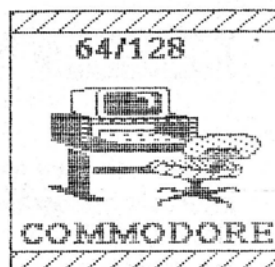


THE DISPATCH DISK AUGUST 1990



THE EDITOR'S DESK

Hello Everbody,

This is the forth DISPATCH DISK that I've had a hand in producing. As I've mentioned in the MAY edition, I'm using GEOS & TASWORD to produce the newsletter and now CROSSWORD MAGIC to make up the various crosswords, that will appear from time to time. I am using GEOS V.2 and quite happy with it's graphics capabilities, but not very conversant with it's word processor (GEO-WRITE).

Which is why I am using TASWORD. Tasword is quite good word processor and does the job admirably. I will supply an article on TASWORD in an future edition of the DISPATCH DISK. I have been experimenting with various fonts from GEOS, you might have noticed the different club headings every month. The two fonts I've used for this edition are DELOREAN and VATICAN.

The above mentioned fonts are two of many fonts and utilities that came from the five P.D. disks that I've purchased from the club disk library, which normally I might not have come across if I wasn't in an user group. This proves a point that being in a user group benefits all it's members in some degree or other.

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WELCOME

The club is progressing along quite nicely, with a steady membership level which is increasing at a slow, but steady rate. Since the last couple of meetings we have had more enquires and vistor's of which three have become members.

We the club welcome these new members into our user group and hope they enjoy learning and improving their skills plus, what they desire to know from the user group.

Mr & Mrs Edwin - Maggy Marrington -
Bert Brodie
WELCOME TO OUR CLUB
AND HAPPY COMPUTING.

POKES

The POKE statement places a value into a specified memory location, E.G. - 10 poke 1024,83 would place a graphic heart symbol on the upper left had corner of the screen. The value 1024 refers to the memory address, which may have the values from 0-65535 inclusive, while the number 83 is value stored at this address. (83 is C64 M/L for the heart symbol).

Poke is also useful for setting the C64 into upper/Lowcase mode. Normal keyboard control for Upper/Lowcase is COMMODORE/SHIFT. From within a program you can use these POKE Statements:-

POKE 53272,23 (Switchs to Lowcase)
POKE 53272,21 (Switchs to Capitals & Graphics)

Hope this information is useful, Happy Computing.

JAN VAN DE BELT EDITOR

LIBRARY NEWS - AUGUST 1990

This month, we have added a new Pd Disk to the Library. It has a couple of interesting programs that will give you a print-out of all the 2 or 3 Block Print Shop graphics on a disk. There is also a program which enables you to print labels which include your selected Print Shop graphic. Price is \$3.00. Full details of the contents of the disk (Disk No. 34 in our collection) follow:

MEMOS - EVENTS: This program enables you to make up of special events e.g. your wedding anniversary, and to recall them on request. Saves to disk. Printout option available. Program from Computel's Gazette Dec. '85

MICRO SIM KEYBRD: Micro Flight Simulator Control Panel. Program from Ahoy Jan. '86

BRAINSTORM: An aid to Brainstorming sessions. Input ideas, group or remove them. adjust groupings. Create, rearrange & rephrase headings. Create rough draft. Finalise & print document. Program from Run Nov. '85.

MEMO WRITER: Screen-oriented word processor using C-64's built-in editing capabilities. Single & double spacing. Print in normal & expanded characters. Program from Computel's Gazette May '84.

MICRO SIM JOYSTICK: Joystick version of earlier program.

DOUBLE SPACELIST: Produces a double-spaced list of a Basic program file. Program from Ahoy Jan. '86.

LIST INDENT RUN: Instructions included in the program. List a Basic program file but only shows one basic statement per screen or printer line. Program from Run Jan. '86.

CONTROL-Q: Quote Mode Control. Program from "Commodore Microcomputers" magazine Jan/Feb '86.

FLEX-LABEL: Creates and prints out non-graphic labels. Expanded size print available. Disk save option available.

