



SASKATOON TEXAS INSTRUMENTS COMPUTER CLUB

NEWSLETTER DECEMBER 1984

NEXT GENERAL MEETING AT:

SASKATOON REGIONAL COMMUNITY COLLEGE,

ROOM 114, 145 1ST. AVE. NORTH

7:00 PM DEC. 3RD, 1984

1985 DATES:

JANUARY 7TH, 1985

FEBRUARY 4TH, 1985

MARCH 3TH, 1985

APRIL 1ST, 1985

MAY 6TH, 1985

NEWSLETTER COMMITTEE

LEN READ, 3713 DIFFENBAKER DRIVE, 384 2844
FRANCIS X. GASTON, 407 2010 22ND ST. W., 978 0182

TV REPAIRS

TEXAS INSTRUMENTS
41 SHELLY ROAD
RICHMOND HILL, ONT.
L4C 5G4

NEWSLETTER EDITORIAL

WELL, ANOTHER MONTH HAS PASSED AND WE ARE STILL SURVIVING. NOTHING SHORT OF OUTSTANDING. FOR THOSE OF YOU WHO DID NOT ATTEND THE LAST MEETING, WE HAVE ACQUIRED THE FOLLOWING MEMBERS:

DERRICK REMPEL, 119 AVE H N., S7L 2CS, 652-3319
GLENN MAXWELL, 34 SCHWAGER CR., S7H-5C2, 477-1281
RON SCHNOR, 1115 MUNROE AVE., S7H 2G3, 343-1256
IAN HAWES, 101 HARVARD CR., 27H 2R3, 374-0019

WE HOPE THAT THEY WILL BE ABLE TO PROVIDE US WITH A NEW FRESH INPUT.

WELL, ITS TIME TO PUT ON YOUR THINKING CAPS. WE OF THE NEWSLETTER COMMITTEE HAVE DECIDED TO ACCEPT SUGGESTIONS TO OBTAIN A NAME, OR TITLE FOR OUR NEWSLETTER. WE WILL ACCEPT ALL ORIGINAL, OUTRAGEOUS OR UNIQUE SUGGESTIONS. WE WILL ACCEPT AS MANY AS YOU CAN SUGGEST. THE NAME WILL BE CHOSEN AT THE JANUARY MEETINGS BY ALL MEMBERS. ONCE WE HAVE CHOSEN ON A NAME, ALL OTHER SUGGESTIONS WILL BE KEPT ANONYMOUS. THINK OF IT, YOUR SUGGESTIONS MIGHT JUST BE PRINTED ON THE FRONT PAGE!!!! SINCE WE TRADE NEWSLETTERS WITH OTHER CLUBS, YOUR SUGGESTIONS JUST MIGHT BE SEEN ACROSS THE CONTINENT. PLEASE PRESENT ALL SUGGESTIONS TO EITHER KEN OR FRANCIS.

A NEW PROPOSAL BY ONE OF OUR MEMBERS IS TO HAVE A PRINTER AVAILABLE AT THE MEETINGS. A SUGGESTION WAS PLACED THAT A CHARGE OF \$1.00 PER PROGRAM BE PLACED. THIS WILL COVER THE COST OF RIBBONS, AND WHATEVER IS LEFT OVER, WILL GO TOWARDS THE CLUB. SO FOR THOSE OF YOU WHO ARE PROGRAMMERS AND REQUIRE THAT LISTING FOR DEBUGGING, WELL THIS MAY JUST BE WHAT YOU REQUIRE. REMEMBER, THIS IS STILL ON A PROPOSAL LEVEL.

WELL UNTIL NEXT TIME ONCE AGAIN. REMEMBER, HAVE YOUR SUGGESTIONS READY!!!!

NOVEMBER MEETING "MINUTES"

AT LEAST 16 MEMBERS WERE ABLE TO ATTEND THE NOVEMBER MEETING. THERE WERE 2 SYSTEMS BROUGHT TO THE MEETING. (ONCE AGAIN, NOT IN ORDER OF EVENTS):

1. THREE NEW MEMBERS JOINED THE GROUP. THEY ARE DERRICK REMPEL, GLENN MAXWELL, AND RON SCHNOR. A VETERAN MEMBER, IAN HAWES ALSO CONTINUED HIS MEMBERSHIP INTO THE CLUB.

