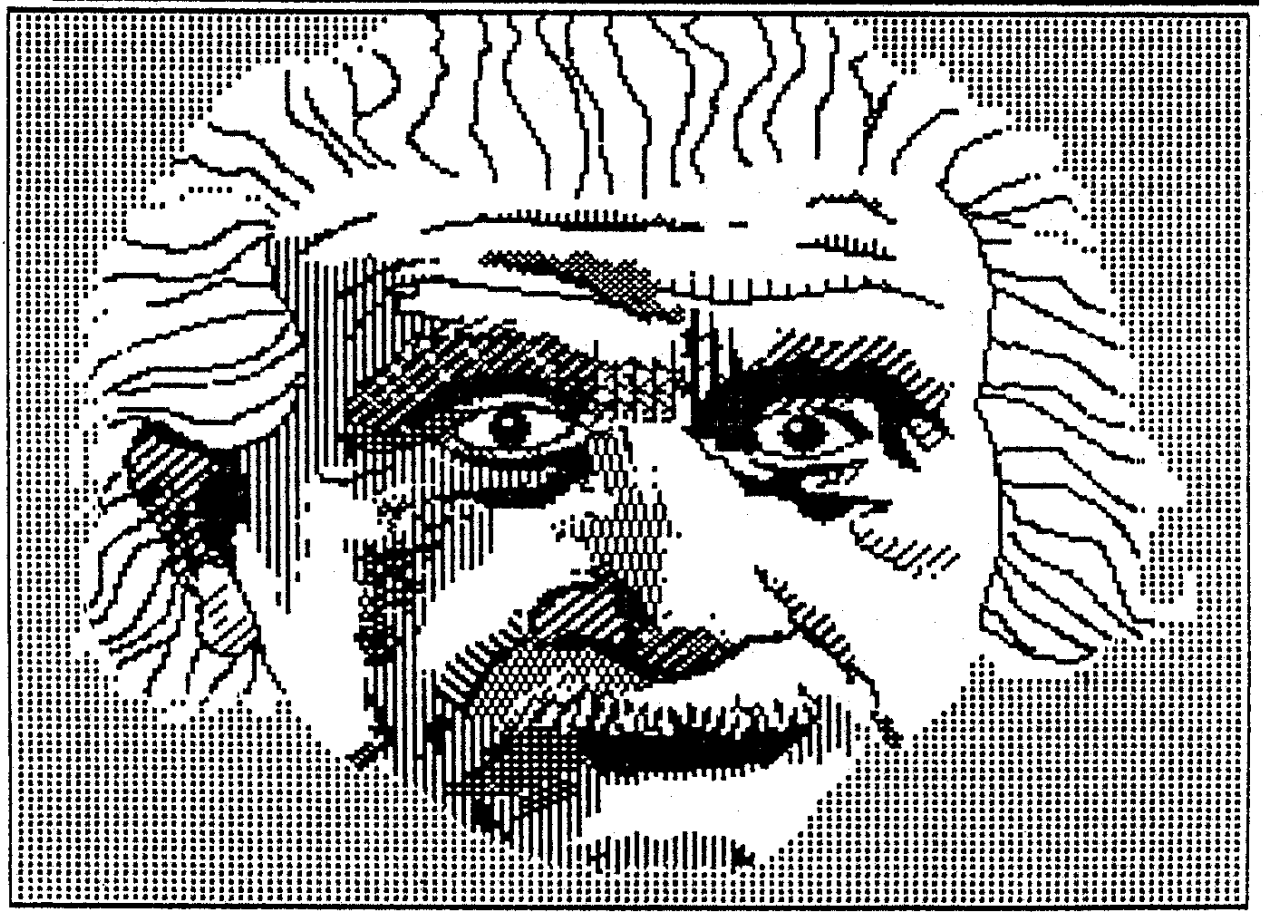
FORMAT

THE NEWSLETTER
of the
INDEPENDENT
DISCiPLE USER GROUP

ISSUE #3 - OCTOBER 1987



PURE GENIUS FOR THE DISCiPLE

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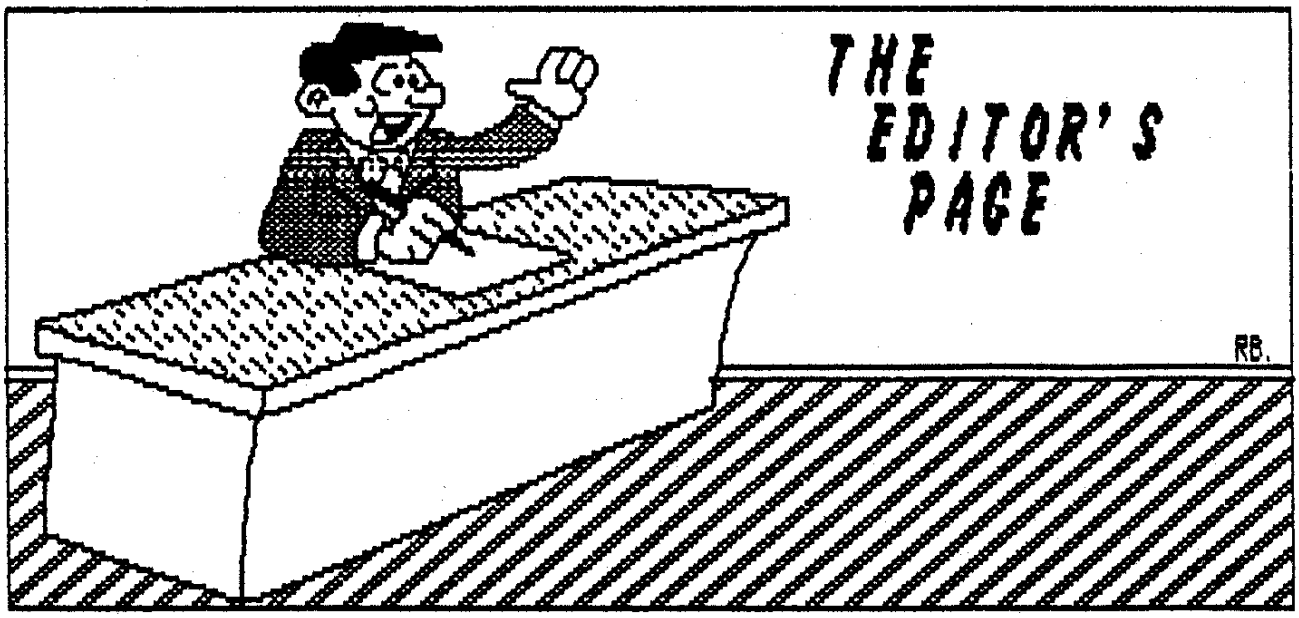
FORMAT is published by THE INDEPENDENT DISCiPLE USERS GROUP (INDUG), 34 Bourton Road, Gloucester, GL4 0LE. England. Tel: (0452) 412572. DISCiPLE is a trade mark of Miles Gordon Technology. The DISCiPLE interface is marketed by Rockfort Products, 81 Church Road, Hendon, London, NW4 4DP.



Welcome to issue 3. It only seem like yesterday that I laid hands on my first DISCiPLE. Actually it's a full twelve months since its launch at the PCW show in London and what a difference that year has made. I was at the 1987 PCW show just a few days ago and even Amstrad had DISCiPLEs on their stand. Most software companies are now happy to convert software for the DISCiPLE, but there are still a few that still need working on.

I was very pleased to receive a rather long article from Alen Mile, of Miles Gordon Technology the inventors of the DISCiPLE, which is included in this issue. Although this means leaving out a few things, I make no apology for running it in full as I believe Alen has a lot to say that will be of interest to FORMAT readers. Alen and Bruce Gordon (the real brains behind the DISCiPLE) are now working on several new products, some of which will be in great demand among DISCiPLE users. I will try to bring you details as soon as they are released.

The DISCiPLE has awoken interest in the Spectrum as a serious computer, but it will not last unless there is good back-up and information to feed that interest. From your kind letters I know FORMAT is being well received. The only complaint so far has been that FORMAT is, sometimes, a little to technical. It has been decided, now there is no serious Spectrum magazine left on the market, that FORMAT should grow to satisfy the demand we all know exists. Don't worry, there's no way we intent to turn into another games review rag (I know few readers would want that). There is however a call for articles on such things as Machine Code Programming, Advanced Basic, Computer Music, ect. in fact anything that helps users get the most from their Spectrum.

To help in this expansion I would like to hear from any reader who has the address or telephone number of any of the writers who used to appear in ZX Computing, or for that matter any of the other serious Spectrum magazines which have disappeared.

