START?(MO/YR) 12/89" :: AC
CEPT AT(12,23)SIZE(-2)VALIDA
TE(DIGIT):MO :: ACCEPT AT(12
,26)SIZE(-2)VALIDATE(DIGIT):
YR !210
270 DISPLAY AT(14,1):"USE SC
REEN/PRINTER? (S/P) S" :: AC
CEPT AT(14,27)SIZE(-1)VALIDA
TE("sSpP"):P$ :: IF P$="S" O
R P$="s" THEN 410 !166
280 OPEN #1:"PIO" :: PRINT #
1:CHR$(27);"N";CHR$(4)!251
290 IMAGE ##/## #####.## $
#####.## #####.##
#####.## !168
300 IMAGE #####.## #####.##
#####.## !121
310 IMAGE ##/## !043
320 PRINT #1,USING 290:"MO",
"YR","CURRENT","PAYMENT","IN
T. ","PRINC. ","NEW. BAL." !02
8
330 FOR X=1 TO N :: IX=INT(1
00*I2*L+.5)/100 :: IF X=1 TH
EN IX=IX+1 !112
340 YR$=STR$(YR):: IF YR<10
THEN YR$="0"&YR$ !215
350 PR=P-IX :: NB=L-PR !147
360 IF NB<0 THEN P=P+NB :: G
OTO 350 !091
370 PRINT #1,USING 290:MO,YR
$,L,P,IX,PR,NB :: IT=IT+IX :
: L-NB !216
380 DISPLAY AT(23,1):USING 3
10:MO,YR$ :: DISPLAY AT(24,1
):USING 300:IX,PR,NB !052
390 MO=MO+1 :: IF MO=13 THEN
MO=1 :: YR=YR+1 :: IF YR=10
0 THEN YR=0 !113
400 NEXT X :: PRINT #1:"TOTA
L INTEREST":IT :: CLOSE #1 :
: STOP !035
410 PRINT " INT. PRINC.
NEW BAL." !071
420 FOR X=1 TO N :: IX=INT(1
00*I2*L+.5)/100 :: IF X=1 TH
EN IX=IX+1 !112
430 YR$=STR$(YR):: IF YR<10
THEN YR$="0"&YR$ !215
440 PR=P-IX :: NB=L-PR !147
450 IF NB<0 THEN P=P+NB :: G
OTO 440 !181
460 PRINT USING 310:MO,YR$ !
092
470 PRINT USING 300:IX,PR,NB
:: IT=IT+IX :: L=NB !101
480 CALL KEY(O,K,S):: IF S=0
THEN 510 !067
490 CALL SOUND(500,20000,30)
!018
500 CALL KEY(O,K,S):: IF S=0
THEN 500 !057
510 MO=MO+1 :: IF MO=13 THEN
MO=1 :: YR=YR+1 :: IF YR=10
0 THEN YR=0 !113
520 NEXT X :: PRINT "TOTAL I
NTEREST":IT :: "DO YOU WISH T
O PRINT? (Y/N)Y":: ACCEPT A
T(24,28)SIZE(-1)VALIDATE("Yn
yn"):ANS$ :: IF ANS$="Y" OR
ANS$="y" THEN 210 !193

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If you are interested in how the mortgage formula can be derived, it requires some Algebra II from high school. [There is a LOT of algebra used in computerese anyway!] First we need to know how much of each payment is devoted to interest and how much reduces the principal. In the following I represents the interest per repayment period, and P the payment, and brackets [] are used for superscripts. If $L[n-1]$ is the remaining balance of the previous payment period, then the interest currently is $I * L[n-1]$. Thus the amount going to principal is $P - I[n]$ or $P - I * L[n-1]$, and the new balance is $L[n-1] - (P - I * L[n-1])$. That is,

$$L[n] = L[n-1](1 + I) - P$$

Carrying this backwards another element we would get:

$$L[n] = (L[n-2](1 + I) - P)(1 + I) - P$$

$$= L[n-2](1 + I)^2 - P((1 + I) + 1)$$

and backwards to the first element, we get:

$$L[n] = L[0](1 + I)^n - P((1 + I)^{n-1} + \dots + (1 + I) + 1)$$

Now the series that follows P in the last formula is a geometric series of the form:

$$x^m + x^{m-1} + x^{m-2} + \dots + x + x^0$$

My old algebra book told me that this can be re-expressed as:

$$(x^{m+1} - 1)/(x - 1)$$

(beginning with 0 there are m+1 elements). Using this general form we see that x is (1 + I) and m+1 is n. So the sum of the series is:

$$((1 + I)^n - 1)/I$$

Now we have:

$$L[n] = L[0](1 + I)^n - P(((1 + I)^n - 1)/I)$$

$$= L[0](1 + I)^n - (P/I)((1 + I)^n - 1)$$

Then a little clue. The first element $L[0]$ is the original loan balance L, and the last must be 0 since we want the loan "paid off." Thus we get:

$$0 = L(1 + I)^n - (P/I)((1 + I)^n - 1)$$

$$L(1 + I)^n = (P/I)((1 + I)^n - 1)$$

$$(IL(1 + I)^n)/((1 + I)^n - 1) = P$$

and finally:

$$IL/(1 + 1/(1 + I)^n) = P$$

You may cheerfully ignore all of this if you wish!

HI DOWN THERE
 BY
 G.S. and G.S.R.

Melbourne good luck with your Fair, the work that your members have put in makes one realize why the TI99/4A has stuck around so long.

As you all know Guy joined up here and at long last I had something to eat that was not bread or fish. It was so good that I have asked Guy to give you all the recipe for the light lunch he cooked for the top management up here. I had some and if you follow his instructions to the letter you will be delighted with the results. "Guy it is all yours"

Knowing what a gourmet George was and also because I wanted to keep my hand in, I offered to cook the lunch for some of the folks up here. "Yes there are still top dogs, and middle dogs, and even snappy little dogs". The lunch consisted of soup, steak, and ice cream. To do justice to a meal you should flow chart it first. I mean that, sit down and work out what you are going to have and how long each part is going to take to prepare and cook. At no time do you want to end up serving a meal that has part of it warmed up. This lunch was for Wednesday, so the soup was started on Monday, by the way we are all metric up here and that is how you will get your measurements.

Below are the ingredients for each course, please don't alter them or the cooking times, in good cooking there are no short cuts to perfection.

- SOUP

2 Kilo of chicken thighs
 100 grammes fresh spring onions
 1 kilo fresh picked tomatoes
 350 grammes young carrots
 1 small capsicum green
 1 small capsicum red
 250 grammes toasted bread crumbs
 150 grammes hard grated parmesan
 25 grammes chives
 1 dessert spoon salt
 half litre good dry white wine
 2 litres water

MAIN COURSE

8 40mm thick scotch fillet steaks
 250 grammes fresh spring onions
 400 grammes cherry tomatoes
 1 small yellow capsicum

1 small cauliflower
 500 grammes garden fresh string beans
 2 kilos new potatoes
 250 grammes cream cheese
 1 dessert spoon English mustard powder

DESSERT

8 peaches FRESH and RIPE
 500 ml fresh cream
 1 port glass vintage Port
 500 grammes of plain flour
 2 eggs
 1 champagne glass of champagne

PREPARATION INSTRUCTIONS
 for the soup.

DAY ONE

Skin and clean the 8 thighs. Put the 2 litres of water in a saucepan with a good fitting lid, bring water to the boil, and place all the thighs into the boiling water, turn down the heat so that the water is just simmering, and fit lid to saucepan. Simmer for three hours. Remove from heat and let cool for 5 minutes, then place in a dish again with a cover, place in the fridge for at least 24 hours.

DAY TWO

Skin the congealed fat from the top of the dish, and place the remainder into the saucepan (no lid) heat on a very gentle heat until the soup is warm, strain through a strainer that you have lined with bread. The soup now goes back in the fridge, and the meat is saved for another dish, the bread is given to your cat or dog, the bones to the garbage.

Now is a good time to prepare the tomatoes. Boil a pan of water and place the tomatoes in for 2 minutes, strain and peel. Allow the tomatoes to cool then pierce them with a fork, place the tomatoes into a dish and pour the wine over them, making sure they are completely covered. Place the dish back in the fridge.

DAY THREE

Prepare the vegetables, washing and then discarding any bruised or badly marked ones. Cut onions into pieces about 5mm. long, the same with the carrots and slice these if they are 1 cm thick, the capsicums have seed cores removed, and are diced into 1 cm squares. While this is going on the soup is taken from the fridge and once more placed in a saucepan over very gentle heat. The prepared vegetables are placed into a frying pan that has been lightly brushed with light olive oil only. This pan is placed over a fast heat, for two minutes, and then

transferred to the saucepan containing the soup stock. It should now be 15 minutes before serving time, two minutes before serving time place the tomatoes and wine in the saucepan. Crush the washed chives and scatter over the soup dish, the bread crumbs and cheese should have been well shaken and placed on the table for the diners to sprinkle over the soup themselves.

Note always make sure that your soup dishes are hot before the soup is placed in them, but please warn the diners of that fact.

THE MAIN COURSE

DAY ONE

Clean and pierce each steak with a fine skewer or long darning needle. Place each steak in a deep dish making sure that there is a small gap between each, now pour over them all the burgundy less one wine glass, save that glass of wine and make sure the air can not get to it. Place the steaks in the fridge and make sure they are well covered. If air gets to red wine it oxidizes it and even metho drinkers will think twice about having a swig.

DAY TWO

Whip the cream cheese in a basin, and when soft stir in the glass of burgundy, only stir it in so that you obtain a red streaky look, now do the same with the mustard powder, your cheese should now appear with red, yellow and some orange stripes. Once again into the fridge and covered.

DAY THREE

Scrub the potatoes carefully, remove any eyes, leave in a bowl of water that a lemon has been squeezed into. Clean the beans and top and tail them, just place them into a collander to drain off, now the carrots clean by scrubbing and top and tailing, into a collander or wrap them in a clean cloth. The spring onions are washed and cut up into lengths between 1 and 2 cm. The cauliflower is cleaned after cutting it into pieces so that each piece has three flowers, cleaning is by washing under a running cold water tap for about 5 minutes. (ed. not for drought areas) The yellow capsicum is diced the same as for the soup.

DESSERT

DAY ONE

Carefully split the peaches in half and destone them, place in a dish and pour a little of the port into each half, place in the fridge after they have a cover over them.

DAY THREE

Make a smooth pancake batter with the flour and eggs, instead of water use the champagne, whip the cream until very stiff, take the peaches out of the fridge and pour any port in the dish into the cream. Take a teaspoonful of cream and fill each half of the peach with the cream and join the halves together using new wooden toothpicks, (not recycled ones Peter).

COOKING THE MAIN COURSE

Put the potatoes into a saucepan of water and boil for 15 to 20 minutes depending on the size of the potatoes, walnut size 15 minutes, apricot size 20 minutes, carrots are cooked for 10 minutes in boiling water, the beans for five. Whilst this hive of activity is going on a heavy cast iron frying pan is lightly brushed with light olive oil. Put the pan on medium heat, and place the spring onions and capsicum in the pan and let it cook for 15 minutes, turning and lightly tossing the contents every 2 to 3 minutes, don't let these vegetables scorch or burn.

Now is the time for the steaks, you will have lifted the onions and capsicum from the pan and turned the heat up to high, take the steaks from the dish of burgundy and place them in the pan, for 2 minutes each side, after this place in the oven set at 180 degrees celsius. Return the onions and capsicum to the steak pan and without cleaning the pan pour in the burgundy from the steak dish, cook for one minute, pour over the steaks, and spread the cream cheese thickly over the top of each steak, then sprinkle with the long chives. The serving dish is further decorated with the tomatoes and cauliflower buds that have been boiled for 2 minutes in the carrot saucepan.