2. FIRST BUSINESS BY HARRY CARUK, WAS TO WELCOME THE NEWER MEMBERS TO OUR CLUB.

3. AFTER DISCUSSIONS, A MOTION WAS PROVIDED BY DAVE OCONNER, SECOND BY GORDON MILLHAM, TO INTRODUCE A MODULE LIBRARY. THIS IS TO PROVIDE A CHANCE FOR THE SALE AND RENTAL OF MODULES, BY MEMBERS AND FOR MEMBERS. PRICES, COST, AND APPOINTMENT OF A MODULE LIBRARIAN TO BE DISCUSSED AT A FUTURE MEETING.

4. HARRY CARUK WAS ABLE TO PROVIDE US A VISUAL REVIEW OF THE MBX SYSTEM BASEBALL GAME.

5. DEMONSTRATIONS OF POLE POSITION, MINER 2049ER, FATHOM, MOONSWEEPER, SUPER DEMON ATTACK, AND MICROSURGEON SUPPLIED BY

F.X. GASTON.

6. DEAN JAMIESON PROVIDED HIS INSIGHT INTO THE COMPUSERVE BULLETIN BOARD SYSTEM. HE PROVIDED NEW INFORMATION SUCH AS THE TERMINAL EMULATOR 1200 BAUD FOR \$10.00, UNPROTECTION FOR EXTENDED BASIC PROGRAMS VIA POKING (* - IT WORKS WITHOUT PROBLEMS IN REMOVING PROTECTIONS) DISCOUNTS SPECIALS ON BOOKS, AND NEWS OF OTHER USER GROUPS. THERE ARE OTHERS BUT JUST TOO NUMEROUS TO MENTION.

7. MIKE BOYACHEK BROUGHT A COPY OF "PROGRAMMING IN SPRITES" BY MILLER GRAPHICS. A VERY COMPREHENSIVE INTRODUCTION INTO THE EXTENDED BASIC'S CAPABILITIES. CONTACT MIKE IF YOU ARE INTERESTED.

8. NOVEMBER'S NEWSLETTER WERE DISTRIBUTED TO THE MEMBERS BY F.X. GASTON. ONLY FOUR MEMBERS WERE NOT PRESENT.

9. DENNIS HANCOCK AND OTHERS WERE GIVING SHORT DEMONSTRATIONS ON THE EXTENSIONS OF ASSEMBLY PROGRAMMING USING THE EDITOR/ASSEMBLER.

10. IT WAS DECIDED THAT HARDWARE WILL BE BROUGHT TO THE NEXT MEETING BY DIFFERENT MEMBERS, IN ORDER TO FACILITATE THE SHARING OF DUTIES. DAVE OCONNER WILL PROVIDE THE PEB AND HARRY THE MONITOR AT THE NEXT MEETING. (* - APOLOGIES, AS TO WHO WAS TO BRING THE CONSOLE?)

11. KEN READ WILL CONTINUE TO PROVIDE SERVICE AS THE SOFTWARE LIBRARIAN.

12. THERE WERE DISCUSSIONS AS TO PROVIDE LESSONS FOR EXTENDED BASIC. WILL PROBABLY BE INTO THE NEW YEAR. WE HAD MANY INTERESTED MEMBERS

13. RON SCHNOE HAS BEEN LOOKING INTO THE POSSIBILITIES OF ACCESSING THE CARTRIDGE ITSELF. HIGHLIGHTED BY DEAN JAMIESON AS TO HAVING SEEN SOMETHING IN COMPUSERVE OF PLACING CARTRIDGES ONTO DISKETTES. (* - AS OF THIS WRITING, THERE IS NOW A WAY OF DOING THIS; THIS FROM THE 9T9 USER GROUP OF TORONTO. SEE FRANCIS FOR INSTRUCTIONS, ALSO ON THE NEXT NEWSLETTER. GRATITUDE TO THE 9T9 GROUP FROM TORONTO).