See you next month.

Bob Brenchley. Editor.

NEWS

NEWS

HISOFT-RELEASES

HiSoft have release fully DISCiPLE compatible versions of their highly successful DEVPAC and PASCAL packages. While both programs worked on the DISCiPLE before, some of the more advanced facilities used Microdrive 'HOOK CODES' which made files unreadable from Basic. The new versions use the DISCiPLE Native Command Codes and open up the full range of features to the DISCiPLE programmer.

TROJAN TLW

Following the successful re-release of The Last Word at the ZX Microfair in August, Myrmidon Software has tied up a deal with TROJAN PRODUCTS of Swansea. Trojan, famous for their light pens, where chosen by Nick Buckingham, author of TLW and head of Myrmidon Software, from amongst several interested parties. Nick felt that Trojan's long association with the serious Spectrum market but them in an ideal position to give TLW the market exposure it deserves.
Trojan Products can be contacted on Swansea (0792) 205491.

BRISTOL SOFTWARE

A new program is now available from Bristol based company Redcliffe Software. Called 'DISC_FILE', the program allows a catalogue of all files, on up to 255 discs, to be maintained. It is supplied on tape for easy transfer to disc. Sorted prints may had in several forms, there's even a print designed to produce a label for your disc. The database can be created, interrogated, updated or printed in a very user friendly fashion. At £5.95 its good value for money. Redcliffe Software can be contacted at 108 Broughton House, Somerset Street, Redcliffe, Bristol, BS1 6RY.

SCREEN DUMPS

One of the few real problems with the DISCiPLE are the screen dump routines. The A4 one built into the system will only work on modern 'Epson Compatible' printers, ones which accept the Esc * control code. Some printers calling themselves 'Epson Compatible' are only compatible with older Epson printers (pre FX80) which did not have this control.

INDUG to the rescue.... We now have available a set of routines, which integrate into your system file, that will work with all 'Epson Compatibles'. They simply overwrite the DISCiPLE's existing routines and so are used in exactly the same way from Basic or the Snapshot button. The routine for A4 uses the Esc 'L' (double density) mode. The single size dump does not use the colour file information so the problem of completely black dumps will not occur with this routine.

Copies of the tape are available from the club address at £3.95 for UK members £4.95 for overseas airmail. Payment in Sterling by cheque drawn on UK bank (or a Euro Cheque with card number on rear) or cash. Please make cheque payable to INDUG.

SPARKS STILL FLY

Creative Sparks Distribution, who ceased trading and called in the receiver in July, are still causing ripples in the industry. The receiver has been looking for a buyer for the software in the SPARKLERS range but has found problems as not all software can be sold as in several cases the copyright reverted to the programmer when CSD crashed. Bob Brenchley (Your favourite editor) through his company NationSoft is currently in dispute with the receiver over 5 programs. It is recommended that anyone who wrote a program for CSD should check the small print on their agreement as soon as possible. Please contact FORMAT if you need any advice.

SWEDISH USER GROUP

DUGOS are a new user group in Sweden. DUGOS stands for DISCiPLE USER GROUP OF SWEDEN and is run by Georg Dahl of Anderspersv 12, S 261 62 Glumslov, Sweden. It is intended that INDUG and DUGOS will work closely together in the future which will help the fast growing Swedish market to expand even faster.

TLW REVIEW

THE LAST WORD

By: Dennis Waring.

I spend much of my spare time using the computer to write a book, therefore, as you can imagine, I need to use a wordprocessor quite a lot.

I was very pleased to find that another such programme was being produced, to perhaps rival "Tasword", as it's a well known fact that only with competition will improvements be forthcoming.

T.L.W. comes as a tape driven package with extra routines to change it to a microdrive program (which the DISCiPLE will accept) or a full blooded disc version. I altered the system as supplied to disc operation and was very impressed with the friendly controls.

As most Spectrum users have a wordprocessor amongst their tapes, you may be able to appreciate some of the things that I never found very 'User Friendly' such as having to come away from my text to do things like print, copy, merge, load or save. My biggest bone of contention has always been printer controls. I never could see the sense in using graphic characters for defining types of text, as you could spend much of your time trying to decide whether a graphic marker was at the bottom left or right of its square, so invariably I got a wrong print out.