FLEX-SORT, FLEX-SORTPGM: Programs used by Flex-Label.

P/S PRINTER B10: The first automatic Print Shop graphics printer for Non-Commodore graphics and Gemini 10X/SG-10 printers. Prints out all graphics on a disk in columns of 3 graphics with title below the graphic. Produces a result on an Epson compatible printer (but not brilliant).

PS/PM/NB V1.2: This program converts graphics between Print Shop Side A (Non-Commodore), Printmaster (and its Art Gallery) and Newsroom Photo Disks.

P/S LABELMAKER: This program prints standard one inch mailing labels using Side B (Commodore-2 block) graphics and text on a Commodore 1525, MPS-801 or 803 or compatible printer.

SHOPPERS: Shoppers Companion. Prepare and printout your shopping list.

LABELLER128: A label printing program for the 128.

DIR PRINTER: Makes Disk Envelopes with the Disk Directory on them.

DISK SURGEON: Disk Utility Program. Change Disk Name. View Directory. Unscratch Directory. Scratch File - Leave On or Take Off Directory. Print Directory.

PS LABELINE: This program prints standard one inch mailing labels using Print Shop Graphics and text on an Epson compatible printer. Now compatible with Print Shop Companion.

CONNECTING AN RS-232 PRINTER TO A C-64

BY TERRY PITT *

June's issue of the Dispatch Disk featured an article by John Wright about connecting a Centronics printer to a C-64. This article is an outline of how to connect an RS-232 printer. There are two big reasons why this is not as simple as a Centronics printer is:-

1) RS-232 must be about the most NON-STANDARD standard that I have ever come across and

2) In their wisdom, Commodore did not install a proper RS-232 port on the C-64 or 128. The user port is able to transmit and receive serial information using RS-232 protocol and is therefore software compatible, but the output is TTL logic levels of 0 and +5V instead of + and - 3 to 25V. It is also the wrong polarity ie +ve when it should be -ve and 0 when it should be +ve. Any interface must take care of both these aspects. As well, the connecting cable must connect the correct pins together.

STEP 1:- Build your interface. There are two kits listed in the 1990 Jaycar catalogue. The kit I built, ETI-1601, is probably the better one as it does include some control and handshaking lines, but it does need a separate power supply (batteries). Cost is about \$24.00. It is a simple kit to build, but you will need a fine soldering iron and good soldering skills. Ask Rob if you don't feel confident though (he's gonna love me for this!). Ready made interfaces are also available from Computermate in Sydney, priced around \$90.00, or from overseas.

STEP 2:- You need to work out whether your computer and printer are D.T.E.- Data Terminal Equipment or D.C.E.- Data Communications Equipment. Logic says that the computer should be DCE (sending) and the printer DTE (receiving). However the C-64 transmits data on pin 2 and is thus DTE. As my printer was also DTE, my cable swaps pins 2 and 3 over ie 2-3 and 3-2. You must also connect pin 7 straight through as this is the signal earth and seems to be one of the few standard connections around.

STEP 3:- You now need to satisfy any printer CONTROL LOGIC ie what

lines control the printers ability to receive data. If you are lucky, and keep the data rate down to 300 baud (remember to set both computer and printer baud rates the same), you should be able to get your printer printing something. If you still get nothing, then you will need to check or 'trick' the pins that control this. The most common ones used are as follows:-

Pin 4 - RTS - Request To Send

Pin 5 - CTS - Clear To Send

Pin 6 - DSR - Data Set Ready

Pin 20 - DTR - Data Terminal Ready

A careful study of your printer handbook may enable you to work out which ones and how to do it. Study the wording carefully and it may become apparent. 'Tricking' a pin is done by applying + or - 9V to it while checking the data transmission on pin 2 on the computer side. I have included details at the end of this article of some simple test gear to help you do this.