14. DISCUSSIONS WERE INTRODUCED IN REGARDS TO THE DEFINITION OF PIRACY OF SOFTWARE OR FROM MAGAZINES. AS THE CLUB'S ETHICAL RULES STANDS, WE WILL ONLY ACCEPT SOFTWARE FOR OUR LIBRARY IF THOSE PROGRAMS ARE NO LONGER BEING SUPPLIED OR PROGRAMS THAT ARE CONSIDERED PUBLIC DOMAIN. BETWEEN MEMBERS IS BEYOND THE CLUB'S RULINGS.

15. MIKE BOYACHEK AND SON, PROVIDED A DEMONSTRATION ON THE REPAIR OF THE TI JOYSTICKS (IF YOU STILL HAVE THEM). WITH A HOLE PUNCH, FOIL AND GLUE(?), YOU CAN EXTEND OR IMPROVE YOUR YOYSTICK'S LIFE.

16. A BROTHER EP44 PRINTER TYPEWRITER WAS DEMONSTRATED BY F.X. GASTON (WHAT THIS NEWSLETTER IS PRINTED ON). IT USES AN 24 X 18 DOT MATRIX OUTPUT. VERY PORTABLE AND VERSATILE, SINCE IT CAN ALSO BE USED AS A REMOTE TERMINAL. PRINTOUT IS NEAR LETTER QUALITY

17. INQUIRIES IN REGARDS TO RS232 PRINTER BUFFER. DOES ANYONE KNOW HOW TO MAKE ONE, AND POSSIBLE EXPENSES?

18. NEW MEMBERS WERE ASKED AS TO HOW LONG THEY HAVE HAD THEIR SYSTEM AND THEIR USES. RESPONSES FROM GENERAL TO GAME USAGE.

19. EXPLANATIONS AS TO THE LATENESS OF THE UNISOURCE CATALOGUE WAS PROVIDED BY F.X. GASTON. ALSO NEW MEMBERS

REQUESTED ADDRESSES AND COST OF OTHER CATALOGUES, IE. TENEX, BROADBENT, TEXCOMP, ETC.

20. DAVE BRUNNEN BROUGHT UP DISCUSSIONS IN REGARDS TO THE HOME COMPUTER MAGAZINE. AVAILABLE AT W.H. SMITH IN CONFEDERATION, SOME PAGES WERE EITHER DUPLICATED AND/OR MISSING. FOR YOUR INFORMATION IF YOU PLAN TO PURCHASE THIS MAGAZINE.

21. LAST BUT NOT LEAST, PROBLEMS DEVELOPED WITH DENNIS HANCOCK'S SYSTEM. IT APPEARED THAT THE DISKS COULD BE READ, BUT NOT WRITTEN TO. NOT ONLY THIS, BUT THE DISKS WERE ALSO DESTROYED (ERASED COMPLETELY). HELPFUL MEMBERS ATTEMPTED TO CORRECT THIS PROBLEM, BUT TO NO AVAIL. CONTINUING SAGA IN THIS ISSUE.

22. MEETING ADJOURNED.

-FRANCIS X. GASTON-

THE SAGA OF THE BROKEN DRIVE -----

DURING OUR LAST MEETING, DENNIS HANCOCK ENCOUNTERED SOME PROBLEMS WITH HIS SYSTEM. THE MAIN PROBLEM WAS THAT THE SYSTEM WOULD READ BUT NOT WRITE A DISKETTE. NOT ONLY THAT, IT APPARENTLY DESTROYED ALL THE PROGRAMS WITHIN. SOME SUGGESTIONS PROVIDED WAS THAT IT MAY BE ONLY TO THE FIRST TWO TRACKS, IE. DIRECTORY. WELL, PRIOR TO THE ADJOURNEMENT OF THE MEETING, WE DID NOT HAVE ANY LUCK IN CORRECTING THIS PROBLEM.

THE NEXT DAY, DAVE BRUNNEN, DENNIS HANCOCK, AND MYSELF DECIDED TO MEET AT MY PLACE TO TRY TO TROUBLESHOOT ON WHAT THE PROBLEM MIGHT BE. BY USING DENNIS'S DRIVE IN MY PEE, WE DISCOVERED THAT THE PROBLEM WAS INDEED WITH THE DISK DRIVE, AND NOT THE CONTROLLER OR ANY OTHER EQUIPMENT.