I was very pleased to see that T.L.W. has 24 printer control tokens in a drop down menu and, like everything else, they are

usable with out leaving the text. I can input such things as NLQ, A4 paper, Underlined and in Italics, all at the same time (whilst still writing). But the biggest boost for me was they are defined by special characters 1 to 24 which makes life so much easier as I can now see at a glance whats going on.

I also find it very comforting to be able to catalogue my disc without leaving the text, or even going out of the program, this as you will all appreciate is very useful if you are not quite sure what you have called a particular file.

Certainly TLW scores with something I've never seen before, 4 selectable video settings. With this you can change the screen from the standard 80 to 60, or 48, or just 40 characters per line. I can assure you that if you have difficulty reading the screen on standard setting you will be able to take your glasses off with the 40 char mode as the print seems very large indeed. The mode has no effect on the final printout, in all modes lines can be up to 148 characters long and if needed they are split on screen (with an indicator to show a soft-line-break) but are printed out to their full width.

Another nice touch is the built in CLOCK and DATE definer, these are items that one usually finds only in the more expensive wordprocessors. The alarm that can be set for up to 250 minutes and can be set or reset at any time, again without leaving the text file. One of the other nice things is being able to do a word count very quickly, just press Extended Mode "w" and there it is on the screen (470 WORDS, 2890 BYTES, CURSOR AT 32980).

I liked being able to do a print out of both the help menu and the printer tokens, both on a single A4 sheet (I have stuck mine on card and it now sits at the side of my machine.

Well, the TLW alarm has just gone off and that means its time for my Sunday tea, so I will have to leave you now, but before I do let me sum up my findings by saying that The Last Word is without a doubt a very powerful wordprocessor and well worth the effort of getting use to its new commands. Most important, to us poor hard up users, it's well worth the asking price of £15

All we have to do now is get Nick Buckingham to make all Spectrum users very happy by doing a spelling checker, then the other computer companies can keep their processors.

FACT FILE

PROGRAM:	The Last Word.
TYPE:	Wordprocessor.
SUITABLE FOR:	Spectrum 48k/128k/+2.
	Fully DISCiPLE compatible.
PUBLISHER:	Myrmidon Software
	P.O.Box 2,
	Tadworth,
	Surrey, KT20 7LQ.
PRICE:	£15

ALEN MILES ON HI-TECH CO's

I suppose what I want to talk about is communication. Nothing to do with modems, nothing about handshaking, not even to do with networking - just plain human communication.

You see, for the past couple of months I haven't really had much communication with DISCiPLE users. Those of you who contacted Rockfort before that - with a question or a problem or a suggestion - will know that it was often me who answered the letter or the phone call, (or a few of you might remember that it was me who **didn't** answer your letter or your phone call!). But now Bruce Gordon and I are hard at work trying to bring the next product to the market (you'll have to wait until Spring, I'm afraid) and I'm away from the heart of the DISCiPLE action, and that's given me time to do some thinking.

Why, I wondered, did we never seem to have time to answer all your letters and calls quickly and accurately? Why, for that matter, do so many other small companies in our field have the same problems? The letter pages in the magazines are always full of complaints about the lack of help and support from manufacturers; just occasionally there'll be praise from a satisfied customer who's found an efficient - HEAVEN BE PRAISED! - hi-tech company. What makes us so universally awful when it comes to providing good customer service?

Well, I think I know some of the reasons, and I offer these few simple observations and suggestion, to INDUG members. Depending on your experience with the DISCiPLE, you may wish to regard these notes as The Consumer's Guide to Getting Good Service from Hi-Tech Companies, or as my apology for not having got round to helping you.

1. Remember that many companies making peripherals and software are young and small. Commonly, the same person who speaks to you on the phone is probably also responsible for ordering the parts for the factory, selling the product to the shops, writing the copy for the adverts, and all this before lunch. That's the way it has to be, because in a fiercely competitive market, profit margins are usually low, and the product has to be a very considerable success before the company can afford to hire staff specifically for customer assistance.