It is a good idea when setting the table to make sure that the vegetables have separate serving dishes fitted with lids, knobs of butter are placed on the dishes before covering.

COOKING THE DESSERT

Place a cotton thread over the two ends of the toothpicks, so that you can hold the loop of cotton with the peach hanging from it, dip the peach into the batter mix, making sure that it is covered all over. Hang the covered peach into a deep fryer that you have made ready and set at high temperature. Cook the peaches until the batter sets and serve straight away, with a side portion of the whipped cream.

G.S.R.

P.S. This was the food of the gods. G.S.

FOUR-A/TALK

Random ramblings
about things TI.

by Bill Gaskill

MARCH 1990

TAX TIME

WHAT'S HOT:

SPELL IT!, ASGARD MOUSE, BRAD SNYDER 40 COLUMN UTILITIES, REGENA ON ADVANCED BASIC, SMALLTALK, TI TAX, HARRISON WORD PROCESSOR UPDATE, TIPS V1.5 and more.

DISCOVERIES:

-You will recall that I made mention of the SmallTalk BBS program that I found on GENIE in the last Four-A/Talk column. It is a 100% assembly language program written by Canadian programmer Lloyd Galenzoski, that consumes less than 50 sectors on disk. Well, I finally got to try it out with a friend recently, and is it "sweet". SmallTalk has to be the simplest piece of BBS software to use that there is. It supports about a 100 users, XMODEM file transfers, has a complete message base facility and let's the Sysop view everything that the caller is doing. It does not (at least as far as I can tell from the limited docs) allow the Sysop to break in on the caller or to communicate with the caller on-line like the "big boys" do. However, if you are interested in setting up your own Bulletin Board, and want the quickest way to get started, I will guarantee that SmallTalk is going to be the most user friendly BBS you will find. It supports 300, 1200 and 2400 baud modems too. The entire package is public domain and will probably start showing up in club libraries, if it is not there already. Nice job, Lloyd!

-I have also been playing around with Brad Snyder's 40 Column Utilities package lately, after reading Harry Brashear's MICROreview of it in one of last year's MICROpendiums. I REALLY like this program. Although there are other 40 column display utilities out there, namely DEP from Oak Tree Systems, XDP by Australian Craig Sheehan, EDP by Paragon Computing (Curtis Provance) and a 40 column display program written by Dr. Roy Tamoshiro, the Snyder package has won my favor. It does not have the features of the EDP program by Curtis Provance and it does not have the flash and immensely impressive graphics of Craig Sheehan's XDP, but it does have ease of use over all of them. It is simply a very comfortable piece of software to program with, lacking the clutter of "so many features you can't remember them all, or how to use them", yet with the kind of features that an XB programmer demands most.

My "playing" around resulted in a couple of really nice applications that could not have been created without the 40 column text screen and some of the other options that the Snyder package offers. If you are an XB programmer who would like to put some real "class" into your screen displays and who has an interest in unique features like the

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ability to scroll the screen in all four directions, read strings of existing text from the screen, convert upper to lower case, convert lower to upper case and dump the contents of any screen to your printer at the touch of a key, then this program is for you. Of course it has all the "expected" features such as windows etcetera too. The price for this Fairware application is a measley \$6.50. Ought to at least be a \$10 program, but I'm not the author, so I'll keep my mouth shut.
Contact:

BRAD SNYDER
148 Ave. A
Palmerton, Pa. 18071

NEWS:

SPELL IT!

-Jim Reiss (and Asgard Software), the guy who brought us Typewriter 99 and who is working on a module version of a new terminal emulator program, has written a new spelling checker for the 99/4 (and Geneve) that is available in SS/SD, DS/DD and hard disk versions. I don't have a ton of information on the product, but I do know that it will work with TI-Writer and ANY of the TI-Writer clones such as:

- o Art Green's RAG Writer.
- o Paolo Bagnaresi's BA-Writer.
- o Tony and Will McGovern's FunnelWeb.
- o J. Peter Hoddie/Myarc's My-Word program for the Geneve.
- o Jerome Prinkl/DataBiotics' WordWriter etc.

Since I haven't received my copy of it yet, I can't tell you much about its operation, speed, accuracy etcetera, but the claims are that it is "many times" faster than any existing 99/4A spell checker (all one of them, not counting the one that comes with WriterEase) and it also apparently works within the document rather than as a separate setup the way the Tom Kirk (DragonSlayer-American Software) spell checker does. My guess is that it will probably work with Press too, when it comes out. Chris Bobbitt would not have overlooked that need. I'm sure.

Prices that I have seen in print are \$19.95 for the DS/DD version and \$24.95 for the SS/SD version, both of which contain 30,000 word dictionaries, and \$34.95 for the hard disk version, which contains a whopping 200,000 word dictionary. Add \$2.50 for shipping and handling when you order. I knew I bought my hard disk for something. It SURE IS NICE to see someone supporting the HFDC and hard disk setups out there! If you are interested in obtaining a copy of Spell It!, contact Asgard Software at the address listed below.

ASGARD MOUSE:

-As if a new spelling checker weren't enough, Asgard has also introduced a new mouse for the 99/4A and Geneve. You will recall that Franz Wagenbach introduced us to the Mechatronics GmbH mouse through his T.A.P.E. firm back in 1986, which was the first 99/4A mouse that I am aware of. Unfortunately, it didn't seem to achieve the kind of acceptance I thought it would. I am not really sure if it is still available, but I did see Franz still offering it at the Fest-West in

San Diego in February 1989. At any rate, Mike Maksimik, author of FDOS and in my opinion, the best newsletter article of 1989, has created a new mouse for the 99/4A that also comes with the necessary software to use the device with TI-Artist, TI-Artist Plus! and for interfacing with Extended Basic and assembly programs. The mouse sells for \$49.95 plus \$5.00 shipping and handling. You may order yours from:

ASGARD SOFTWARE
P.O. BOX 10306
ROCKVILLE, MD. 20849
703-255-3085

TI TAX:

-Bill Chavanne has released the 1989 TI Tax (Multiplan Templates) income tax program through Jeff Guide's Disk Only Software this year. To the best of my knowledge, TI Tax is the only Federal Income Tax preparation software still available for the 99/4A or Geneve. James Sleeth of California used to offer a Multiplan package and even had a few State income tax modules to offer too, but he doesn't seem to be involved in it anymore. Julian Achim and Datax had an Extended Basic tax preparation program, but I believe the last one of those he produced for the 99/4A was the 1986 tax year release. Steve Karasek of St. Louis seems to be producing Federal Income tax preparation programs for every computer but the TI and Joe Nuvolini of RMI Home Computer Sales in Colorado Springs dropped out of the income tax software business 4-5 years ago. So it looks as if TI Tax is your best shot.

According to a press release I read on TI Tax, all of the IRS forms that it replicates are IRS approved. The eight volume set is massive, but I don't think everyone needs all eight. I believe the idea is that you buy only those forms that you need, based upon your tax scenario. The most expensive module in the set is only \$20, with most being more like \$12.50. You must have Multiplan to use TI Tax. If you are interested, contact:

DISK ONLY SOFTWARE
P.O. Box 244
Lorton, Va. 22079
800-736-4951

REGENA ON AVANCED BASIC:

-Cheryl (Regena) Whitelaw, known far and wide for her expertise in TI Basic and Extended Basic (not to mention Microsoft Basic and who knows what else), has begun tackling yet another computer language. Regena has now created a Diskazine type offering of Myarc Advanced Basic techniques, tutorials, programs and the like that will be offered on a monthly subscription basis. You may order as many or as few months as you like. The cost is \$6.00 per issue. Topics to be included are:

- o Learning to program.
- o Adapting other Basics to Advanced Basic.
- o Programming techniques and
- o Actual Advanced Basic programs.

If you are a Geneve owner and wish to take advantage of this ground

level offer, now that Advanced Basic is a "whole" language, write to:

REGENA
918 CEDAR KNOLLS WEST
CEDAR CITY, UTAH 84720

-Asgard Software has compiled over 50 listings of GENie uploads into a Page Pro 99 specific library, dubbed library 38. It is apparently open to all registered owners of Page Pro 99. To join Library 38 you must send a note via GENie Mail to C.BOBBITT.

-Ron Wolcott's TIPS (TI Print Shop) is now in V1.5. The newest version has been trimmed down for additional speed and it also supports color printers like the NX1000 Rainbow. There are also some new font files available, that were released at the same time as V1.5, that provide fancy alphabet images. Barry Traver has uploaded the new version and the newest fonts to GENie and probably CompuServe for the TI-SIG subscribers. If you are not into telecommunications, check your club library. I would imagine that someone has downloaded the new stuff to make it available to you.

-Paul Dam has released V2.5 of MENU80, which is sort of the Geneve version of John Johnson's BOOT/HRD MENU program for the 99/4A. He says that; "...MENU80 Ver 2.5 (is) probably the last in a series of MENU80's unless some radical changes come along. I have used some ideas that speed things up over ver 2.3, and have added some options. I will work on a MOUSEMENU80 in the c99 programming language, and possibly put another MENU screen on MENU80. I would like to add John Johnson's XUTILS on the next Screen. MENU80 is made possible with Barry Boone's GETKEY, GETSTR EXEC programs. MENU80 is Public Domain. Permission is granted to distribute MENU80 with any other software...". Another Paul Dam upload that I ran across was a HELP file for 9640 owners that Geneve users might be interested in. Here again, both files are available as downloads from GENie.

-Gene Hitz has given Barry Traver permission to distribute a ton of Basic and Extended Basic games written for Arcade Action Software back in the days when Gene was commercially involved with the 99/4A. Barry, who is an assistant sysop of the TI RoundTable on GENie, has put the programs up for grabs as SHAREWARE. They may or may not appear in a future Genial Traveler issue. Don't know one way of the other. If you would like to contact Gene about the programs write to:

ARCADE ACTION SOFTWARE
4122 N. GLENWAY
WAUWATOSA, WI. 53222

-Bruce Harrison called the other night (March 12th) to say that he was releasing an upgrade to the Harrison Word Processor. The new version apparently contains some bug fixes and also a few added features that existing users have requested. I don't have mine yet, but will report more on the upgrade when I get it. To ensure that you get a copy of the upgrade (assuming that you are a current owner), write to;

HARRISON SOFTWARE
5705 40TH PLACE
HYATTSVILLE, MD. 20781
301-277-3467

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STORE FRONTS:

-It seems that one of the vanishing "breeds" in computerdom (is that a word?) everywhere is the retail computer store. Even in the IBM and MS-DOS clone world there seems to be fewer and fewer local vendors that have actual "open to the public" type shops where a person can walk in, browse through the goodies and generally talk computers. Of course store fronts have been a rare thing in the 99/4A community for some time, but there are still a few out there. From the folks at Fest-West in Tucson I learned of The Orphanage in Littleton, Colorado, and from my own wanderings and contacts I came across Janie Lawrence's Bits and Chips and Barb Weiderhold's Queen Anne Computer Shoppe, both in the Seattle area. If you know of a store front operation in your community that still supports the 99/4A or Geneve, even as a side line venture, I would like to know about it. There are also a few vendors who operate out of their homes that are open to the public by appointment only or only on weekends etc. I would like to hear about those supporters too. I will make sure that the information is included in future Four-A/Talk articles for all 99/4A and Geneve owners to take advantage of. Please help! Here's a list of some that I am already aware of.

