



THE DISPATCH DISK



SOUTHERN DISTRICTS
COMMODORE USERS
CLUB INC.

November 1988

COMMITTEE - 1987/88

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	Library open 7:00 pm - 7:30 pm each general meeting.		
Newsletter	: John Hancock - see above.		

Next meeting : MONDAY 23rd January at 7:30 pm.

Location : Salvation Army Hall, Elizabeth Rd. Morphett vale.
Subject : Children's Night

February : Disk Protection
March : Superbase

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FROM THE EDITOR

The second anniversary of the club has now passed and we are still here thanks to the dedication of a small band of people, the committee. Each member has made a positive and very fruitful contribution to the club, but the club's success is due to the commitment of all of the members to the various activities in which the club is involved. From a personal perspective I am encouraged to receive a number of articles from some club members.

At the club meetings I am conducting a tutorial on basic Commodore operation and programming. This will be followed on a Superbase tutorial conducted by Paul Gorton, which will involve more advanced programming. Attendance at the current tutorial should be adequate preparation for the superbase tutorials. The saying "You only get out of it what you are willing to put into it" applies to these tutorials. Although those attending may listen and learn at the tutorials the information gained will be quickly forgotten if not reviewed. For this reason a summary of the material presented will be published in the newsletter each month. There will also be exercises to reinforce what was learnt and to prepare for the next months tutorial.

The new committee is listed at the front of this newsletter so please make your desires for the club known to them.

MEMBERS LISTING

It is planned to provide a list of members names, addresses and phone numbers in a forthcoming issue of the Dispatch Disk. If you do not want these details published please tell me and I will exclude those details from the list. I have a list of these details with me at each meeting for any member to check the accuracy of our club records.

MEMBERSHIP FEE

It is time again for members to rejoin. Members have until the January meeting to pay their membership fee, after which their membership may lapse. There will be a vote on the abolition of the family membership at this meeting, leaving only full membership, which incorporates family privileges. This leaves only one membership, full which remains at \$10 with a \$5 joining fee for first time members.

FAMILY PICNIC

Congratulations to the winners of the prizes at yesterdays picnic. This is written before the picnic but I anticipate a good time for both adults and children. A number of people are working very hard to make this an enjoyable occasion. I only hope that you did not miss out.

On behalf of the committee I would like to wish all of the members a very merry Christmas, and leave you with the following Christmas message from the life of Jesus;

The angel of the Lord said to the shepards "Do not be afraid; for behold, I bring you good news of great joy which shall be to all people; for today in the city of David there has been born for you a Savior, who is Christ the Lord....

Glory to God in the highest,

And on earth peace among men with whom He is pleased.

COMPUTER TUTORIAL PART 1

by J. Hancock

1.1 Introduction

A computer consists of a number of parts, usually consisting of the computing unit, keyboard, monitor and mass storage device. In the case of the Commodore 64 the computing unit is combined with the keyboard, the mass storage device may be a tape or disk drive and the monitor may be a television or a dedicated display.

1.2 The Screen

When the computer is turned on we are presented with a sign on message telling us what type of computer we have and the available space for BASIC programmes. At this point we can type a command, which is a word to tell the computer to do something. In the coming weeks we will look at a number of commands for the Commodore 64, what they do and how they work. The cursor (the flashing rectangle) can be moved anywhere on the screen and characters typed or removed. This is called "Full screen editing". To enter a command simply type it at the beginning of any line on the screen and press <RETURN> while still on that line. If the line is still on the screen the command may be repeated by moving the cursor onto that line and pressing return.

1.2 Some Commands

What follows are some simple commands. To execute these commands, type them at the beginning of the line and press return while the cursor is on that line.

LIST Display the BASIC programme in the memory.
NEW Remove the BASIC programme from the computers memory.
RUN Begin executing the BASIC programme currently in the computers memory.
PRINT Will display to the screen the value(s) following the PRINT command, for example,
PRINT "the number is ";x
 will display on the screen the words, the number is, followed by the value for x.

1.3 Loading and Saving Files

But we need a BASIC programme in the computers memory for most of these programmes to produce any result. We must therefore learn how to get a BASIC programme from a tape or disk drive into the computers memory. The command to do this is LOAD. For example;

LOAD
will search the tape drive (if one is attached) for the first file and load it into the computers memory. If the required file may not be the first one on the tape then a filename may be used.
LOAD "file"
where file is the name of the file that is to be loaded. For example,
LOAD "BASICGAME"
will search the tape for the programme BASICGAME and load it into the computers memory.

To load a basic programme from the disk drive type,
LOAD "filename",8
The ,8 tells the computer to look for the file, filename, on the disk in the disk drive.

To save a BASIC programme to tape,
SAVE "file"
Or to save a programme to disk type,
SAVE "file",8
which is the same as for LOAD.

1.4 Scientific Calculator

As well as commands, which tell the computer to do something, there are also functions, which return a value. For example,

SQR(x) Will return the square root of the number x.

For example

PRINT SQR(16)

will display the number 4.

In addition to functions we also have operators. The four basic numeric operators are add, +, subtract, -, multiply, * and divide, /. For example,

PRINT 5*6+7

will display the number 37 to the screen.