Don't be afraid to 'trick' several pins at the same time if you need to. Also, don't worry about applying these voltages to the pins as the standard dictates that each pin must be able to withstand + and - 25V as well as short and open circuits without failing. REMEMBER - DO NOT APPLY ANY VOLTAGES TO THE USER PORT DIRECTLY!!! IT IS NOT AS TOLERANT AND MAY BE DAMAGED!!! Only do these experiments to the OUTPUT side of the INTERFACE ie the PRINTER side. Note that the C-64 does not need to be 'tricked'.

STEP 4:- HANDSHAKING is used to interrupt the flow of data through the interface cable. This is necessary to tell the computer to stop sending data if the printer goes 'Off line', runs out of paper, or the buffer fills up etc. Look carefully at your printer manual for reference to a pin which changes its output when it is 'busy' or 'off line'.

You may also need to 'trick'

Pin 8 - DCD - Data Carrier Detect as this pin is sometimes used by printers to disable their reception of data.

In my printer however, it was Pin 11 on the printer - SCA - SeCondARy request to send, that did the trick when it was joined to pin 5 - CTS at the computer end.

STEP 5:- With the information you have gained you should now be able to

make up a suitable cable. Mine needed only 4 wires (see the diagram at the end) but other printers may need more (or less?). There are a few points to watch out for when using an RS-232 printer.

The syntax of the open command is:-

```
OPEN(file number),2,0,"<control register><command register>"
```

I generally use 2 for the FILE NUMBER, but it can be any number between 1 and 255. If it is above 127 though, a line feed will follow all carriage returns.

The 'OPEN' command works differently to the normal serial port command. When you open an RS-232 channel, a CLR is performed. This happens because buffer space is allocated at the top of memory above your program, and any variables already created will be lost, as this is where they are normally stored.

The CONTROL REGISTER sets up such parameters as the number of stop bits, word length and baud rate. I have included a table at the end of this article to help you to work this out. Reference to my printer manual showed that it needed 8 data bits, 1 stop bit and 1200 baud. This works out to a value of 8. If I had needed 2 stop bits though, this would have changed 136 (128+8).

I have yet to work out how to use baud rates higher than 1200 when programming in BASIC. Mini Office II allows 2400 baud and GEOS allows up to 3600 baud so it should be possible. If anyone knows how, could they please let me know.

The COMMAND REGISTER defines other terminal parameters such as parity, full/half duplex and handshaking. My printer needed no parity, half duplex and X line handshaking which worked out to a value of 17. A complete OPEN statement for my setup therefore is:-

```
OPEN2,2,0,CHR$(8)+CHR$(17)
```

When programming, don't CLOSE the data channel too early or you will lose any data still in the buffer. Check for this by including the following line in your own programs:-

```
100 SS=ST:IF(SS=0 OR SS=8) THEN 100  
110 CLOSE 2
```

Remember then to OPEN the channel first and CLOSE it last!!

CHARACTER SETS and CONTROL CODES are another area where you will have

to experiment. I doubt if there are any RS-232 printers which will produce Commodore reverse graphic control codes. If you are mainly interested in Word Processing, or programs such as GEOS, then you shouldn't encounter too many problems. If you do strike them though, a comparison between your printers list of ASCII codes and the C-64's list may help you to see which ones to avoid.

PRINTER CONTROL CODES, ie for print pitch, draft or NLQ printing, linefeeds and margins etc vary from printer to printer any way so you will need to look into this carefully. If you're lucky, your printer will have EPSON emulation which a lot of programs cater for automatically. Mine was originally connected to an Apple IIC computer and has 'IMAGEWRITER' emulation. Oh well; life wasn't meant to be easy.

In conclusion you may ask "Is it worth the effort?" For a long time I didn't think so and it was packed away in a box and advertised for sale in various places (see 'The Dispatch Disk'- February 1990). In the meantime, I purchased a Commodore Compatible Riteman C+ printer.

When I took over as editor of the 'Dispatch Disk' and started using GEOS a lot, this situation changed. One of the printer drivers on the G.E.O.S. system disk is 'IMAGEWRITER'. When used with a data rate of 9600 baud, it is much faster than my other printer. This is due mainly to the 3k print buffer compared to the Riteman's 'one line of text' buffer. As a result each line can be printed in one pass instead of 8 small segments with resultant 4-6 times speed increase.