THE ORPHANAGE
LITTLETON, COLO.
303-973-6390 or
303-973-3290

BITS AND CHIPS
23637 HIGHWAY 99
SEATTLE, WA. 98020

QUEEN ANNE COMPUTERS
6102 ROOSEVELT WAY NE
SEATTLE, WA. 98115
206-283-0953

NOVA COMPUTERWARE
52 AIRPORT ROAD
EDMONTON, ALBERTA
CANADA T5G 0W7
403-452-0372

COMPETITION COMPUTER
719 2629 WEST NATIONAL
MILWAUKEE, WI. 53204
414-672-4010

L.L. CONNOR ENTERPRISE
1521 FERRY STREET
LAFAYETTE, IND. 47904
317-742-8146

JIM LESHER
722 HUNTLEY
DALLAS, TX. 75214
214-821-9274

BRAATZ COMPUTER SERVICES
719 E. BYRD ST.
APPLETON, WI. 54911
414-731-3478

TRIVIA:

-Ever wonder who that smiling guy is in the NOVA Computer ad that has been in MICROpendium for the past few years? If you don't know what I'm talking about, turn to the November 1989 issue of MICROpendium, page 32, lower left corner. Well, I did wonder, and thanks to Steve Mehr, I found out. It's Leigh Dehaney, son of Nova Computers owner Judy Dehaney, who recently attended Fest-West in Tucson, and who's firm is featured in the STOREFRONTS article above. How's that for trivia?

Did you know that;

-An outfit named Leroy Enterprises in Dallas, Texas used to market a complete 99/4A software package for Shaklee Distributors?

-Jim Peterson, of TigerCub Software, used to use a different company address in his software advertisements, to identify the publication the customer read the ad in? A similar idea is often employed by other companies when they include a DEPT. in the address of their company. It is to tell the owner which paid for ads are generating the most sales.

-Mike McCann, author of The Printer's Apprentice and other great commercial programs, also released a Fairware program called 99-Animator in 1987?

-Armadillo Bytes, a Dallas, Texas computer repair firm, offered a TI-99/8 with hexbus DS/DD drive for sale (used) for \$1000? A month or so later the price was down to \$800, but it apparently sold at that price or something close to it. Kind of gives you an idea of what one might cost if you wanted to own a 99/8.

THIS MONTH IN TI HISTORY:

<1980>

Creative Computing magazine calls the new TI-99/4; "One of the most easy to use systems we've tested...price still beyond grasp of Middle America."

-The same source verifies that TI Basic for the 99/4 was written by Microsoft, to TI specs.

<1981>

Second issue of TIHOME Tidings contains letters from Stephen Shaw and Peter Brooks.

<1982>

Stephen Shaw, dba Stainless Software is granted licenses to sell FFF Software, Norton Software and PRP Computergraphic software in the United Kingdom.

-The Minneapolis / St. Paul 99ers are formed with Paul Weiblen as president.

<1983>

Microsoft Multiplan is released for the 99/4A.

-Plans to produce ZAXXON for the 99/4A are cancelled by DataSoft. The reason is that the program could not be ported to a GROMpack (module) and DataSoft did not think that there were enough owners with expansion systems to successfully market the program in a disk version.

-TI releases Disk Manager II module. It is offered as a \$9.95 upgrade to owners of Disk Manager I.

<1984>

San Francisco based Triton Products Company is named by TI as the "fulfillment house" for remaining 99/4A hardware and software products.

-TI officially left the home computer market behind and ceased all production of the 99/4A on March 28, 1984.

-InfoCom reverses decision of Feb84 and decides to continue producing its adventure games for the 99/4A.

-Creative Computing writes an in-depth article on the demise of the 99/4A. The article is authored by David Ahl and is found on page 30..

-DIABLO game is released by Extended Software of Cedar Creek, Ohio.

-Speed Math program appears in Popular Computing page 209.

<1985>

Peter M.L. Lottrup book on Mini-Memory assembly language debuts from Compute! Books.

-Chicago TI-UG members Roger and Orlan Degris, Box 481 Lake Zurich, IL. 60047 release the 49-99 keyboard, a standard 99/4A keyboard with an added Fctn key.

<1986>

Thomson Software, a Michigan based supporter and vendor of 99/4A software closes down after owner Don Thomson accepts a new job that will reportedly conflict with his TI business.

-CorComp releases the X-10 Home Sentry System.

-On March 19 Richard Mitchell purchases the rights to The Smart Programmer and merges his Super 99 Monthly publication under the new name. Mitchell announces the merger in the Mar86 issue of Super 99 Monthly, which appears in June '86.

-Millers Graphics announces a new card for the PE box that interfaces with IBM keyboards. It is never produced.

-Myarc demonstrates XB II at Fest-West in Los Angeles.

-John Keown releases the ill-fated menu program called Program Manager. It runs out of a cartridge and is designed for assembly programs. The module is to be marketed by Pilgrim's Pride.

-Texas Instruments closes all exchange centers. The final nail is driven in to the 99/4A coffin.

-Chicago Users Group becomes the first Users Group to advertise nationally for outside members.

-Home Computer Magazine does its last disappearing act when magazine subscribers and supporters receive notification by mail that HCM has gone out of business, and that the balance of their subscription is considered "filled" by the one issue of Home Computer Journal that is sent with the notice of HCM's demise.

<1987>

Access Engineering, a consortium made up of Jim Horn, Richard Rosen and Chris Bobbitt, announce ADDS, AMOS, AC-BASIC and AC-PASCAL for the Myarc 9640 computer.

-Triton Products Inc., the company chosen by TI in 1984 to handle the remaining stock of 99/4A hardware and software, announces a PC Clone to the TI Community complete with an MG designed bridge box so that you can use your 99/4A keyboard with the IBM clone.

-MICROpendium receives beta version of Myarc 9640, which is now a computer on a card for the PE Box rather than a full-fledged computer as originally planned.

-Ryte Data 210 Mountain St., Haliburton Ontario, Canada announces its plans to build an IBM-AT like expansion box for the 99/4A and Geneve computers.

-Bible Trivia is released by Trinity Products.

<1988>

Myarc announces release of Hard Disk Controller Card.

-Al Beard, dba LGMA Products, releases 99Fortran, a version of the Fortran 77 language, ported over to the 99/4A.

<1989>

Paul Charlton releases a developers kit for the Geneve 9640.

-ADVANCED BASIC for the Geneve debuts.

-Al Beard, spokesman for LGMA products, announces 99FORTTRAN for the Geneve.

-Asgard Software announces a contest to design a new 99/4A compatible computer to pick up where the Myarc Geneve left off. Owner Chris Bobbitt is critical of Myarc's mismanagement of the Geneve and their lack of customer support for the product.

MICROdex for TI-Base announced. Program is the first third-party application to be developed for TI-Base.

-Geometer's Apprentice debuts from the Mike McCann software house.

-Northcoast 99ers begins accepting non-attending members, following the lead of the Chicago TI-UG.

-TICOFF is held March 18 at the Roselle Park (NJ.) High School.

-MICROpendium publishes the sources of several computerized indexes to their magazine.

Did you know that...?

by Chick De Marti

Apr. 1990

More from HTA (Hints, Tips, & Ans.)
* by Bill Sponchia *

```
10 RANDOMIZE(0)
20 A=INT(RND*A)+100
30 PRINT A
```

#21. When programming in XBasic it pays two ways to squeeze as many statements as you can into each program line. The first is that it saves memory by eliminating line numbers, and second, it speeds up the programs because it has less lines of code to process

But what does it do?
What is it good for??

I ran some tests and here's what I got. (I added these lines...)

```
5 A=21
6 FOR I=1 TO 10
40 NEXT I
RUN
```

The results were:

104 104 104 104 104
104 104 104 104 104

#22. Another method to save memory by reducing it's size is to replace a constant used with a variable. This is assuming that the constant is used a number of different times.

I changed line 6 to line 3...putting the 'A=21' within the loop...Result:

104 121 125 125 125
125 125 125 125 125

#26. You can list a program to disk by stating LIST "DSKn.prog." This (creates) a DV/80 file which is then readable by TI-Writer. This can be helpful for putting program listings in documents. But another benefit is the ability to use the FIND STRING command to help locate something in a long program.

I now changed RANDOMIZE(0) to plain RANDOMIZE. Now the results were:

103 116 100 106 106
100 117 120 112 119

NOTE--> Save this hint in your TI-Base file...great for changing command files (normally DF/80 to DV/80) cd.

(At this point I decided to test 'A', with PRINT A. The result: 19?)

#13 (TI-Writer or equivalent) If you must go to the bottom of your text (in a very long file) instead of paging down simply go to the command line and press "S" for 'Showline' and at the prompt "enter line number" just type "E" This is equivalent to last line (END) of the document.

One last try, with line 10 RANDOMIZE I moved 'A' outside the loop, changing 3 FOR I=1 TO 10 to 6 FOR I=1 TO 10 Result:

110 184 164 112 159
222 110 206 256 149

I haven't figured out what i discovered yet!

This next one I got from the Bits, Bytes, & Pixels (November issue).

"Here's a quickie routine..if A=21 and you are in Extended Basic..." (Cont. next column...)

YOU CAN BET ON IT

The hardware you want to use requires a cable you don't have.

(Did you know...cont.)

DAY OF THE WEEK

by Bill Sheridan

(This article I got from the K-TOWN 99ers...thanx)

CALL CLEAR or DISPLAY ERASE ALL?

In one of the newsletters I read an article that said, "Use DISPLAY ERASE ALL instead of CALL CLEAR because it is faster." Because I had heard this before I didn't pay attention to where I read it. But later I thought it would be a nice item to write about...and show how much faster it is. So I wrote the little test program below.

```

10 N=11
20 CALL CLEAR
30 DISPLAY AT(14,2):"<Press
<ANY> key to start>"
40 CALL KEY(0,K,S):: IF S=0
THEN 40
50 FOR I=1 TO N
60 CALL HCHAR(1,1,I+32,768)
70 CALL CLEAR
80 NEXT I
90 DISPLAY AT(14,10)BEEP:"TE
ST #1"
100 DISPLAY AT(14,2):"<Press
<ANY> key to start>"
110 CALL KEY(0,K,S):: IF S=0
THEN 110
120 FOR I=1 TO N
130 CALL HCHAR(1,1,I+32,768)
140 DISPLAY ERASE ALL
150 NEXT I
160 DISPLAY AT(14,10)BEEP:"T
EST #2"
170 GOTO 40
    
```

I made everything within the loops identical to make it a fair test. I choose the variable N=11 because I wanted to easily see the time it took to complete the loop. 11 loops took approximately ten seconds. The surprise was that the CALL CLEAR took 10 seconds, while the DISPLAY ERASE ALL loops took 12 seconds??? (I still will use it ...DISPLAY ERASE ALL just looks more elegant. cd)

"This short program I saw in the July issue of MICROpendium written by Robert Neal, of the TI User Group of Will County. I thought it was real clever and have added it to my disk of misc. programs.

The program will compute the day of the week (Monday, Tuesday, etc.) from the date (MM,DD,YYYY) entered. Handy for finding out on what day of the week you were born.