DENNIS THEN DID NOT HAVE ANY OTHER ALTERNATIVES BUT TO SEND HIS UNIT IN TO GEOPHYSICAL SERVICES IN ONTARIO. AFTER CONTACTING THEM, THIS WAS EXPLAINED TO DENNIS; THEY REQUIRE AT LEAST \$82.00 IN ORDER TO JUST LOOK AT THE SYSTEM. EXTRA COSTS OR REFUNDS ARE POSSIBLE, WITH MUCH HOPE ON THE LATTER. SO DENNIS SENT IN HIS UNIT BY COURIER. HOPEFULLY THEY WILL RETURN IT REPAIRED PROMPTLY.

SO NOW WHAT FOR THE FUTURE? WELL, IT WAS PROPOSED THAT WHOEVER BRINGS THEIR SYSTEMS, HARDWARE OR SOFTWARE, TO THE MEETINGS, ONLY THAT PERSON, OR HIS DELEGATE MAY OPERATE THOSE ITEMS, INCLUDING SET-UP AND TAKE-DOWN. THIS SHOULD REDUCE OR REMOVE ANY PROBLEMS FOR FUTURE MEETINGS. AS YOU CAN SEE, IT BECAME AN EXPENSIVE LESSON, BUT A LESSON WORTH LEARNING.

FRANCIS X. GASTON-

DRIVE FOR DISKETTES

This is the third and last part to the article on disk drives.

Sequential Data Files

These are individual records stored on the disk one after the other, in the same order in which they were written. For example, the first record in BOWLERS would contain the data written to the disk for the first bowling league member; the second record written to the disk would contain the data of the second member, and so on.

These sequential files can be either FIXED LENGTH or VARIABLE LENGTH record files. A fixed length record file is identical to the files stored on cassettes. Each record is the same length, which can be anywhere from 2 characters (bytes) to 255 characters (a full sector) long.

In a variable length file each record may have a different length up to a maximum amount. For example, suppose a part of each record in BOWLERS was to contain the member's name. With fixed length records, we would have to make sure that we truncated any names that were too long to fit in the record. On the other hand, if someone's name was were short (and therefore smaller than the fixed length), the DOS would have to pad the name part of the record with zero bits so that it would be the right length. In a variable length file, we would not have to worry about any of this. We would tell the DOS the maximum size that the variable length record would be and let the computer do the rest. Variable length records can be up to 254 characters long, which means that we can set the maximum length high enough to accommodate any name. This way, if a name is short, we do not waste disk space with padded information. Variable length records are very efficient at storing data strings, such as people's names. The only disadvantage is that variable length record files use up one byte per record, which makes the maximum length of a record 254 bytes.

The major drawback of a sequential file is that even though the file is located on a disk in a drive that can jump from track to track, it is often a case of "you can't get there from here." In this regard, it is just like a cassette tape file. Whenever data is read from this kind of file or written to it, the entire file (that is, all the records) in front of the one we want must be read or written. So it is not possible to go from record 242 to record 241. Instead, the system goes back to record 1 and reads all the way to 241. To read from a sequential fixed length file, we would OPEN the file in the INPUT mode. To write out to the file, we would OPEN it as OUTPUT.

Because the sequential variable length file is stored on a disk, there are some things we can do with it that are just not possible with cassette tape files. For example, we can tell the DOS that we want to add new records to a file and that we don't want to read in all the previous data first. In this case, we

can OPEN the file in what is called APPEND mode so that we will automatically add new records to the back of the file. We cannot do this with cassette tape files!

The EOF function is another neat feature provided by TI's DOS for sequential files. This allows us to see if we have run out of data on a sequential file while we are reading it in. Trying to read past the last record on a file will generate an error. This means that we do not have to keep a special record count to make sure that we don't try to read in too many records.

Because the data is saved in the buffer, we can both read and write at the same time. We do this by OPENing the file in UPDATE Mode. Using this feature is very tricky because we cannot tell the DOS which record we want written out. If we have just read in the 15th record, changed its data and then want to write it to the disk, we have to be carefull. Telling the DOS to write it out now won't cause the new data to write to the 15th record. For this reason, I'd never use this method.