COMPUTER TUTORIAL PART 2

by J. Hancock

2.1 Definitions

Before we discuss writing programmes we need to define a number of terms.

Variable A variable is the name of a value. There three types of variables, real - a decimal number, integer - a whole number and string - may contain letters.

Constant A constant is a single value, for example numeric, 1,2345, or string "Hello There".

Statements A statement is an instruction given to the computer. REM is a statement which tells the computer to ignore the line starting with this statement.

Command A command tells the computer to do something. PRINT will display to the screen the data in the PRINT command.

Function A function will return a value. LEN is a function which will return the length of the string requested.

Operator An operator operates on constants or variables. The symbol * is an operator, for example 3*4 will be evaluated to 12.

It is not necessary to completely understand all of the above definitions at once, but keep this list in the back of your mind and when you see any of these words read the above together with the Commodore manual and the meanings will become clear.

1.2 A Programme

Commodore BASIC uses line numbers to tell the BASIC interpreter the order in which to execute the lines. When writing a programme it is a good idea to start by numbering the lines in tens.

```
10 REM *****
20 REM *           TEMPCONV           *
20 REM *           -----           *
30 REM * A PROGRAMME TO CONVERT TEMPERATURES IN *
40 REM * DEGREES FARENHEIT TO DEGREES CELSIUS *
50 REM *           -----           *
60 REM *           J. HANCOCK           *
70 REM *           11/11/88           *
80 REM *****
90 REM
100 REM GET THE TEMPERATURE IN DEGREES FARENHEIT
110 INPUT "ENTER THE TEMPERATURE IN DEG FARENHEIT ";FARENHEIT
120 REM CALCULATE THE TEMPERATURE IN DEGREES CELSIUS
130 LET CELSIUS = (FARENHEIT-32)*5/9
140 REM DISPLAY THE RESULT
150 PRINT "THE TEMPERATURE IN CELSIUS IS ";CELSIUS;" DEG"
```

1.3 EXERCISES

1. Rewrite the above programme to convert from degrees Celsius to degrees fahrenheit.
2. Rewrite the above programme to repeat for different temperatures without having to type RUN repeatedly.

Next month we will add to the above programme.

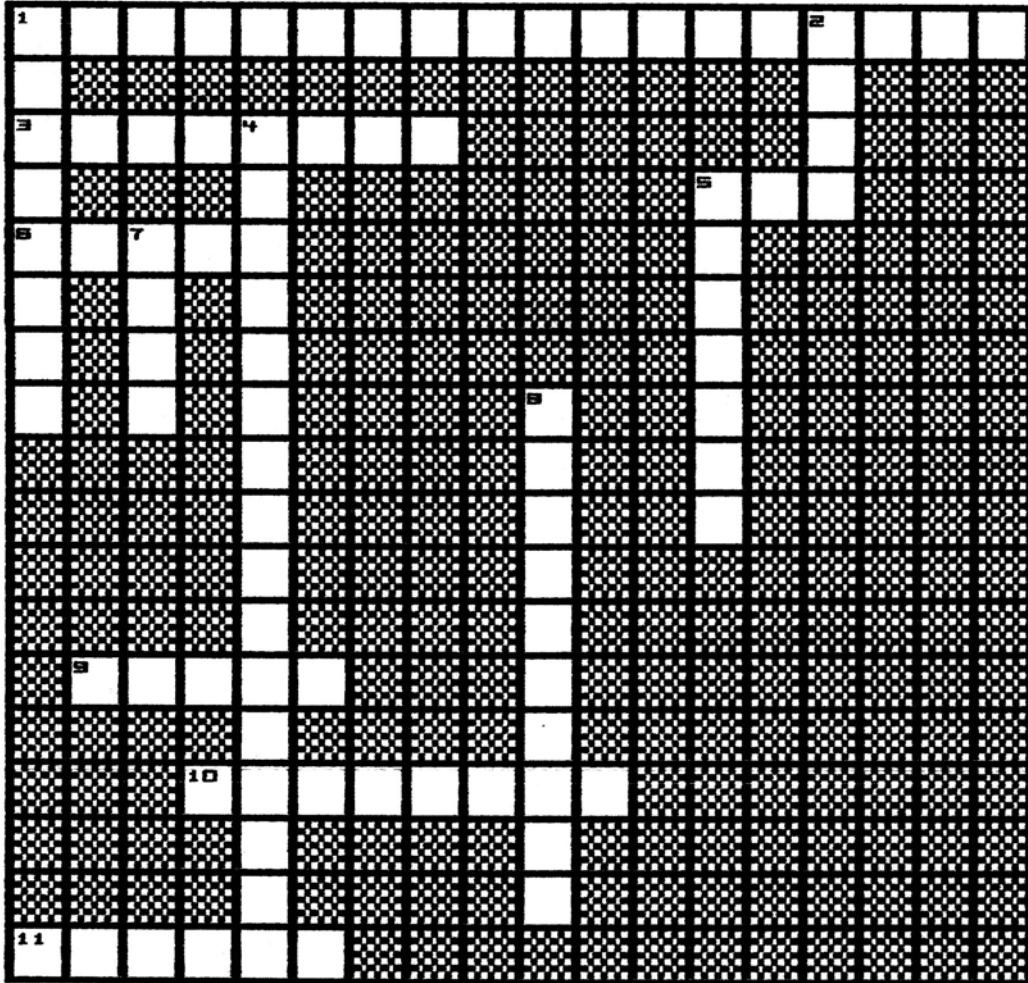
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The joy-stick which was won as a prize at yesterdays picnic was generously donated by George McKay of Surge Computing.