The following is the nuts-and-bolts of the program. You may want to add your own REMS, PRINTS, etc."

```

100 INPUT "ENTER MM,DD,YYYY:
":M,D,Y
110 A=Y-(INT(Y/28)*28):: B=A
/4:: E=A-INT(B)*7)
120 C$="511462403513":: IF E
=0 THEN IF M<3 THEN C$="40"
130 E=VAL(SEG$(C$,M,1)):: IF
Y<1900 THEN A=A+12
140 G=A+INT(B)+D+E:: F=G-(IN
T(G/7)*7
150 DATA SUN,MON,TUES,WEDNES
,THURS,FRI,SATUR
160 RESTORE :: FOR B=0 TO F
:: READ C$ :: NEXT B
170 PRINT "THE DAY IS ";C$;"
DAY"
180 PRINT
190 INPUT "DO ANOTHER? (Y/N)
": YN$
200 IF YN$="Y" OR YN$="y" TH
EN GOTO 100
    
```

(This one I also put in my disk of misc. programs...(the disk is getting mighty full) cd.)

~~~~~  
I'm out of coffee,  
See you next month  
\*- - C H I C K - -\*

TI-BASE      TI-WRITER

I KEEP TRACK OF THE ITEMS WE HAVE IN OUR MARKETPLACE USING TI-BASE. I WOULD LIKE TO MAKE THE LIST AVAILABLE TO ALL OF OUR MEMBERS, BUT ONLY A FEW HAVE TI-BASE TO PRINT OUT THE LIST. SO I HAVE CONVERTED THE TI-BASE FORMAT TO TI-WRITER FORMAT USING THE FOLLOWING PROCEDURE. JUST ABOUT EVERYONE CAN READ AND PRINT A DV/80 FILE.

1. INITIALIZE A BLANK DISK SSSD,DSSD OR DSDD.
2. BOOT UP TI-BASE.
3. LOAD YOUR DATA BASE. (USE STORE)
4. PUT INITIALIZE DISK INTO DRIVE2.
5. TYPE SET RECNUM OFF
6.        SET TALK OFF
7.        SET HEADING OFF
8.        SET PRINTER=DSK2.STORE1
9. PRINT ALL NO,NA,DI (NO=#, NA=NAME, DI=DISTRIBUTOR).
10. THIS SHOULD LOAD ON YOUR INITIALIZED DISK IN DRIVE2 THE FILE IN DV-80 FORMAT.
11. BOOT UP TI-WRITER (FUNWEB).
12. USE THE FORMATTER LOAD AND PRINT FILE DSK2.STORE1.
13. SAMPLE #1 WAS THE RESULTS.
14. IF DO NOT WANT DOUBLE SPACES BOOT UP TI-WRITER AGAIN USING EDITOR MODE LOAD FILE DSK2.STORE1.
15. GO TO MANUAL MODE (CNTR/O)
16. REMOVE ALL OF THE CARRIAGE RETURNS AND LINE FEEDS BY USING FCTN/X AND FCTN/3.
17. IF YOU LIKE PUT YOUR OWN HEADER ON.
18. SAVE FILE USING A DIFFERENT NAME DSK2.STORE2
19. PRINT FILE WITH THE FORMATTER. SAMPLE #2 THE RESULTS.
20. THE ABOVE PROCEDURE IS BASED UPON THERE ARE NO CONTROLS CODES IN THE TI-BASE. IF THERE ARE DROP ME A LINE AND I WILL TELL YOU HOW I GOT AROUND THEM.

FRED MOORE

SAMPLE #1

|   |                      |             |
|---|----------------------|-------------|
| 1 | MAXFLIX PROFESSIONAL | JP SOFTWARE |
| 2 | PICTURE TRANSFER     | JP SOFTWARE |
| 3 | TRIAD                | JP SOFTWARE |
| 4 | HYPERCOPY            | JP SOFTWARE |
| 5 | GRAPHICS EXPANDER    | JP SOFTWARE |

SAMPLE #2

| NO. | NAME                 | DISTRIBUTOR |
|-----|----------------------|-------------|
| 1   | MAXFLIX PROFESSIONAL | JP SOFTWARE |
| 2   | PICTURE TRANSFER     | JP SOFTWARE |
| 3   | TRIAD                | JP SOFTWARE |
| 4   | HYPERCOPY            | JP SOFTWARE |
| 5   | GRAPHICS EXPANDER    | JP SOFTWARE |

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### NEW ADDS APRIL 1990 LA99ER USERS GROUP MARKETPLACE

| NO. | NAME                | DISTRIBUTED         | SALE  |      | MAILING |      |      |      |
|-----|---------------------|---------------------|-------|------|---------|------|------|------|
|     |                     |                     | PRICE | TAX  | USA     | CAN. | EUR. | AUS. |
| 54  | FONT WRITER II      | ASGARD SOFTWARE     | 7.50  | .50  | .90     | .99  | 2.06 | 3.55 |
| 76  | TYPEWRITER 99 CART. | ASGARD SOFTWARE     | 21.95 | 1.43 | 1.10    | 1.15 | 2.53 | 3.07 |
| 84  | ARTIST INSTANCES #4 | ASGARD SOFTWARE     | 5.25  | .35  | .70     | .77  | 1.57 | 1.79 |
| 80  | ARTIST INSTANCES #6 | ASGARD SOFTWARE     | 6.96  | .46  | .70     | .77  | 1.57 | 1.79 |
| 92  | BEYOND VIDEO CHESS  | ASGARD SOFTWARE     | 8.95  | .59  | .70     | .77  | 1.57 | 1.79 |
| 95  | GENIAL TRAVELER #1  | GENIAL COMPUTERWARE | 25.00 | 1.65 | 1.70    | 1.87 | 3.83 | 4.89 |
| 96  | GENIAL TRAVELER #2  | GENIAL COMPUTERWARE | 25.00 | 1.65 | 1.70    | 1.87 | 3.83 | 4.89 |
| 124 | BALLOON WARS        | ASGARD SOFTWARE     | 3.75  | .25  | .70     | .77  | 1.57 | 1.79 |
| 129 | DOOM GAMES I        | ASGARD SOFTWARE     | 5.95  | .40  | .70     | .77  | 1.57 | 1.79 |
| 130 | DOOM GAMES II       | ASGARD SOFTWARE     | 5.95  | .40  | .70     | .77  | 1.57 | 1.79 |
| 131 | DOOM GAMES III      | ASGARD SOFTWARE     | 5.95  | .40  | .70     | .77  | 1.57 | 1.79 |
| 133 | GOURMET #2          | ASGARD SOFTWARE     | 3.75  | .25  | .70     | .77  | 1.57 | 1.79 |
| 134 | GOURMET #3          | ASGARD SOFTWARE     | 3.75  | .25  | .70     | .77  | 1.57 | 1.79 |
| 135 | GOURMET #3          | ASGARD SOFTWARE     | 3.75  | .25  | .70     | .77  | 1.57 | 1.79 |
| 137 | FORM MAKER 99       | ASGARD SOFTWARE     | 18.75 | 1.27 |         |      |      |      |
| 138 | GRAPHX COMP.        | ASGARD SOFTWARE     | 18.75 | 1.27 |         |      |      |      |
| 140 | HIGH GRAVITY        | ASGARD SOFTWARE     | 6.00  | .40  |         |      |      |      |
| 141 | OLD DARK CAVES      | ASGARD SOFTWARE     | 13.50 | .91  |         |      |      |      |
| 143 | PAGE PR099 UTILITY  | ASGARD SOFTWARE     | 11.25 | .75  | .70     | .77  | 1.57 | 1.79 |
| 145 | RECEIPT WRITER 2.0  | ASGARD SOFTWARE     | 7.50  | .50  | .70     | .77  | 1.57 | 1.79 |
| 147 | STAMP MANAGER       | ASGARD SOFTWARE     | 7.50  | .50  |         |      |      |      |
| 148 | TOD EDITOR 3.0      | ASGARD SOFTWARE     | 11.25 | .75  | .70     | .77  | 1.57 | 1.79 |
| 150 | THE GAME PACK       | ASGARD SOFTWARE     | 4.50  | .30  |         |      |      |      |
| 153 | WITCH END           | ASGARD SOFTWARE     | 7.50  | .48  | .70     | .77  | 1.57 | 1.79 |
| 157 | ROCK RUNNER         | ASGARD SOFTWARE     | 9.75  | .65  | .70     | .77  | 1.57 | 1.79 |
| 161 | MUSIC SYNTHESIZER   | ASGARD SOFTWARE     | 7.50  | .48  |         |      |      |      |
| 162 | PICASSO 2.0         | ASGARD SOFTWARE     | 11.22 | .76  |         |      |      |      |
| 163 | PICASSO BORDERS     | ASGARD SOFTWARE     | 5.98  | .40  |         |      |      |      |
| 164 | PICASSO ENLARGER    | ASGARD SOFTWARE     | 7.49  | .50  |         |      |      |      |
| 165 | PICASSO UTILITIES   | ASGARD SOFTWARE     | 7.49  | .50  |         |      |      |      |
| 166 | USING PICASSO       | ASGARD SOFTWARE     | 4.49  | .50  |         |      |      |      |

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The LA99 USERS GROUP is exchanging it's library with CHICAGO. This is part 6 of the list of items we now have for you. The usual price of \$2.00 each plus .25 each mailing U.S.A. Keep this list, there is more to come. Available at the meeting, or write ... Fred Moore - 7730 Emerson Ave. L.A., CA 90045.

DISKNAME = 116  
4 AVAIL 354 USED 56 FILES

DISKNAME = 113  
2 AVAIL 356 USED

18 FILES

| FILENAME   | EXT   | SIZE | TYPE   | P | KEY | COMMENTS                   | ADDITIONAL INFORMATION       |
|------------|-------|------|--------|---|-----|----------------------------|------------------------------|
| (PRINTART) | .XB   | 5    | PGM    |   |     | PRINT GRAPHICS FROM FILES  |                              |
| BCALENDAR  | .DATA | 15   | D/V 80 |   | GRA | PICTURE FOR PRINTART       | NEED PRINTER                 |
| ALOAD      | .XPEE | 3    | PGM    |   | UTL | ASSEMBLY LOADER FOR XBASIC | PROGRAMS WITH LOAX AND ZMENU |
| ANDY/CAPP  | .DATA | 28   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| CBROM/CAL  | .DATA | 50   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| CHAR/BROWN | .DATA | 35   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| DAVID      | .DATA | 44   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| DAMS       | .DATA | 41   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| FLYING/ACE | .DATA | 29   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| HOLLHOBBIE | .DATA | 30   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| KIRK       | .DATA | 27   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| LINUS      | .DATA | 30   | D/V 80 |   | GRA | PICTURE FOR PRINTART       |                              |
| LOAD       | .XB   | 5    | PGM    |   | GRA | SAME AS (PRINTART)         |                              |
| LOAX       | .XOME | 9    | PGM    |   | UTL | SEE A.OAD                  |                              |
| MACRO      | .BXB  | 3    | PGM    |   | UTL | PRINTER DEMO               |                              |
| TELEPHONE  | .XB   | 3    | PGM    |   | UTL | HANGE SHAPE OF CURSOR      |                              |
| KSOND      | .XB   | 3    | PGM    |   | UTL | WEIRD SOUND DEMO           |                              |
| ZMENU      | .XB   | 4    | D/F 80 |   | UTL | SEE A.OAD                  |                              |

DISKNAME = 114  
0 AVAIL 358 USED

15 FILES

| FILENAME   | EXT  | SIZE | TYPE   | P | KEY   | COMMENTS                     | ADDITIONAL INFORMATION    |
|------------|------|------|--------|---|-------|------------------------------|---------------------------|
| CURSOR     |      | 4    | PGM    |   | Y XB  | CHANGE YOUR CURSOR TO ANY    | KEY FROM THE KEYBOARD     |
| DECHENREF  |      | 4    | PGM    |   | Y XB  | PRINTS OUT A DECIMAL TO HEX  | REFERENCE LIST            |
| FMLP/PAC   | .ARC | 37   | D/F128 |   | Y XB  |                              |                           |
| GODFATHER  |      | 37   | PGM    |   | MIS   | PLAYS THE THEME SONG FOR THE | GODFATHER                 |
| SN-LABELS  |      | 89   | I/V254 |   | Y XB  | PRINTS 3 ACROSS LABELS       |                           |
| STUDY/NUM  |      | 4    | PGM    |   | Y XB  | HELPS YOU UNDERSTAND THE     | RELATIONSHIP OF NUMBERS   |
| TISORT/PAC | .ARC | 76   | D/F128 |   | Y XB  | SUPER NICE SORTING PROGRAM   |                           |
| TLCOMMANDS | .TXT | 12   | D/V 80 |   | Y U/L | PRINT OUT THE TRANSLITERATE  | COMMANDS                  |
| VCR/DOC    | .TXT | 24   | D/V 80 |   | Y     | DOCUMENTATION FOR VCR PGM.   |                           |
| VCR/GUIDE  |      | 25   | PGM    |   | Y U/L | PROGRAM TO KEEP TRACK OF     | YOUR VCR TAPES.           |
| VCR/PRINT  |      | 5    | D/V163 |   |       | PART OF VCR PGM.             |                           |