Let's review what we know about sequential file processing. First, the file can be composed of either fixed length records or variable length records. Second, fixed length record files are just like cassette files except that they can be a maximum of 255 characters long. These files can be OPENed as either INPUT only or OUTPUT only. Variable length record files have a length of 254 bytes (maximum) and can be OPENed as INPUT, OUTPUT or in APPEND mode. Third, using the EOF statement will protect you from reading past the last record on the file. Finally, you can try a tricky technique to both read and write a sequential file by OPENing it in UPDATE mode.

We will now go over an example of what the sequential disk file program code would look like by recoding the bowling league program.

```
90 REM ROOM FOR 60 BOWLERS
   NAMES,AVERAGES,HANDI
   CAPS.
100 DIM B_NAMES$(60),B_AVG(60),
   B_HANDI(60)
999 REM OPEN FOR OUTPUT
1000 OPEN #25:"DSK1.BOWLERS",
   OUTPUT,INTERNAL,SEQUEN
   TIAL,VARIABLE 254
1010 FOR I=1 TO 60
1020 PRINT #25:B_NAMES$(I);B_
   AVG(I);B_HANDI(I)
1030 NEXT I
1040 CLOSE #25

1099 REM OPEN FOR INPUT
1100 OPEN #20:"DSK1.BOWLERS",
   INPUT,INTERNAL,SEQUEN
   TIAL,VARIABLE 254
1110 I=1
1120 INPUT #20:B_NAMES$(I);B_
   AVG(I);B_HANDI(I)
1130 IF EOF(20)=0 THEN 1140 ELSE
```

```
1160
1140 I=I+1
1150 GOTO 1120
1160 CLOSE #20
```

Statement 1100 opens the file called BOWLERS located on any disk found on drive 1 for input. Statement 1000 opens it for output. Since the file already exists on the drive, this new version will be written over the earlier version already on the disk. Note that by letting the DOS do the blocking, we have significantly decreased the amount of work we have to do on output (compared with what is required for tape files). Also notice that I use variable length records to minimize wasted disk space when a bowler has a short name. Another thing to notice is that on input, I use file #20 for BOWLERS, but for output I use file #25 for the very same file. I do this to emphasize that once a file has been CLOSED, you can reopen it with any available file number. The only rule to remember is that you can't use the same file number for two different files that are open at the same time!

Relative (Random) Data Files

One of the most powerful features of the DOS is its ability to handle the second kind of file that can be stored on a disk, the RELATIVE or RANDOM file. These files are composed of fixed length records which the DOS can locate directly. The DOS does not have to read past a previous record in order to get to the one we want, it can calculate the exact track, sector, and location within a sector merely by looking at the record number we want to retrieve. With this kind of file, the 15th record written out can be placed on the first record of the file, the 4th record written out can be placed on the 3rd record of the file, and so on. This kind of file processing is very useful when we want to update particular records in a very large file. We don't want to waste our time reading the data that doesn't change. For example, suppose that our bowling file contained data on 500 bowlers but only 30 of them bowl on a particular day. Why waste time reading in records on all 500 members when all we want to do is to update 30 records? You can see that this type of file can give us tremendous power.

Because the only limitation on relative record files is that they be fixed length, there is nothing to prevent us from creating this file sequentially in one program and updating it as a relative file in another! If we are just going to read the various records on the file, we can OPEN the file as INPUT. Similarly, if we are creating the file and are not going to be reading any records, we can OPEN it as OUTPUT. However, if we are going to be updating individual records, we indicate this to the DOS by OPENING the file in UPDATE mode. Every time we want to read or write a record, now matter how it was opened, we give the record number as part of the READ or PRINT statement. Without a record number, the DOS will get the next available record for reading or writing. Suppose that I last read in record 15 using the REC part of the read statement. If I follow that with a regular read (no REC included), my program will wind up reading record 16.