OCTOBER CROSSWORD



NOVEMBER CROSSWORD



ACROSS

- 1. Addendum to Graphics Programme
- 3. BASIC Command
- 5. BASIC Function
- 6. The Way Computers Think
- 9. Computer Language
- 10. Waveform
- 11. Number System

DOWN

- 1. Data transfer
- 2. Logic gate
- 4. Graphics Programme
- 5. Computer key
- 7. Billion (American)
- 8. Circuit Element

GLOSSARY OF COMPUTING TERMS
(DAT-DIS)

Data base A PROGRAMME used to systematically store a large amount of data for later recall or printing. A database is similar in many ways to a SPREADSHEET. The main difference being that a database is used to store units of information that are similar to one another in structure. Some examples are ; a mailing list, a book inventory or a stock list.

Decimal This is the number system that we were all brought up with. It consists of the ten digits from 0 to 9 and the position of each digit indicating its power of ten. The first position indicates units, the second position indicates tens the third position indicates hundreds etc. If we compare this to the Roman numbering system we see that a digits value comes from its relative position in a number not its absolute position. For example IX = 9 where I = -1 but IC = 90 and here I = -10, the same absolute position but different value because of the digit it is placed next to.

It is important to understand this in computing because computers do not think in this most unnatural of number systems, decimal but in BINARY. The only reason that we think in decimal is because we have ten fingers.

HEX, OCTAL

Digital In English it is anything associated with a number that can be written with one character, for example the digits 0 to 9. The popular definition is anything associated with computers. In electronics it is anything that uses numbers to store to transmit information. Anything that is not ANALOGUE is said to be digital. Computers are digital, but so are many control circuits used in machinery, remote control units, and even many telephone circuits are digital. There are doubts about the advantages of some digital circuits over their analogue counterparts.

Disk Operating System (DOS)

This is that part of a computers operating system that is principally concerned with disk operations. There are operating systems that are loaded from disk at a COLD BOOT, instead of residing permanently in the computers memory. These are also called disk operating systems. Two such systems are MS-DOS and CP/M. Because of this MS-DOS and CP/M computers need DISK DRIVES to run.

Disk drive

This is a unit containing a rotating disk coated with a magnetic material. Floppy disk drives use a non rigid polymer disk in a felt lined plastic jacket. The floppy disk drive usually runs at 300 RPM and the read/write head(s) are in contact with the disk when it is being accessed. Hard disk drives use an aluminium disk usually with several platters. The typical speed

of a hard disk is 3,000 RPM and the heads skim just above the surface of the disk. Any dust inside a hard disk will upset the aerodynamics of the head and cause it to crash into the platter thus causing serious damage to the surface and the head. This is why most modern hard disk drives are sealed. On floppy disks and cheaper hard disk drives a STEPPER MOTOR is used to position the head, but more expensive hard disk drives use a voice coil which is similar in principle to a loudspeaker.

Removable media refers to a floppy disk or hard disk which can be removed from the drive whereas a fixed drive is a hard disk which can not be removed.

A new type of disk drive is being used which uses an optical format similar to the compact audio disk.

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THE IN'S AND OUTS OF THE COMMODORE 64

In this article I will attempt to give a brief run-down on the input and output ports of the 64 and there possible uses.

There are a lot of useful features built into the 64 that are taken for granted, or not generally known about. In all there are six different "ports" that allow access into or out of the computer. They are;

- * Joy-stick or paddle ports x2
- * Expansion port (for cartridges)
- * Video and audio output
- * Cassette port
- * User port

Of these the user port would be the most versatile.

Depending on how the 64 is set up in software it can be used to drive serial or centronics printers, modems, and generally anything else you can think of. There are eight independent leads which can be used for either signaling into or out of the computer.

Although the 64 has a serial output (Otherwise known as RS232 or something similar), it is not quite within the limits of the standard, which is +/-3 to 12 volts. The 64 uses what is known as "pseudo" RS232 and even then most of the outputs are inverted (0 volts when you would expect 5 or visa versa), but this is easily fixed with some cheap add ons. In conjunction with the serial output on the user port, there are two sixteen bit counters which can be used for counting or timing applications using the system clock.

Next there are the joy-stick ports. These can only be used as inputs. This does however give you scope for another ten discreet digital (on or off) inputs. One thing that amazes me is that the 64 supports a proportional joy-stick such as used on the apple and no-one seems to manufacture one. (Unless the apple ones work, I've never really checked). The nearest they have got to it is the paddles and I dot think that they are quite the same thing. These joy-sticks would be great on things like the flight simulator, which loose realism, not to mention control while using stepping joy-sticks.