| VCR/SCRN   |      | 8    | D/F 80 |   |       | VCR PROGRAM. CATALOG ALL     | YOUR TAPES                |
| VCR/DATA1  |      | 3    | I/V 80 |   |       | DATA FILE FOR VCR PROGRAM.   |                           |
| XB/REF/CD  | .TXT | 21   | D/V 80 |   | Y     | PRINTS TOKEN CODES AND GIVES | HEX AND DEC IN-D.         |
| ZAP        |      | 9    | PGM    |   |       | WATCH FOR LIGHTNING BOLTS.   | DON'T LET ME HIT YOUR TI. |

DISKNAME = 115  
2 AVAIL 356 USED

8 FILES

| FILENAME   | EXT   | SIZE | TYPE   | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION      |
|------------|-------|------|--------|---|-----|------------------------------|-----------------------------|
| ALPHABET   | .XB   | 21   | PGM    |   |     | ALPHABET TEACHING GAME       | SPEECH                      |
| BANKING    | .BIB  | 32   | PGM    |   | Y   | KEEP RECORD OF BANKING TRANS |                             |
| CANADA     | .BIB  | 39   | PGM    |   | Y   | PROVINCES AND CAPITALS       |                             |
| DIRECTORY  | .XB   | 4    | PGM    |   | Y   | CATALOG DISK                 | OUTPUT TO SCREEN OR PRINTER |
| OUTLINER   | .XB   | 32   | PGM    |   | Y   | CREATE OUTLINES ON DISK      |                             |
| STK/SAMPLE | .DATA | 168  | I/F 80 |   | Y   | FILE USED WITH PT1 & 2       |                             |
| STOCK      | .XB   | 21   | PGM    |   | Y   | STOCK RECORD KEEPING         |                             |
| STOCKPART2 | .XB   | 39   | PGM    |   | Y   | STOCK RECORD KEEPING PT2     |                             |

| FILENAME   | EXT   | SIZE | TYPE | P | KEY  | COMMENTS                      | ADDITIONAL INFORMATION    |
|------------|-------|------|------|---|------|-------------------------------|---------------------------|
| ABC/ORDER  |       | 4    | PGM  |   | UTL  | HELPS YOU TO SORT YOUR INFO   | INTO ALPHABETICAL ORDER   |
| ABC/SORT   |       | 5    | PGM  |   |      | PLACE NAMES IN PROPER ORDER   |                           |
| AREA/RECT  |       | 5    | PGM  |   | MATH | HELPS TO FIGURE AREA OF A     | RECTANGLE.                |
| BAR/GRAPH  |       | 5    | PGM  |   |      | PLOTS BAR GRAPHS. WHAT ELSE?  |                           |
| BAT/AVG    |       | 3    | PGM  |   | UTL  | COMPILES YOUR BATTING AVG.    |                           |
| BINAR/NUM  |       | 4    | PGM  |   | UTL  | SHOWS HOW TO CONVERT BINARY   | TO DECIMAL.               |
| CHAR/CODE  |       | 8    | PGM  |   | UTL  | INPUT SOME NUMBERS AND SEE    | WHAT CHARACTER CODE YOU I |
| CHECKBOOK  |       | 5    | PGM  |   | BUS  | BALANCES YOUR CHECK BOOK.     | IF THAT'S POSSIBLE.       |
| COIN/COUNT | .GAME | 7    | PGM  |   | ED   | ADD THE COINS AND GIVE THE    | TOTAL. LEARNING AIDE.     |
| COMP/PIANO |       | 5    | PGM  |   |      | TURN YOUR COMPUTER INTO A     | PIANO.                    |
| CONCATENB  |       | 5    | PGM  |   |      | CONCATENATES SYLLABLES.       | LOTS OF FUN.              |
| DBL/MONEY  |       | 3    | PGM  |   |      | WATCH YOUR MONEY GROW.        |                           |
| DICE/ANAL  |       | 5    | PGM  |   |      | LEARN ABOUT DICE.             |                           |
| ENG/METRIC |       | 7    | PGM  |   | ED   | CONVERTS ENGLISH TO METRIC    | SCALES. VERY HELPFUL.     |
| FACE       |       | 6    | PGM  |   |      | MAKE A FACE                   |                           |
| FAM/BUDGET |       | 3    | PGM  |   |      | HELP YOUR FAMILY STICK TO     | IT'S BUDGET WITH THIS.    |
| FRA/DEC    |       | 3    | PGM  |   | ED   | CONVERTS FRACTIONS TO DEC.    |                           |
| GUMMER     |       | 24   | PGM  |   | GAME | ANOTHER ONE OF THOSE SPACE    | GAMES.                    |
| HANGMAN    |       | 10   | PGM  |   | GAME | PLAY THE GAME OF HANGMAN      | AGAINST THE COMPUTER.     |
| HEX/NUMBER |       | 5    | PGM  |   | ED   | CONVERTS HEX TO DECIMAL.      |                           |
| HORSE/RACE |       | 11   | PGM  |   | GAME | BET ON THE HORSE RACE.        |                           |
| JOY/CRAYON |       | 5    | PGM  |   |      | DRAW WITH YOUR JOYSTICK.      |                           |
| KEY/CRAYON |       | 6    | PGM  |   |      | DRAW WITH YOUR KEYBOARD.      |                           |
| L I L/STAR |       | 3    | PGM  |   |      | PLAYS SONG AND FILLS THE SKY  | WITH STARS.               |
| LOAD       |       | 26   | PGM  |   |      | PROGRAM LOADER.               |                           |
| MATH/CHECK |       | 7    | PGM  |   | ED   | CHECK YOUR MATH HOME WORK.    |                           |
| MISS/LETER |       | 7    | PGM  |   | ED   | HELP SPELL THE MISSPELLED     | WORDS.                    |
| MISSILES   |       | 8    | PGM  |   | GAM  | LAUNCH SAMS MISSILES.         |                           |
| NAME/TONE  |       | 6    | PGM  |   | GAM  | PLAY NAME THAT TONE. SEE IF   | YOU CAN RECALL NOTES A-G  |
| PAP/PR/SIS |       | 8    | PGM  |   | GAM  | PLAY PAPER, ROCK, SISSORS     | AGAINST THE COMPUTER.     |
| PLANETS    |       | 7    | PGM  |   | ED   | NAME THE PLANETS IN ORDER     | FROM THE SUN.             |
| REMOVE/X'S |       | 7    | PGM  |   | GAM  | DON'T BE THE ONE TO REMOVE    | THE LAST X.               |
| REPEAT     |       | 5    | PGM  |   |      | TRY TO REPEAT H'S             |                           |
| RND/NUMS   |       | 5    | PGM  |   |      | GENERATES AND COUNTS EACH     | RANDOM NUMBER.            |
| ROCKET     |       | 4    | PGM  |   |      | WATCH ROCKET BLAST OFF. LIST  | HIS PGM. EDUCATIONAL.     |
| ROUND/NUM  |       | 3    | PGM  |   |      | SHOW HOW TO ROUND NUMBER TO   | THE NEAREST 100TH.        |
| RT/JUSTIFY |       | 4    | PGM  |   |      | RIGHT JUSTIFY NUMBERS.        |                           |
| SAVE/ACCT  |       | 3    | PGM  |   |      | CALCULATES SAVING ACCOUNTS.   |                           |
| SCRAMBLE   |       | 8    | PGM  |   | GAM  | PLAY A GAME OG SCRAMBLE.      |                           |
| SCRN/REPET |       | 3    | PGM  |   |      | WATCH REPEATING WORDS.        |                           |
| SECT/COOE  |       | 5    | PGM  |   |      | CREATES CODED MESSAGES.       |                           |
| SIGEN      |       | 3    | PGM  |   |      | MAKES SIGEN SOUND.            |                           |
| SPACE/WAR  |       | 13   | PGM  |   | GAM  | SOMETHING LIKE BEYOND PARSE.  |                           |
| SPEED/READ |       | 5    | PGM  |   | ED   | LEARN TO SPEED READ.          |                           |
| SPELL/TEST |       | 5    | PGM  |   | ED   | CHECK YOUR SPELLING ABILITY.  |                           |
| STATE/CAPS | .GAME | 11   | PGM  |   | ED   | CAN YOU NAME ALL THE STATE    | CAPITALS? TRY IT.         |
| STORM/DIST |       | 4    | PGM  |   | UTL  | CALCULATES STORM DISTANCES.   |                           |
| TEAM       |       | 6    | PGM  |   | UTL  | CALCULATES TEAM AVERAGES.     |                           |
| TEAM/BAT/A |       | 6    | PGM  |   | UTL  | CALCULATES THE TEAM'S         | BATTING AVERAGE.          |
| TEMP/FAC   |       | 6    | PGM  |   | UTL  | CONVERTS TEMPERATURES FROM    | F TO C AND BACK.          |
| TIME/BOMB  |       | 6    | PGM  |   | GAM  | FIND THE BOMBS BEFORE IT GOES | OFF.                      |
| TRAMPOLINE |       | 6    | PGM  |   | GAM  | GUESS HOW MANY TIME THE MAN   | WILL JUMP ON THE TRAMPOL  |
| TRANSLATOR |       | 9    | PGM  |   | ED   | TRANSLATES ENGLISH TO FRENCH  | AND SPANISH.              |
| TV/TYPE    |       | 3    | PGM  |   |      | TURN YOUR TV INTO A TYPE      | WRITER.                   |
| WORD/TURN  |       | 3    | PGM  |   |      | TURNS WORDS IN ALL DIFFERENT  | DIRECTIONS.               |
| ZOO/AC/SIG |       | 5    | PGM  |   |      | TELLS YOU YOUR BIRTH SIG.     |                           |

DISKNAME = 117  
0 AVAIL 358 USED 13 FILES

| FILENAME    | EXT | SIZE | TYPE  | P | KEY  | COMMENTS                     | ADDITIONAL INFORMATION  |
|-------------|-----|------|-------|---|------|------------------------------|-------------------------|
| ZETRONDOME  | .   | 52   | 1/254 |   | MUS  | PLAYS SONG. MOST ALL THE     | SONGS ON THIS DISK HAVE |
| BEATLES     | .   | 53   | 1/254 |   | MUS  | SOME SORT OF GRAPHICS.       | ENJOY.                  |
| GHOSTBUST   | .   | 41   | PGM   |   | MUS  | GHOSTBUSTERS                 |                         |
| LOAD        | .   | 4    | PGM   |   | Y    | PROGRAM LOADER.              |                         |
| NEWSONG     | .   | 28   | PGM   |   | MUS  | GO AHEAD. SING ALONG.        |                         |
| PINKPANTHER | .   | 16   | PGM   |   | MUS  | PINK PANTHER.                |                         |
| RAINBOW     | .   | 16   | PGM   |   | MUS. | SOMEWHERE OVER THE RAINBOW.  |                         |
| ROCKAROUND  | .   | 18   | PGM   |   | MUS. | ROCK AROUND THE CLOCK.       |                         |
| RUSTIC      | .   | 7    | PGM   |   | MUS  | NICE SONG CALLED RUSTIC.     |                         |
| STARTREK    | .   | 30   | PGM   |   | MUS  | THERE FROM STAR TREK.        |                         |
| VALENDAY    | .   | 38   | PGM   |   | MUS  | FOR YOU AND YOUR VALENTINES. |                         |
| WE-WORLD    | .   | 29   | PGM   |   | MUS  | WE ARE THE WORLD             |                         |
| WESTERN_BO  | .   | 26   | PGM   |   | MUS  | WESTERN BOOGIE.              |                         |

DISKNAME = 118  
43 AVAIL 315 USED 12 FILES

| FILENAME    | EXT   | SIZE | TYPE  | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION  |
|-------------|-------|------|-------|---|-----|------------------------------|-------------------------|
| ANTHEM1E2   | .BIE2 | 38   | PGM   |   | SNG | NATIONAL ANTHEM/FLAG HISTORY | TELE AND SPEECH         |
| ANTHEM08    | .XB   | 33   | PGM   |   | SNG | NATIONAL ANTHEM/FLAG HISTORY | TEXT TO SPEECH DISK     |