Let's review what we have discussed about relative record files. First, they must contain only fixed length records, and any fixed length record file can be treated as a relative file. Second, they can be OPENed for INPUT only, OUTPUT only, or in UPDATE mode. Third, in order to use any mode, we must give the record number as part of the READ or PRINT statement. Fourth, if we don't provide a record number, the next record in line will be read or written.

Suppose that we want to update our bowlers' pin averages after every frame. We first change our original example program to create a file using fixed length records only. For this example, let's make all records 250 bytes long. Then we give each bowler a number representing his record number, that is, the first bowler on our file has record number 1, the second has record number 2 and so on. We then write a program that would look something like this:

```

    99 REM OPEN FOR UPDATE
   100 OPEN #15:"DSK.BASIC01.
        BOWLERS",UPDATE,INTER
        NAL,RELATIVE,FIXED 250
   200 REM MAINLINE
   210 INPUT "ENTER BOWLER'S #":I
   220 IF I < 1 OR I > 60 OR I = INT(I)
        THEN 210
   230 INPUT #15,REC I:B_NAMES;B_
        AVG;B_HANDI
   240 PRINT "ENTER NEW AVERAGE
        FOR ";B_NAMES$
   250 INPUT B_AVG
   260 .....(compute handicap here)
   270 PRINT #15,REC I:B_NAMES;B_
        AVG;B_HANDI
   280 GOTO 210
   999 CLOSE #15
```

We open a relative file called BOWLERS located on a disk called BASIC01, using the UPDATE mode. Then we ask for the bowler's record number. We edit this number to make sure that it is legal, and then in lines 230 and 270 we include the number as part of our READ and PRINT statements.

We have gone through a very broad discussion about disks, disk drives, and disk files. I hope you found it both interesting and instructive. I also hope that it will make you feel so confident about using disks that you'll want to join the drive for diskettes!

-KEN PEAD-

DATAFAC: UNBBS

UNBBS - UNIVERSITY OF MANITOBA BBS HAD RECENTLY BEEN IMPLEMENTED IN SEPTEMBER OF THIS YEAR. THIS IS MY FIRST ENCOUNTER WITH A TRULY "NATIONAL" BBS. IT IS TRULY AN ASTOUNDING SYSTEM, TO ATTRACT MANY MORE USERS, OF MANY SYSTEMS.

THE SYSTEM WAS DISCOVERED BY KEN READ. THE SYSTEM HAS BEEN DEVELOPED BY THE UNIVERSITY OF MANITOBA'S COMPUTER SCIENCE DEPARTMENT, AND IS OPEN TO ALL WHO POSSESS A TERMINAL AND A MODEM. IT IS A TIME SHARING SYSTEM USING A LARGE MAINFRAME COMPUTER. IT IS MENU AND COMMAND DRIVEN WITH MORE THAN ADEQUATE ASSISTANCE, IN CASE OF DIFFICULTIES. ALTHOUGH IT IS STILL ON A TRIAL BASIS, IT HAS PROGRESSED THROUGH NUMEROUS CHANGES AND IMPROVEMENTS SINCE ITS IMPLEMENTATION.

WITHIN THE SYSTEM, THERE ARE SUB-CATEGORIES OF BULLETIN BOARDS. OF NO SURPRISE, ARE BBS FOR APPLE, COMMODORE, IBM, ATARI, AND MORE. I HAVE RECENTLY SENT A LETTER TO THE CO-ORDINATOR TO INCLUDE OUR SYSTEM ALSO, AND HOPEFULLY BY CHRISTMAS, WE WILL HAVE ONE FOR THE T1. AT THE MOMENT YOU CAN SEND MESSAGES TO ME, USERID #810, OR TO KEN READ, T1 USER EXTRAORDANAIR..#752.