Another area where it is better is that it prints at 80 Dots Per Inch compared with 60 DPI that you get from most Commodore compatible printers including a very new MPS 1230. The end result of this is that text and graphics are no longer stretched horizontally and come out exactly as you see them on the screen. GEOWRIT margins are kept the same also. A nice bonus is that its ribbons last MUCH longer than the Ritemans.

I now find myself using the RS-232 printer more than the Riteman especially with programs such as Mini Office II, Easy Script and G.E.O.S. The text for this article was done

using Easy Script and the graphics were done using GEOPAINT. Both were then printed out using the interface and cable described.

It still can't print from programs like Printmaster which only access printers attached to the normal serial port, but as I don't use these very often, its not a big problem. I have kept my Riteman printer for this reason though.

Two books which helped me a lot in getting the printer to work properly were 'THE RS-232 SOLUTION' by Joe Campbell (available from the Noarlunga Library) and 'COMMODORE-64 PROGRAMMER'S REFERENCE GUIDE' which is/was put out by Commodore. Thanks must also go to Greg Dodd for his assistance in getting me started.

To use the following tables, add up the amounts shown in the VALUE column that match the requirements for your printer. The two numbers you obtain are used in your OPEN statement.

CONTROL REGISTER TABLE

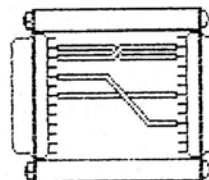
| ITEM | VALUE | EXAMPLE |
|-------------|-------|---------|
| Stop Bits | | |
| 1 Stop Bit | 0 | 0 |
| 2 Stop Bits | 128 | |
| Word Length | | |
| 8 Bits | 0 | 0 |
| 7 Bits | 32 | |
| 6 Bits | 64 | |
| 5 Bits | 96 | |
| Baud Rate | | |
| 50 Baud | 1 | |
| 75 " | 2 | |
| 110 " | 3 | |
| 134.5 " | 4 | |
| 150 " | 5 | |
| 300 " | 6 | |
| 600 " | 7 | |
| 1200 " | 8 | 8 |
| 1800 " | (NI) | 9 |
| 2400 " | (NI) | 10 |
| 3600 " | (NI) | 11 |
| 4800 " | (NI) | 12 |
| 7200 " | (NI) | 13 |
| 9600 " | (NI) | 14 |
| 19200 " | (NI) | 15 |
| | ----- | ----- |
| Total | | 8 |

COMMAND REGISTER TABLE

| ITEM | VALUE | EXAMPLE |
|--|-------|---------|
| ----- | | |
| Parity Options | | |
| - Parity disabled, none generated/received | 0 | 0 |
| - Odd parity Receiver/Transmitter | 32 | |
| - Even parity Receiver/Transmitter | 96 | |
| - Mark transmitted Parity check disabled | 160 | |
| - Space transmitted Parity check disabled | 224 | |
| Duplex | | |
| Full Duplex | 0 | |
| Half Duplex | 16 | 16 |
| Handshake | | |
| 3 Line | 0 | |
| X Line | 1 | 1 |
| | ----- | ----- |
| Total | | 17 |

RS-232 Breakout Box

25 pin male D connector from Interface

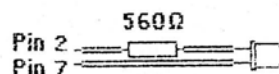


25 pin female D connector to Printer

A Simple adaptor as shown can help a great deal when working on RS-232 devices. I used a BIC biro cut in half as a spacer and a bolt through the middle to hold everything together. Simple but effective.

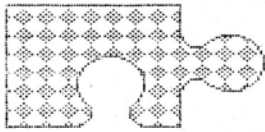
Remember pin 7 must connect straight through

LED Indicator



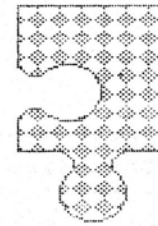
A useful data flow indicator can be made up as shown. A dual colour LED is best as it avoids polarity worries. These can be purchased from most electronics stores.