| BIO/TE2     | .BIE2 | 33   | PGM   |   | Y   | BIOGRAPHY AND COMPATIBILITY  | TELE AND SPEECH         |
| DONALDUK P  | .ARTP | 25   | PGM   |   | UTL | TI ARTIST PIC OF DONALD DUCK |                         |
| GETTYSBURG  | .BIE2 | 40   | PGM   |   | Y   | LINKLINS GETTYSBURG ADDRESS  |                         |
| LOTTERY     | .BIB  | 9    | PGM   |   | UTL | PICK SEVEN RANDOM NUMBERS    |                         |
| MYSTRYSPEL  | .XB   | 42   | PGM   |   | GAM | WORD GUESSING                |                         |
| NAMEAVE     | .X    | 3    | PGM   |   | UTL | PRINTS A WAVE                |                         |
| SPRINGER    | .ASMP | 20   | PGM   |   | GAM | PARACHUTE GAME               |                         |
| SUPERMAN    | .XB   | 4    | PGM   |   | UTL | SCREEN DUMP TO PRINTER       |                         |
| TABLESORT   | .XB   | 12   | PGM   |   | UTL | SORTS ON TI WRITTEN FILES    | OPTION TO CHOOSE COLUMN |
| WISCONSINTS | .XB   | 56   | 1/254 |   | EDU | COUNTIES OF WISCONSIN QUIZ   |                         |

DISKNAME = 119  
13 AVAIL 345 USED 13 FILES

| FILENAME   | EXT  | SIZE | TYPE   | P | KEY | COMMENTS                      | ADDITIONAL INFORMATION  |
|------------|------|------|--------|---|-----|-------------------------------|-------------------------|
| *PRINTHE   | .TXT | 25   | D/V 80 |   |     | DOCUMENTATION                 |                         |
| *READHE    | .TXT | 19   | D/V 80 |   |     | DOCUMENTATION                 |                         |
| ALFATEACH  | .    | 40   | PGM    |   | ED  | VERY NICE FOR TEACHING YOUR   | CHILD THE ALPHABET.     |
| AUTOLOAD   | .    | 3    | PGM    |   |     | PROGRAM LOADER                |                         |
| BANKBOOK1  | .    | 33   | PGM    |   | UTL | CHECK BOOK MANAGER            |                         |
| BANKBOOK2  | .    | 4    | PGM    |   | UTL | PART 2 OF CHECK BOOK MANAGER  |                         |
| CALENDAR   | .    | 64   | 1/254  |   | Y   | VERY NICE PLANNING CALENDAR.  |                         |
| COLUMN     | .    | 15   | PGM    |   | UTL | TAKES ANY AD COLUMN FILE AND  | PUTS IT INTO 2 COLUMNS. |
| FIND       | .    | 2    | D/F 40 |   |     | PART OF BANK BOOK PROGRAM.    |                         |
| THEARBELL  | .    | 37   | PGM    |   | MUS | I HEARD THE BELL MUSIC WITH   | GRAPHICS.               |
| LOAD       | .    | 28   | PGM    |   | UTL | LOADER FOR MMAS MUSIC ON DISK |                         |
| MANGER     | .    | 36   | PGM    |   | MUS | AWAY IN THE MANGER, GRAPHICS  |                         |
| SILENTNITE | .    | 39   | PGM    |   | MUS | SILENT NIGHT WITH GRAPHICS.   |                         |

DISKNAME = 120  
1 AVAIL 357 USED 15 FILES

| FILENAME   | EXT   | SIZE | TYPE | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION   |
|------------|-------|------|------|---|-----|------------------------------|--------------------------|
| 4INARW     | .BIB  | 13   | PGM  |   | GAM | CONNECT 4 GAME BUT VERY SLOW |                          |
| BLACK-BOX  | .BIB  | 22   | PGM  |   | GAM | USE X-RAYS TO FIND ATOMS IN  | A BOX                    |
| BOMBEI     | .BIB  | 9    | PGM  |   | GAM | TRY TO LEVEL A CITY BEFORE   | CRASHING INTO A BUILDING |
| DARKTHINGS | .BIB  | 27   | PGM  |   | GAM | USE ROBOTS TO CATCH THINGS   | IN THE DARK              |
| ELEPHANTS  | .BIB  | 29   | PGM  |   | GAM | ELEPHANT SOURING BATTLE ON A | 9 X 9 GRID               |
| FLAK/ATT   | .BIB  | 17   | PGM  |   | GAM | LAUNCH MISSILES & OVERFLING  | AIRCRAFT                 |
| INVADERS   | .B    | 24   | PGM  |   | GAM | INVADERS TYPE GAME IN BASIC  |                          |
| KATZENHOU  | .BIB  | 20   | PGM  |   | GAM | EAT CHEESE BEFORE BEING      | EATEN BY A CAT           |
| KRANCH     | .B    | 39   | PGM  |   | GAM | BASIC GAME THAT PLAYS LIKE   | PAC MAN                  |
| ROBOT JOKE | .BTE2 | 27   | PGM  |   | Y   | SPE TWO ROBOTS TELL JOKES    | TELE AND SPEECH          |
| RUNDAT     | .BIB  | 40   | PGM  |   | UTL | TRALK APPOINTMENTS           |                          |
| SPEECH GEN | .BTE2 | 31   | PGM  |   | Y   | UTL SPEECH GENERATOR PROGRAM | USE TELE AND SPEECH      |
| SPELL TE2  | .BTE2 | 15   | PGM  |   | EDU | SIMPLE SPELLING PROGRAM      | TELE AND SPEECH          |
| TRIGRIX    | .BIB  | 41   | PGM  |   | EDU | RIGHT ANGLES, SINE & COSINES |                          |
| VERTSPACE  | .BIB  | 3    | PGM  |   | UTL | HIGH RES VERTICAL SPACING    | USED                     |

DISKNAME = 121  
40 AVAIL 318 USED 15 FILES

| FILENAME  | EXT  | SIZE | TYPE   | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION   |
|-----------|------|------|--------|---|-----|------------------------------|--------------------------|
| BUSGVAL2  | .    | 41   | PGM    |   | UTL | PART OF BUDGET SAVING PGM.   |                          |
| BUSGVAL3  | .    | 45   | PGM    |   | UTL | A PROGRAM TO HELP YOU WITH   | YOUR BUDGET AND SAVINGS. |
| BUSGAVDOC | .TXT | 19   | D/V 80 |   |     | DOCS FOR BUDGET SAVING.      |                          |
| CATALOG   | .    | 4    | PGM    |   | UTL | WILL CATALOG A DISK AND TELL | HOW PROGRAM LOADS.       |
| CFINDER   | .    | 44   | PGM    |   | ED  | CONSTELLATION FINDER, GOOD.  |                          |
| DOCUMENT  | .TXT | 13   | PGM    |   |     | DOCS FOR PLANET FINDER.      | NAVSTAR ,ETC.            |
| DOCUMENT1 | .TXT | 12   | PGM    |   |     | SAME                         |                          |
| DOCUMENT2 | .TXT | 9    | PGM    |   |     | SAME                         |                          |
| DOCUMENT3 | .TXT | 8    | PGM    |   |     | SAME                         |                          |
| DOCUMENT4 | .TXT | 12   | PGM    |   |     | SAME                         |                          |
| DOCUMENT5 | .TXT | 21   | PGM    |   |     | SAME                         |                          |
| FLIP      | .    | 18   | PGM    |   | GAM | FLIP NUMBERS TO GET THEM IN  | ORDER. VERY CHALLENGING  |
| LOAD      | .    | 2    | PGM    |   | UTL | AUTO LOADER FOR BUDGET SAVE. |                          |
| NAVSTAR   | .    | 35   | PGM    |   | ED  | FIND LOCAL COORDINATES FOR   | NAVIGATIONAL STARS.      |
| UNNAVSTAR | .    | 35   | PGM    |   | ED  | IDENTIFIES NAVIGATIONAL STAR |                          |

DISKNAME = 122  
7 AVAIL 351 USED 11 FILES

| FILENAME    | EXT | SIZE | TYPE  | P | KEY | COMMENTS                    | ADDITIONAL INFORMATION     |
|-------------|-----|------|-------|---|-----|-----------------------------|----------------------------|
| ERIEBELBERT | .XB | 39   | PGM   |   | Y   | GRAPHICS AND SPEECH DEMO OF | ERNIE AND BERT             |
| FINALE      | .XB | 18   | PGM   |   | M/G | ENTIRE DISK IS MUSIC &      | GRAPHICS DEMO OF SPACE PGM |
| LOAD        | .   | 2    | PGM   |   |     |                             |                            |
| R           | .   | 4    | PGM   |   |     |                             |                            |
| SH/1        | .   | 35   | PGM   |   |     |                             |                            |
| SH/2        | .   | 52   | 1/254 |   |     |                             |                            |
| SHUTTLE     | .   | 87   | 1/254 |   |     |                             |                            |
| ST          | .   | 36   | PGM   |   |     |                             |                            |
| STAR        | .   | 27   | D/163 |   |     |                             |                            |
| STARW       | .   | 19   | PGM   |   |     |                             |                            |
| TITLE       | .   | 32   | PGM   |   |     |                             |                            |

DISKNAME = 123  
0 AVAIL 358 USED 13 FILES

| FILENAME    | EXT | SIZE | TYPE | P | KEY | COMMENTS                   | ADDITIONAL INFORMATION     |
|-------------|-----|------|------|---|-----|----------------------------|----------------------------|
| AMER/FLAG   | .   | 23   | PGM  | Y | MUS | SUNG WITH GRAPHICS.        |                            |
| BETHOVEN    | .   | 31   | PGM  | Y | MUS | MAKE GREAT MUSIC.          |                            |
| BETHOVENS   | .   | 47   | PGM  | Y | MUS | BETHOVEN'S SIM.            |                            |
| BUMBLE      | .   | 45   | PGM  | Y | MUS | FLIGHT OF THE BUMBLE BEE.  |                            |
| CASTILLA    | .   | 17   | PGM  | Y | MUS | VERY NICE SONG, CASTILLA.  |                            |
| GOLFATHER   | .   | 37   | PGM  |   | MUS | THEME FROM GOLFATHER.      |                            |
| LOAD        | .   | 4    | PGM  | Y |     | AUTO LOADER                |                            |
| MUSIC-DEMO  | .   | 16   | PGM  |   | MUS | SIT BACK AND ENJOY         |                            |
| NEVERCONSUM | .   | 23   | PGM  |   | MUS | NEVER ON A SUNDAY.         |                            |
| ORGAN       | .   | 38   | PGM  |   | MUS | JUST LISTEN TO THE SOUNDS. |                            |
| PUPPY TOWN  | .   | 34   | PGM  |   | MUS | PUPPYTOWN.                 |                            |
| ROBOT BOOG  | .   | 17   | PGM  |   | MUS | ROBOT BOOGIE, WATCH THEM   | DANCE.                     |
| VENUS BOOG  | .   | 26   | PGM  |   | MUS | VENUS BOOGIE, I WONDER IF  | THEY DANCE TO IT UP THERE. |

DISKNAME = 126  
0 AVAIL 358 USED 17 FILES

| FILENAME   | EXT  | SIZE | TYPE  | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION |
|------------|------|------|-------|---|-----|------------------------------|------------------------|
| BARTENDER  | .XB  | 13   | PGM   |   | SOL | LEARN TO MIX DIFFERENT       | ALCOHOLIC DRINKS       |
| COOKIEFILE | .XB  | 28   | PGM   |   | FUT | LEARN TO MAKE DIFFERENT      | TYPE: OF COOKIES       |
| FORM-GEN   | .XB  | 28   | PGM   |   | BUT | GENERATE BUSINESS FORMS      |                        |
| GOLD       | .XB  | 4    | PGM   |   | PIC | LOREAN FIGURE FOR GOLD       |                        |