Perhaps that explains why, when you phone with a technical enquiry there's "no-one available to answer your question", or why your letter remains unanswered, or why that piece of software you sent in to be looked at hasn't been returned. But it doesn't solve your problem. How do you get better service? Well, the trick is to remember what sort of company it is you're

dealing with, and to make it easy for them to deal with your question or problem. So:

2. If you're sending a letter with your question or problem remember that the manufacturer may receive 20 similar letters a day, and writing answers can be very time-consuming when the staff is small.

a) DO keep your letter short and to the point. If possible, give a short underlined heading at the top so that the reader can see instantly what the letter's about. For example:

DISCIPLE: PROBLEM WITH PRINTER INTERFACE

b) DON'T put a whole list of technical questions in a single letter. I have to admit that when I've had three pages of questions to answer, that's often the letter I've put on the bottom of the pile.

c) DO give a telephone number where you can be contacted in the afternoon or evening. This will allow the company to call you, which is much faster and easier than writing a letter. I mention the afternoon, because most companies will prefer to call when phone rates are cheaper. Some small companies may prefer to call after 6pm; state the times when you are at the number you give.

d) DO contact your local dealer first - especially if you live overseas. The dealer may have had the same enquiry before; if so, he can answer your question immediately. But if he can't answer it, ask him whether he would mind contacting the manufacturer; if the dealer asks your question, the manufacturer is likely to respond faster than to an end-user.

f) If you need standard product information and you know that the company will mail you a brochure, DO enclose a stamped addressed envelope - and the envelope should be big enough for a folded A4 size leaflet.

g) DON'T put enclosures in your letter - discs with examples of your problems, etc. There's rarely time for someone to look at such material. However, if you have additional material to send, say so in your letter. The manufacturer will then tell you whether it will be helpful or not. If you send something in, do not necessarily expect to get it back so don't send your only copy.

h) DO write in with your solutions as well as your problems. There's nothing better on a Monday morning than getting a letter which solves a problem that the designers have been scratching their heads about for days.

3. If you're phoning the company, then:

a) DO plan what you need to ask before you call. Write down your question, make sure you can describe your problem clearly. If you can be accurate, this will save you money and the company time.

b) DON'T be surprised if there isn't somebody available to answer your question immediately. In some companies, there may be a policy to have a person available to deal with technical enquiries at a certain time of day. Ask what time you should call back.

c) The person you talk to may suggest a certain course of action. For example, you may be asked to return the product, or to send in some software, or you may be told that information will be mailed to you. If any further action is required by either you or the company after the phone call, DO make sure you get the name of the person you're talking to and ask for an enquiry reference number. This will probably take most companies aback, but a little bit of consumer pressure won't do any harm here. The point of getting a name and a reference number is to protect you in case something goes wrong later - and also to help the company to keep a proper record of your call.

d) DO give the company a reasonable time to act, if action is required. If immediate action is promised, allow a week for anything to happen. If you need to return a product under guarantee, read the guarantee terms first - it often takes some time to return a product to the factory for repair. Remember also that the postal service is getting slower all the time. If there are no results, phone the company again, quoting the name of the person you spoke to and giving your enquiry reference number. DON'T expect necessarily to speak to the same person - who may be otherwise occupied - but the reference number should allow the company to trace back to your original enquiry quickly and to find out whether the appropriate action has been taken.

4. Perhaps the most importance advice of all is not to ask the small hi-tech company for anything, except in last resort. Don't take this the wrong way; they have after all taken your money, and you have a right to expect a reasonable standard of service from them. The person at the other end of the phone should be able to tell you what to do if you need your machine repaired, or when you can expect to receive your upgrade, or why you can no longer interface your toaster with the Spectrum. The basic questions, in other words.

But at Rockfort I found that I very quickly got out of my depth when callers wanted me to disassemble the DISCiPLE's ROM with them, or how to patch The Last WasWriter to work with the DISCiPLE - if I'd known the answers. I'd have been designing hardware or writing software instead of answering the phone. I could, of course, ask Bruce the ROM disassembly question - but that would hold him up when he was trying to produce version 93 of the DISCiPLE for the greater good of all our users.

That's why I was so pleased when Bob Brenchley suggested that he started the Independent DISCiPLE Users Group. I knew that he had an understanding of our interface and an experience of Spectrum software to give our users the answers they needed, while we could get on with making the DISCiPLE a success -

speeding up the administrative system, persuading software houses to work with us, improvements which would help manufacturer and user alike.

So, what we're telling you users now is to contact Rockfort Products if there's a product fault or hardware problem, and to contact INDUG if there's a software or programming problem. And importantly, if there's a piece of commercial software or hardware which seems to dislike the DISCiPLE, speak to the software house or manufacturer concerned, as well as to us and the user group. We've found in the past that the more our users bully other manufacturers, the more willing they are to work with us. It's a question of (just one pun, please, editor!) spreading the gospel.