* Box 2504
Mt Gambier
S.A. 5290
Ph 087-387208

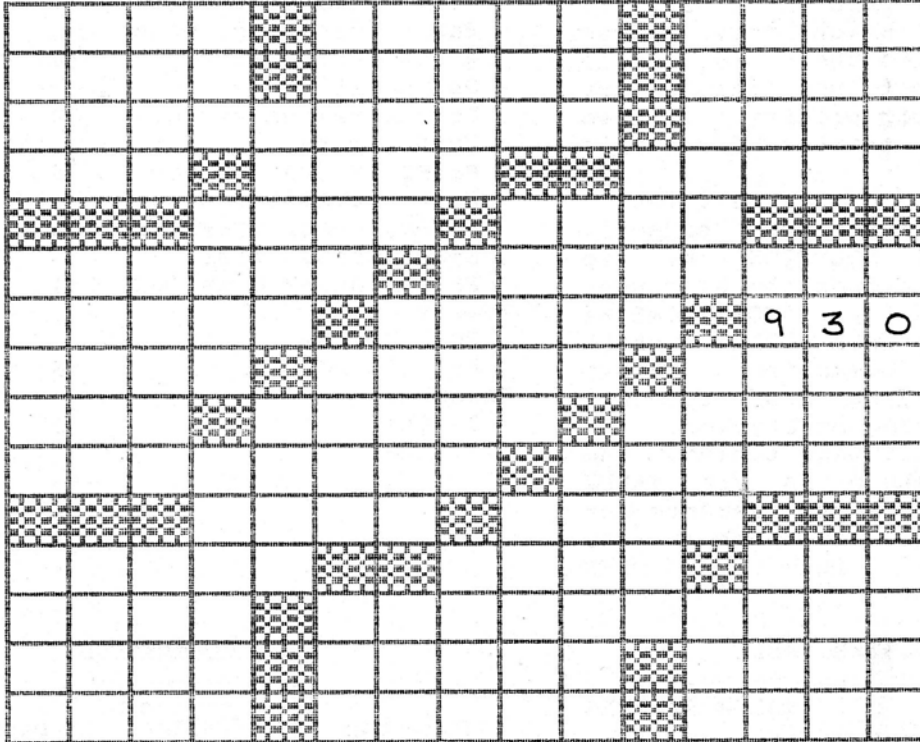


COMPUTER PUZZLE

NUMBER FILL IN NO.1



N/1 FILL IN



3-NUMBERS

- 204
- 248
- 332
- 372
- 477
- 606
- 643
- 672
- 795
- 930

4-NUMBERS

- 2437
- 2648
- 2856
- 2925
- 3320
- 3439
- 3628
- 3737
- 3775
- 4393
- 4484
- 4406
- 4598
- 4567
- 4766
- 4964
- 5349
- 5764
- 6427

4-NUMBERS

- 6967
- 7328
- 7363
- 7598
- 7964
- 8374
- 8463
- 8586
- 8727
- 8772
- 9317
- 9346
- 9401

5-NUMBERS

- 45663
- 47265
- 52547
- 52565
- 53277
- 55938
- 61886
- 65403
- 67376
- 69374
- 79927
- 83253
- 83629
- 85686
- 85947
- 87872
- 89338
- 90844
- 94249
- 97738

6-NUMBERS

- 316874
- 342387
- 464495
- 474783
- 934782
- 984765

8-NUMBERS

- 89362859
- 92644856

4-NUMBERS

- 0202
- 0267
- 0806
- 0986
- 1046
- 2328

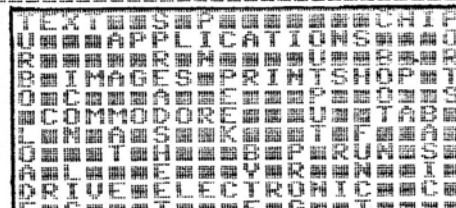
5-NUMBERS

- 25949
- 35287
- 42576

10-NUMBERS

- 0173549262
- 7372362947

ANSWERS: COMPUTER WORDS A



DISPATCH DISK

?????? PROBLEM PAGE ??????
WHERE PROBLEMS ARE SOLVED

Are you having any problems?, such as Software, EG:- Programs, Processors, Games, Art, etc. Plus getting the programs to run or how they work and any problems you may have using the programs.