| GRAPHMS    | .XB  | 40   | PGM   |   | BUT | BAR GRAPH PLOTTING ROUTINE   | WITH TEXT MESSAGES     |
| LIBRARIAN  | .XB  | 16   | PGM   |   | LTB | LISTING OF DIFFERENT BOOKS   |                        |
| LOAD       | .XB  | 4    | PGM   |   | LUT | LISTING OF PROGRAMS ON DISK  |                        |
| MAILINGLST | .XB  | 26   | PGM   |   | BUT | DATABASE OF CREATING OF A    | MAILING LIST           |
| NAMES      | .X   | 20   | 1/250 |   | UTL | NAME UTILITY                 |                        |
| RECORD     | .XB  | 24   | PGM   |   | BUT | RECORD OF PURCHASES WITH     | VENDOR NAME            |
| RULEOF18   | .XB  | 24   | PGM   |   | BUT | PAYMENT SCHEDULE             |                        |
| SECRETARY  | .XB  | 37   | PGM   |   | BUT | CREATE YOUR PERSONAL RECORDS |                        |
| SPEAKSHELL | .XBS | 6    | PGM   |   | SUT | YOUR COMPUTER SPEAKS TO YOU  |                        |
| SPEECH     | .XBS | 13   | PGM   |   | SUT | PUT SPEECH IN YOUR PROGRAMS  |                        |
| SPEECHFX   | .XB  | 8    | PGM   |   | SUT | PROPER TRUNCATION VALUE FOR  | ADDING SUFFIXES        |
| TYPING     | .XB  | 9    | PGM   |   | BUT | LEARN HOW TO TYPE            |                        |
| WORDPRC    | .XB  | 28   | PGM   |   | BUT | BASIC WORD PROCESSOR         |                        |

DISKNAME = 124  
2 AVAIL 356 USED 17 FILES

| FILENAME   | EXT   | SIZE | TYPE  | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION    |
|------------|-------|------|-------|---|-----|------------------------------|---------------------------|
| BUGOUT     | .XB   | 8    | PGM   |   | UTL | USED TO FIND BUGS IF A       | PROGRAM                   |
| CAD/PLAN   | .DOA  | 33   | 1/216 |   | UTL | USED BY CAD/1199             |                           |
| CAD/KEYS   | .DATA | 33   | 1/216 |   | UTL | USED BY CAD/1199             |                           |
| CAD/119946 | .X    | 19   | PGM   | Y | UTL | CAD PROGRAM FOR GEMINI       |                           |
| CAD/11994P | .X    | 24   | PGM   | Y | UTL | CAD PROGRAM FOR PANASONIC    |                           |
| CHESSTERM  | .BOB  | 32   | PGM   |   | GM  | PLAY CHESS OVER A MODEM      |                           |
| CTRIX      | .XE   | 25   | PGM   |   | UTL | DATA BASE ON 3 X 5 CARDS     |                           |
| ERROR      | .XE   | 4    | PGM   |   | UTL | ERROR TRAPPING ROUTINE       |                           |
| MASTERMIND | .BOB  | 14   | PGM   |   | GM  | USES CLUES TO GUESS A 5      | DIGIT NUMBER              |
| MOONLANDER | .BOB  | 4    | PGM   |   | GM  | TRY TO LAND A SPACECRAFT ON  | THE MOON WITHOUT CRASHING |
| NANO       | .BOB  | 36   | PGM   |   | EDU | LEARN TO RUN A MICROCOMPUTER |                           |
| OELTNER    | .XB   | 2    | PGM   |   | GRA | GRAPHICS DEMO USING SPRITES  |                           |
| PLAINS     | .BOB  | 42   | PGM   |   | GM  | PLAINS OF SALISBURY          |                           |
| SOLITAIRE  | .BOB  | 23   | PGM   |   | GM  | SOLITAIRE CARD GAME          |                           |
| TENLNER    | .BOB  | 4    | PGM   |   | MUS | SHORT MUSIC LAYING PROGRAM   |                           |
| VITAL      | .BOB  | 37   | PGM   |   | EDU | MONITOR AND CONTROL VITALS   | RESPIRATORYCARDIOVASCULAR |
| WEBSTER    | .XB   | 16   | PGM   |   | GM  | CATCH BUGS WITH SPIDER BUT   | BEWARE OF SCORPIONS       |

DISKNAME = 127  
20 AVAIL 338 USED 9 FILES

| FILENAME   | EXT | SIZE | TYPE   | P | KEY | COMMENTS                   | ADDITIONAL INFORMATION |
|------------|-----|------|--------|---|-----|----------------------------|------------------------|
| 17THSTREET | .   | 51   | 1/254  |   | MUS | DELIGHTFUL SONG            |                        |
| AXELDATA   | .   | 51   | 1/V 80 |   | MUS | BEVERLY HILLS CUP THEME    |                        |
| AXELF      | .   | 12   | PGM    |   |     | SAME                       |                        |
| GREENLV    | .   | 40   | PGM    | Y | MUS | GREENSLEEVES               |                        |
| LOAD       | .   | 4    | PGM    | Y | UTL | LOADER                     |                        |
| RAINBOW    | .   | 35   | PGM    |   | MUS | I HAVE A FEELING WE'RE NOT | IN KANSAS.             |
| RAINDROPS  | .   | 42   | PGM    |   | MUS | I HOME THAT'S RAIN DRIPS   | FALLING ON MY HEAD.    |
| STARTREKTV | .   | 46   | PGM    |   | MUS | THEME FROM STAR TREK.      |                        |
| SUNFLOWER  | .   | 57   | 1/254  | Y | MUS | SUN FLOWER SONG.           |                        |

DISKNAME = 125  
25 AVAIL 333 USED 17 FILES

| FILENAME   | EXT | SIZE | TYPE   | P | KEY | COMMENTS                 | ADDITIONAL INFORMATION    |
|------------|-----|------|--------|---|-----|--------------------------|---------------------------|
| EQUATIONS1 | .   | 13   | PGM    | Y | ED  | MODULE DUMP OF EQUATIONS |                           |
| EQUATIONS2 | .   | 33   | PGM    | Y | ED  | SAME                     |                           |
| EQUATIONS3 | .   | 16   | PGM    | Y | ED  | SAME                     |                           |
| GAMELOADER | .   | 14   | D/F 80 |   | UTL | WORKS WITH LOAD          |                           |
| GRAMMAR1   | .   | 13   | PGM    | Y | ED  | MODULE DUMP OF GRAMMAR   |                           |
| GRAMMAR2   | .   | 33   | PGM    | Y | ED  | SAME                     |                           |
| GRAMMAR3   | .   | 33   | PGM    | Y | ED  | SAME                     |                           |
| GRAMMAR4   | .   | 10   | PGM    | Y | ED  | SAME                     |                           |
| LOAD       | .   | 3    | PGM    |   | UTL | AUTO LOADER.             | RENAME DISK TO EARLYBIRD. |
| HINDCHALL1 | .   | 13   | PGM    | Y | GM  | HIND CHALLENGE           |                           |
| HINDCHALL2 | .   | 25   | PGM    | Y |     | SAME                     |                           |
| TCHTYPING1 | .   | 13   | PGM    | Y |     | MODULE DUMP TOUCH TYPING |                           |
| TCHTYPING2 | .   | 33   | PGM    | Y |     | SAME                     |                           |
| TCHTYPING3 | .   | 33   | PGM    | Y |     | SAME                     |                           |
| TCHTYPING4 | .   | 10   | PGM    | Y |     | SAME                     |                           |
| ZERO-ZAP1  | .   | 13   | PGM    | Y |     | ZERO ZAP MODULE DUMP.    |                           |
| ZERO-ZAP2  | .   | 25   | PGM    | Y |     | SAME                     |                           |

DISKNAME = 128  
9 AVAIL 349 USED 19 FILES

| FILENAME   | EXT | SIZE | TYPE   | P | KEY | COMMENTS                   | ADDITIONAL INFORMATION   |
|------------|-----|------|--------|---|-----|----------------------------|--------------------------|
| AMAZING    | .   | 13   | PGM    | Y |     | AMAZING - MODULE DUMP.     |                          |
| AMAZINH    | .   | 25   | PGM    | Y |     | SAME                       |                          |
| ATTACK     | .   | 13   | PGM    | Y |     | MODULE DUMP OF ATTACK      |                          |
| ATTAL      | .   | 26   | PGM    | Y |     | SAME                       |                          |
| BJ/POKER   | .   | 13   | PGM    | Y |     | BLACK JACK AND POKER.      |                          |
| BJ/PKES    | .   | 25   | PGM    | Y |     | SAME                       |                          |
| BLASTO     | .   | 13   | PGM    | Y |     | MODULE DUMP OF BLASTO      |                          |
| BLASTP     | .   | 25   | PGM    | Y |     | SAME                       |                          |
| CARWARS    | .   | 13   | PGM    | Y |     | ANYBODY REMEMBER CAR WARS? |                          |
| CARVART    | .   | 26   | PGM    | Y |     | SAME                       |                          |
| FOOTBALL   | .   | 13   | PGM    | Y |     | HOW ABOUT A NICE GAME?     |                          |
| FOOTBALM   | .   | 33   | PGM    | Y |     | SAME                       |                          |
| FOOTBALN   | .   | 18   | PGM    | Y |     | SAME                       |                          |
| GAMELOADER | .   | 14   | D/F 80 |   |     | JUST WHAT IT SAYS.         |                          |
| HANMAH     | .   | 13   | PGM    | Y |     | PLAY THE MODULE GAME.      |                          |
| HANMAO     | .   | 25   | PGM    | Y |     | SAME                       |                          |
| HUSTLE     | .   | 13   | PGM    | Y |     | MODULE DUMP OF HUSTLE.     |                          |
| HUSTLF     | .   | 25   | PGM    | Y |     | SAME                       |                          |
| LOAD       | .   | 3    | PGM    |   |     | AUTO LOADER. WHAT ELSE?    | RENAME DISK TO EARLYBIRD |

DISKNAME = 129  
4 AVAIL 354 USED 12 FILES

| FILENAME   | EXT | SIZE | TYPE  | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION   |
|------------|-----|------|-------|---|-----|------------------------------|--------------------------|
| BDDEMO     | .X  | 47   | DF 80 | Y | DEM | GRAPHICS DEMO MICROCOMPUTER  | APESOFF                  |
| KBGRAPHIC  | .X  | 97   | DF 80 | Y | DEM | PART OF KBDEMO               |                          |
| APESOFF    | .X  | 2    | PGM   | Y | DEM | GRAPHICS DEMO                |                          |
| ASTROSTORM | .X  | 12   | PGM   | Y | GAM | AVOID BEING HIT BY METEORITE |                          |
| AJUSTEIGHT | .X  | 31   | PGM   | Y | GAM | BE A FIGHTER PILOT           |                          |
| BASEBALL   | .X  | 48   | 1/254 | Y | GAM | PLAY BASEBALL                |                          |
| CHARDEF    | .X  | 27   | PGM   | Y | UTL | DEFINE CHARACTERS            |                          |
| FIREBALL   | .X  | 45   | PGM   | Y | GAM | AVOID DESTROYING PLANET BY   | SOLVING EQUATIONS        |
| KEYS       | .X  | 2    | PGM   | Y | UTL | DEFINE KEYS                  |                          |
| KNIGHT     | .X  | 24   | PGM   | Y | GAM | MOVE 1 KNIGHT AROUND A CHESS | BOARD TILL FULL COVERAGE |