The point I'm making is that - whether you're talking about the DISCiPLE or any other hi-tech product - there's a lot that you, the consumer, can do to help the company provide you with a better service. I'm sure I speak for the majority of the companies in our industry when I say that we really do want to help, and we're trying our hardest.

Good INDUGGing!. (Bob, I'm still not convinced that this wouldn't be a better name for a group of land reclaimation enthusiasts).

ALEN MILES.

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BARGAIN CORNER

Members adverts (up to 30 words for £1.25) will be run in the next available issue.

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2 DISC DRIVES 40 Track, Double Sided. Uncased without PSU. £55 each (will split). Ring Paul Liversidge. on Huddersfield (0484) 640950.

YOUR ADVERT

Buying, Selling, Pen Friends, Clubs, etc.

This space is reserved for you. Any PRIVATE advert (subject to acceptance) will be run in the next available issue of format. Any software sold must be original copies, with full instructions and in working order. The publishers will not be held responsible for the content of any advertisement nor for its failure to appear.

* TASTYPE *

This Basic program was written for a 128K Spectrum, DISCiPLE and Amstrad DMP-2000 printer although it could be adapted to operate with a 48K Spectrum or a different printer.

It is designed to supplement TASWORD 2 by providing a means of using a printer as a typewriter for short sentences, say for addressing envelopes or filling in forms, and as such is set up to allow only one line of printed text to be entered at a time.

From within the program you can change typeface, left and right margins and print position from the default settings.

It runs alongside Tasword by saving the Basic of each to RAMDISC and loading whichever is required at the time. If the typewriter mode is selected from Tasword the document is not lost and will still be there on return to it.

Type in the listing, it should be saved using SAVE d1"TASTYPE" LINE 9025. The changes, as shown, should be made to the Basic of Tasword 2, which should be saved as normal. To run the modified program enter LOAD D1"TASTYPE" whereupon the typewriter program will load and save itself to RAMDISC and load Tasword which will also be saved.

To enter the typewriter mode STOP Tasword as normal and select option 'p' and follow the prompts.

When in this mode the top part of the screen shows the control keys & the present settings for both margins, typeface & current print position, as well as a string of characters which the user can set in the Basic, and which will be printed when the copyright symbol is pressed (eg own address for SAE's).

The control keys are as follows:-

LINE	forces printer to print what is in the buffer.
OUT	executes a form-feed.
FORMAT	using a menu, allows the user to change typeface.
POINT	using prompts, allows the user to margins settings, no. of lines to be skipped and position at which to start printing.
OVER	quit & return to Tasword.
(c)	prints out set string.

These are all EXTENDED MODE + SYMBOL SHIFT keypresses.

When entering text it is reprinted further up the screen for checking and to allow the average user (ie, me) to change mistakes before printing. If the text is longer than the space remaining on the current line then it will be truncated to fit the line. The user can, of course, elect to retype his text to suit, or force a new line using the LINE command.

There isn't a lot in the way of error trapping in the program as I am sure that anyone typing this program in will want to