HARDWARE, EG:- Printers, Disk Drive, Keyboards, Mouse, etc, plus any enquires on what goes better with what and how does it work.

PROGRAMING, EG:- Basic, Machine Language and programing problems. Or any other problems you might be experiencing with the C64/128; plus suggestions for future WORKSHOP and DEMONSTRATION.

PROBLEMS/QUESTIONS

(1)

(2)

(3)

DISPATCH DISK NOTES

COMMITTEE 1989-90

President R. Cloosterman 382-0781
Secretary M. Tippins 381-3181
Treasurer A. Heard 085 56-5828
Asst. Secret A. Morrison 085 56-5013
Newsletter ED. J. Van De Belt 382-8660
64 Librarian J. Carey 294-8447
128 Librarian M. Tippins 381-3181
Our Disk and Magazine libraries are open at each general meeting from 7:30pm.

If you have any contributions for the newsletter, see Rob, Jeff or Jan.

NEXT MEETING

Our next general meeting will be held on the 19th Sept 1990 7:30pm.

SUBJECT :- Basic (continued)
Multi-Plan(spreadsheet) by Jeff Carey

LOCATION :- Meetings are held in the house behind the Salvation Army Hall at 186 Elizabeth Rd. in Morphett Vale, just in from Beach Rd.

MEETING RULES

- 1) NO SMOKING
- 2) NO DRINKING
- 3) NO SWEARING

Though the generosity of the Salvation Army, we are allowed to use the facilities in this house, in return for which we give them a relatively small donation. We ask for your co-operation in respect to the above.

While we cannot control what people do away from our club meetings, Piracy of copyright material cannot be condoned at our meetings.

DISCLAIMER

The views expressed in this newsletter are those of the writers, and are not necessarily those of the club's committee or members.

The use of the word "COMMODORE" in no way implies any connection with any organisation bearing that name.

No part of "THE DISPATCH DISK" may be copied or reproduced in any way without the written permission of the committee and the author.

WANTED

ASSISTANCE REQUIRED -THE CLUB STILL NEEDS THE ASSISTANCE OF SEVERAL MEMBERS IN THE FOLLOWING AREAS:-

- 1) Newsletter contributions
- 2) Expert Register. PLEASE help us to help others with their problems.

DEMONSTRATION TOPICS -If you have any requests for topics you would like to see demonstrated, speak up. Even, if it has already been done, and you missed it let us now. If there is reasonable interest, it can probably be repeated.

FUTURE MEETINGS - Help us to spread the word of our existence. Write out some small notices and place them where people will see them. Your local supermarket usually has a notice board as do some Newsagencies and Delis.

FOR SALE

PUBLIC DOMAIN SOFTWARE - We have a large range of PUBLIC DOMAIN Software for sale through our library. Prices represents very good value. Catalogue disks are also available for only \$1.00. See Jeff at tonight's meeting for any enquires.

CHEAP DISKS -How much do you pay for your blank disks?. The club is making bulk purchase of disks to help members save some money. The price of these disks is 70c per disk, which works out to be \$7.00 for a packet of 10. If you are interested in some, see Rob at tonight's meeting.

MEMBERSHIP FEES

The scale of membership fees for this year will be as follows :-

| | |
|-----------------------------|--------|
| Joining Fee for new members | \$5.00 |
| Membership fee (to A.G.M) | \$5.00 |

All pervious members who have not renewed their membership are unfinancial and will have to rejoin the club and pay the joining fee again in order to add items to the club's disk and magazine libraries, we need money, so please pay up promptly.