| LD/GRAPH   | .X  | 33   | PGM   | Y | UTL | GENERATE BAR GRAPHICS        |                          |
| LOAD       | .X  | 6    | PGM   | Y | LUT | AUTOMATIC PROGRAM LOADER     |                          |

DISKNAME = 130  
30 AVAIL 328 USED 7 FILES

| FILENAME | EXT  | SIZE | TYPE | P | KEY | COMMENTS                  | ADDITIONAL INFORMATION  |
|----------|------|------|------|---|-----|---------------------------|-------------------------|
| ATC      | .TOO | 52   | PGM  | Y | GAM | ASSULT THE CITY. YOU NEED | THE TOO MODULE TO PLAY. |
| COMPUTE  | .TOO | 52   | PGM  | Y | GAM | REQUIRES THE TOO MODULE.  |                         |
| DOCTOR   | .TOO | 52   | PGM  | Y | GAM | REQUIRES THE TOO MODULE.  |                         |
| K-MART   | .TOO | 52   | PGM  | Y | GAM | REQUIRES THE TOO MODULE.  |                         |
| LOAD     | .TOO | 16   | PGM  | Y | UTL | AUTLOADER                 |                         |
| ORBS     | .TOO | 52   | PGM  | Y | GAM | REQUIRES THE TOO MODULE.  |                         |
| QMD      | .TOO | 52   | PGM  | Y | GAM | REQUIRES THE TOO MODULE.  |                         |

DISKNAME = 131  
4 AVAIL 354 USED 26 FILES

| FILENAME   | EXT   | SIZE | TYPE  | P | KEY | COMMENTS                   | ADDITIONAL INFORMATION |
|------------|-------|------|-------|---|-----|----------------------------|------------------------|
| ABIDE      | .X    | 9    | PGM   | Y | MUS | HYMN                       |                        |
| ASSURANCE  | .X    | 12   | PGM   | Y | MUS | HYMN                       |                        |
| CHILDREN   | .X    | 14   | PGM   | Y | MUS | HYMN                       |                        |
| CLOSERWALK | .X    | 10   | PGM   | Y | MUS | HYMN                       |                        |
| COMMENTS   | .TEXT | 8    | PGM   | Y | DOC | COMMENTS ON THE HYMN       | PROGRAMS               |
| ET/FATHER  | .X    | 8    | PGM   | Y | MUS | HYMN                       |                        |
| FINALE     | .X    | 8    | PGM   | Y | MUS | HYMN                       |                        |
| HOLY/HOLY  | .X    | 11   | PGM   | Y | MUS | HYMN                       |                        |
| J/SAVES    | .X    | 11   | PGM   | Y | MUS | HYMN                       |                        |
| JUST       | .X    | 8    | PGM   | Y | MUS | HYMN                       |                        |
| JUST/JLE   | .X    | 11   | 1/254 | Y | MUS | HYMN                       |                        |
| LOAD       | .X    | 11   | PGM   | Y | LUT | LOADS MUSIC PROGRAMS       |                        |
| LORDPRAYER | .X    | 9    | PGM   | Y | MUS | HYMN                       |                        |
| LOVE/LIFT  | .X    | 13   | PGM   | Y | MUS | HYMN                       |                        |
| MYSTERYSD  | .X    | 3    | PGM   | Y | MUS | HYMN                       |                        |
| NEED/THEE  | .X    | 15   | PGM   | Y | MUS | HYMN                       |                        |
| OLD-TIME   | .X    | 14   | PGM   | Y | MUS | HYMN                       |                        |
| OLD/CROSS  | .X    | 15   | PGM   | Y | MUS | HYMN                       |                        |
| ROCK/AGES  | .X    | 9    | PGM   | Y | MUS | HYMN                       |                        |
| SEAGULLS   | .X    | 17   | PGM   | Y | DEM | GRAPHICS OF SEAGULL FLYING | OVER BAY               |
| SOFTLY     | .X    | 14   | PGM   | Y | MUS | HYMN                       |                        |
| TELLSTORY  | .X    | 10   | PGM   | Y | MUS | HYMN                       |                        |
| WHERE/HE   | .X    | 8    | PGM   | Y | MUS | HYMN                       |                        |
| WHY/HE     | .X    | 13   | PGM   | Y | MUS | HYMN                       |                        |
| WILDWOOD   | .X    | 18   | PGM   | Y | MUS | HYMN                       |                        |

DISKNAME = 132  
13 AVAIL 345 USED 9 FILES

| FILENAME   | EXT | SIZE | TYPE  | P | KEY | COMMENTS                    | ADDITIONAL INFORMATION |
|------------|-----|------|-------|---|-----|-----------------------------|------------------------|
| BANANA     | .   | 45   | PGM   | Y | MUS | YES, WE HAVE NO BANANAS     |                        |
| BORNFREE2  | .   | 44   | PGM   | Y | MUS | BORN FREE                   |                        |
| LOAD       | .   | 4    | PGM   | Y | Y   |                             |                        |
| MUSICBONDA | .   | 31   | PGM   | Y | MUS | SIT BACK AND RELAX          |                        |
| MUSICTEACH | .   | 50   | 1/254 | Y | MUS | MUSIC TEACHER               |                        |
| NEWYORK    | .   | 31   | PGM   | Y | MUS | MORE GREAT MUSIC            |                        |
| POLIA      | .   | 35   | PGM   | Y | MUS | ROLL OUT THOSE BANANAS, A 1 | AND A 2 AND A...       |
| STARTRK3   | .   | 78   | 1/254 | Y | MUS | MOVIE THEME FROM STAR TREK  |                        |
| SUSANNA    | .   | 27   | PGM   | Y | MUS | OH SUSANNA!!!!              |                        |

DISKNAME = 133  
138 AVAIL 220 USED 27 FILES

| FILENAME   | EXT  | SIZE | TYPE    | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION |
|------------|------|------|---------|---|-----|------------------------------|------------------------|
| -READ-THIS | .TXT | 7    | D/V 80  | Y | UTL | READ THIS FILE.              |                        |
| ALL(N)     | .    | 2    | D/V163  | Y | UTL | THIS COMPLETE DISK IS A      |                        |
| BEEP       | .    | 2    | D/V163  | Y | UTL | GIFT FROM THE LIMA USERS     |                        |
| BYE        | .    | 2    | D/V163  | Y | UTL | GROUP. IT IS A COPY OF       |                        |
| CALL/DOCS  | .    | 26   | D/V 80  | Y | UTL | PROGRAMS THAT APPEARED IN    |                        |
| CHIES      | .    | 2    | D/V163  | Y | UTL | IN ONE OF THEIR NEWSLETTERS. |                        |
| CLOCK      | .    | 2    | D/V163  | Y | UTL | IT CONTAINS ALL KINDS OF     |                        |
| COLORS     | .    | 2    | D/V163  | Y | UTL | EXTENDED BASIC ROUTINES. IT  |                        |
| GOSPR      | .    | 2    | D/V163  | Y | UTL | IS VERY EDUCATIONAL. I THINK |                        |
| GOSB(N)    | .    | 2    | D/V163  | Y | UTL | YOU'LL ENJOY IT. THANK YOU   |                        |
| GOT(N)     | .    | 2    | D/V163  | Y | UTL | VERY MUCH TO THE LIMA USERS  |                        |
| HONK       | .    | 2    | D/V163  | Y | UTL | GROUP FOR THESE SUPER        |                        |
| KEYS()     | .    | 2    | D/V163  | Y | UTL | ROUTINES. I HOPE YOU ALL     |                        |
| LOAD       | .    | 2    | PGM     | Y | UTL |                              |                        |
| MERSEFILES | .    | 78   | D/V 128 | Y | UTL | ENJOY THEM.                  |                        |
| MEN        | .    | 2    | D/V163  | Y | UTL | XB ROUTINE. READ DOC.        |                        |
| PCATSAMPLE | .    | 3    | D/V 80  | Y | UTL | SAMPLE PROGRAM               |                        |
| PEBKV      | .    | 2    | D/V163  | Y | UTL | XB ROUTINE                   |                        |
| PLATO      | .    | 19   | PGM     | Y | UTL | PLATO CATALOGER.             |                        |
| PLATODOC   | .TXT | 16   | D/V 80  | Y | UTL | READ THIS FOR PLATO PGM.     |                        |
| POKEY      | .    | 2    | D/V163  | Y | UTL | XB ROUTINE                   |                        |
| QUITOFF    | .    | 2    | D/V163  | Y | UTL | XB ROUTINE                   |                        |
| QUITON     | .    | 2    | D/V163  | Y | UTL | XB ROUTINE                   |                        |
| RESTORE(N) | .    | 2    | D/V163  | Y | UTL | AND THE ROUTINES JUST KEEP   |                        |
| RUNPROG(S) | .    | 3    | D/V163  | Y | UTL | COMING. I HOPE YOU FIND A    |                        |
| RUNTHISXB  | .    | 30   | PGM     | Y | UTL | WAY TO USE SOME OF THEM.     |                        |
| STSPRT     | .    | 2    | D/V163  | Y | UTL | ANOTHER ROUTINE              |                        |

DISKNAME = 134  
99 AVAIL 259 USED 15 FILES

| FILENAME   | EXT  | SIZE | TYPE   | P | KEY | COMMENTS                     | ADDITIONAL INFORMATION |
|------------|------|------|--------|---|-----|------------------------------|------------------------|
| 99/AA XMAS | .TXT | 48   | D/V 80 | Y | Y   | NOTE FROM PMA SOFTWARE       |                        |
| LOAD       | .    | 8    | PGM    | Y | Y   |                              |                        |
| LOAD1      | .    | 5    | PGM    | Y | Y   |                              |                        |
| PRINT DOC  | .    | 7    | PGM    | Y | UTL | XB PROGRAM TO PRINT DOCS.    |                        |
| -XB'DISK   | .    | 3    | D/V 80 | Y | Y   | THIS DISK CONTAINS 10 GREAT  | XMAS SONGS.            |
| -XB'WANGER | .    | 16   | PGM    | Y | MUS | AWAY IN THE WANGER. GRAPHICS |                        |
| -XB'HALLS  | .    | 31   | PGM    | Y | MUS | DECK THE HALLS. GRAPHICS.    |                        |
| -XB'BELLS  | .    | 29   | PGM    | Y | MUS | JINGLE BELLS WITH GRAPHICS.  |                        |
| -XB'TANGEN | .    | 23   | PGM    | Y | MUS | OH TANGENBAUM                |                        |
| -XB'NIGHT  | .    | 14   | PGM    | Y | MUS | SILENT NIGHT WITH GRAPHICS.  |                        |
| -XB'TON    | .    | 12   | PGM    | Y | MUS | SANTA IS COMING TO TOWN.     |                        |
| -XB'KINGS  | .    | 20   | PGM    | Y | MUS | WE THREE KINGS.              |                        |
| -XB'CHILD  | .    | 29   | PGM    | Y | MUS | WHAT CHILD IS THIS           |                        |
| -XB'WISH   | .    | 10   | PGM    | Y | MUS | WE WISH YOU A MERRY XMAS.    |                        |
| -XB'XMAS   | .    | 11   | PGM    | Y | MUS | WRITE THE PROGRAM            |                        |