PLEASE NOTE: THIS SYSTEM IS BEING SPONSORED BY THE UNIVERSITY OF MANITOBA, WHICH ALSO MEANS THEY FOOT ALL THE BILLS. IN ORDER TO ACCESS, CALL THE DATAFAC NUMBER (IN THE PHONE BOOK), AND OBTAIN A CARRIER TONE. TYPE .(PERIOD) FOLLOWED BY A CARRIAGE RETURN. THEN TYPE THE ADDRESS 93200233 FOLLOWED BY A (CR). THEN TYPE "T1 LOGON UMMS" (CR). IF AT FIRST YOU DONT SUCCEED, REPEAT FROM THE ADDRESS INSTRUCTION. FOR THOSE OF YOU OUTSIDE SASKATOON, THIS METHOD IS ALSO ACCESSABLE. IF YOU HAVE ANY QUESTIONS, SEE KEN OR MYSELF OR LEAVE A MESSAGE ON THE BOARD OR COCO BBS 374-2391. I HOPE TO HEAR FROM YOU PEOPLE SOON. ALSO T1 USERS FROM AS FAR AS NOVA SCOTIA HAVE BEEN ON THIS SYSTEM. I HOPE THAT U OF M. WILL CERTAINLY "KEEP IT UP". SEE YOU ON THE SYSTEM.

-FRANCIS R. GASTON

CORCOMP'S RS232

I HAD RECEIVED MY RS232 FROM TEXCOMF INC (US) OVER TWO MONTHS AGO NOW. DURING THIS TIME OF EXTENSIVE USE, I HAVE NOT ENCOUNTERED ANY PROBLEMS OR DIFFICULTIES OF ANY SORT. THE CARD HAS PERFORMED AS IT WAS ADVERTISED TO DO. IT PROVIDES OPTIONS THAT ARE AVAILABLE OR AS MUCH THE SAME AS THE T1'S RS232. HERE ARE SOME EXAMPLES:

- BAUD RATE OF UP TO 9600
- 7 OR 8 DATA BITS
- PARITY OF ODD, EVEN, OR NONE
- 1 OR 2 STOP BITS POSSIBLE
- PARITY CHECKS, ECHO, CR, AND LF CAPABILITIES

YOU ARE ALSO PROVIDED WITH 2 SERIAL PORTS (WITH OPTIONAL Y

CONNECTOR) AND 1 PARALLEL PORT. ALL OPTIONS MAY BE ENTERED AS BASIC STATEMENTS IN A PROGRAM.

THE UNIT IS ENCLOSED IN A PROTECTIVE PLASTIC CASE, COMPLETE WITH VENTILATION VENTS. THE ACCOMPANYING DOCUMENTATION MANUAL WAS VERY COMPREHENSIVE, FROM INSTRUCTION OF INSTALLATION, TO THOROUGH ERROR CODES AND PIN CONFIGURATION FOR A SERIAL Y CONNECTOR, WHICH BECAME USEFUL SINCE I DECIDED TO DEVELOPE MY OWN.

I HAVE USED THE SYSTEM NOW, BOTH FOR PRINTER AND MODEM, SINCE ITS ARRIVAL. ALTHOUGH CORCOMP PROVIDES A 4 MONTH (120 DAYS) WARRANTY, I DON'T FORLSEE ANY PROBLEMS FOR THE FUTURE. (KNOCK ON WOOD!!!). I WOULD RECOMMEND THIS ADDITION TO YOUR HARWARE.

PRICE FROM TEXCOMP WAS \$79.95 (US). CANADIAN DUTY, SHIPPING AND TAXES (YES TAX!!!) WAS \$110.00 (CAN).

-FRANCIS X. GASTON-

SPY'S DEMISE

CHALLENGER SOFTWARE INT'L
BOX 50150, ST. LOUIS, MISS.
63107

CONFIGURATION:

CASSETTE: EXTENDED BASIC OR ASSEMBLY LANG. USING MINI MEMORY.
DISK: 1) 32K MEMORY - EXTENDED BASIC, MINI MEMORY, OR EDITOR
- ASSEMBLER.
2) WITHOUT 32K - EXTENDED BASIC.

THIS IS THE OFFICIAL TI VERSIN OF PENGUIN SOFTWARES BEST SELLING GAME. THE GAME IS COMPOSED OF NINE SCREENS, WHILE EACH SCREEN IS COMPOSED OF ELEVEN FLOORS. AS YOU MOVE THROUGH EACH FLOOR, A PART OF AN ENCODDED MESSAGE IS REVEALED. IN THIS WAY, A HIDDEN PUZZLE CAN BE SOLVED. IF YOU ARE ABLE TO BREAK THIS CODE, YOU WILL BE ELIGIBLE TO WIN FREE SOFTWARE FROM CHALLENGER SOFTWARE.

THE GAME ITSELF IS RELATIVELY SIMPLE. MUCH LIKE FROGGER, YOU HAVE TO AVOID BEING HIT BY EMBASSY GUARDS. YOUR OBJECTIVE IS TO COLLECT MAPS AND GADGETS WHILE TRYING TO CLEAR THE SCREEN AS QUICKLY AS POSSIBLE TO ACHIEVE HIGHER SCORES. ONE NICE FEATURE IS THE P(PAUSE) KEY WHICH ENABLES YOU TO REST YOUR NERVES, ONCE THE GOING GETS ROUGH.

I'VE HAD THE PROGRAM FOR NEARLY HALF A YEAR NOW, BUT STILL HAVE NOT BROKEN THE CODE. THIS IS A GOOD INDICATION OF WHAT DIFFICULTIES AWAITS YOU.

OVERALL, A VERY "CHALLENGING" GAME.

-FRANCIS X. GASTON-

POLE POSITION

I RECENTLY BOUGHT ATARISOFTS' POLE POSITION, FROM CONSUMER DISTRIBUTERS. EVERYTHING CONSIDERED, IT IS A VERY ENTERTAINING AND CHALLENGING GAME. YOU ARE NOT ONLY PITTED AGAINST OTHER RACERS, BUT MUST ALSO COMPETE AGAINST THE CLOCK. THE GAME REQUIRES NERVES AND SKILL, OF A PROFESSIONAL RACE CAR DRIVER.

THE GAME MAY BE PLAYED USING JOYSTICKS OR KEYBOARD CONTROL. MOVEMENT IS NORMAL JOYSTICK CONTROL, WHILE YOU ALSO HAVE CONTROL OF THE HIGH AND LOW GEARS VIA THE FIRE BUTTON (OR VIA THE APPROPRIATE KEYS). MAXIMUM ALLOCATED SPEED IS 195 MILES PER HOUR.

THE GAME IS PLAYED IN TWO PARTS. THE FIRST IS A QUALIFYING HEAT, WHERE YOU PIT YOURSELF AGAINST THE CLOCK FOR ONE OF THE STARTING EIGHT POSITIONS. THE SECOND PART IS THE ACTUAL RACE ITSELF, WITH WINDING ROADS, SUICIDE RACERS, AND IMMOVABLE ROAD SIGNS. YOUR OBJECTIVE? TO BE THE BEST RACE CAR DRIVER IN THE WORLD!!!

THE GRAPHICS OF THIS GAME COULD HAVE BEEN IMPROVED. UNLIKE DEFENDER, THE PROGRAMMERS APPARENTLY DID NOT USE THE FULL POTENTIAL OF SMOOTH MOVEMENT ON THE TI. INSTEAD, WE ARE SERVED WITH SUBTLE SCREEN CHANGES (WHICH IN THE HEAT OF THE RACE, IS NOT TOO EVIDENT), BUT WHILE APPROACHING CORNERS, THERE ARE MAJOR SCREEN CHANGES.

ALTHOUGH, COMPARISON OF THE TI VERSUS THE ATARI VERSION HAVE BEEN FAVOURABLE WITH OTHER TITLES, THIS ONE JUST FELL SHORT OF ATARI'S. HAVING COMPARED IT TO DEFENDER, I TRULY BELIEVE THAT THE PROGRAMMERS COULD HAVE DEVELOPED A FAR MORE SUPERIOR VERSION. OTHER THAN THIS, I'VE THOROUGHLY ENJOYED AND PLAYED THE GAME TO THE FULLEST. LOOK OUT, MARIO ANDRETTI, HERE I COME!!!!!!!!BROOOOMMMM!!!!!!

-FRANCIS X. GASTON-

NEXT MONTH: MINER 2049ER, SUPER DEMON ATTACK, MOONSWEEPER, AND FATHOM FROM IMAGIC AND TIGER VISION.



32

OFFER ONLINE
P.O. BOX 11988
EDMONTON, ALBERTA
T5J 3L1