make a lot of alterations to it to suit themselves, for instance to the default settings or to the control codes used for typefaces etc. at which time they can enter any checks needed.
I have included REM statements to assist in following the program.

```
9000 REM * * * TASTYPE * * *
9010 REM Brian J. Coutts. 1987.
9025 SAVE !"TASTYPE" LINE 9030: LOAD *"m";1;"TASWORD"
9030 CLS
9040 GOSUB 9880: REM initialise
9050 REM
9060 REM Get line to be printed
9070 REM
9080 GOSUB 9390: REM prompts
9090 FOR n=1 TO width: LET z$=z$+" ": NEXT n
9100 PRINT AT row,col;z$: LET z$="": LET cde=0
9110 INPUT t$
9120 GOSUB 9300: IF cde=1 THEN GOTO 9060: REM controls
9130 IF t$=CHR$ 222 THEN LPRINT: GOTO 9940: REM OVER=stop
9140 IF LEN t$+posn>width THEN LET t$=t$( TO (width-posn))
9150 PRINT AT row,col;t$
9160 GOSUB 9220: REM check/print
9170 IF ok=0 THEN GOTO 9060
9180 LET posn=posn+LEN t$
9190 IF posn>=width THEN LET posn=posn-width: REM position of pr
int head
9200 GOTO 9060: REM next line
9210 REM
9220 REM check & lprint line
9230 REM
9240 PRINT AT 20,0;"IS THIS CORRECT...Y/N?"
9250 LET i$=INKEY$: IF i$="" THEN GOTO 9250
9260 IF i$="y" OR i$="Y" THEN LET ok=1: LPRINT TAB posn;t$;
9270 IF i$="n" OR i$="N" THEN LET ok=0
9280 RETURN
9290 REM
9300 REM check for controls
9310 REM
9320 IF t$=CHR$ 208 THEN GOSUB 9660: LET cde=1: REM FORMAT=typef
ace
9330 IF t$=CHR$ 169 THEN GOSUB 9470: LET cde=1: REM POINT=set pr
int position/margins
9340 IF t$=CHR$ 202 THEN LPRINT: LET posn=0: LET cde=1: REM LINE
=newline
9350 IF t$=CHR$ 223 THEN POKE @6,1: LPRINT CHR$ 12: POKE @6,0: L
ET cde=1: REM OUT=form feed
9360 IF t$=CHR$ 127 THEN LPRINT s$;: LET cde=1: IF posn>=width T
HEN LET posn=posn-width: REM (c)=fixed message
9370 RETURN
9380 REM
9390 REM prompt messages
9400 REM
9410 CLS
9420 PRINT AT 0,0;"EX+SS CONTROLS";TAB 16;"SETTINGS"; OVER 1;AT
0,0;"_____";TAB 16;"_____"; OVER 0
9430 PRINT AT 2,0;"LINE   -Newline";TAB 17;"Margin-L";TAB 29;lef
t;';"OUT    -Formfeed";TAB 17;"Margin-R";TAB 29;right;';"FORMAT
```

```
-Typeface";TAB 17;p$;';"POINT-Print posn";TAB 17;"Print posn";TA
B 29;posn;';"OVER       -Exit";';"(c)-print the following string
:-";s$
9440 PRINT AT 12,0;"------------------------------"
9450 RETURN
9460 REM
9470 REM set print position/margins/width
9480 REM
9490 FOR n=1 TO 288: LET z$=z$+" ": NEXT n
9500 PRINT AT row,col;z$;AT row,col;"DO YOU WISH TO CHANGE PRESE
NT"'"SETTINGS       (1)"''"PRINT POSITION (2)"
9510 LET i$=INKEY$: IF i$="" THEN GOTO 9510
9520 IF i$<>"1" AND i$<>"2" THEN GOTO 9510
9530 IF i$="2" THEN GOTO 9590
9540 PRINT AT row,col;z$;AT row,col;"PLEASE ENTER LEFT MARGIN ("
;left;")": INPUT "LEFT=";left
9550 PRINT AT row,col;z$;AT row,col;"PLEASE ENTER RIGHT MARGIN (
";right;")": INPUT "RIGHT=";right
9560 LET width=right-left: LET posn=0
9570 POKE @6,1: LPRINT CHR$ 27;CHR$ 108;CHR$ left;CHR$ 27;CHR$ 8
1;CHR$ right;: POKE @6,0
9580 GOTO 9640
9590 PRINT AT row,col;z$;AT row,col;"PLEASE ENTER NO. OF NEWLINE
S": INPUT "LINES=";lin
9600 IF lin=0 THEN GOTO 9620
9610 FOR n=1 TO lin: LPRINT: NEXT n: LET posn=0
9620 PRINT AT row,col;z$;AT row,col;"PLEASE ENTER POSITION TO ST
ART"'"PRINTING FROM (0 to ";width;")"
9630 INPUT "POSITION=";posn
9640 LET z$="": RETURN
9650 REM
9660 REM set typeface
9670 REM
9680 FOR n=1 TO 288: LET z$=z$+" ": NEXT n: PRINT AT row,col;z$:
 LET z$=""
9690 POKE @6,1: LPRINT CHR$ 27;CHR$ 120;CHR$ 0;CHR$ 27;CHR$ 53;C
HR$ 27;CHR$ 87;CHR$ 0;CHR$ 27;CHR$ 45;CHR$ 0;: POKE @6,0: REM al
l off
9700 PRINT AT row,col;"S-STANDARD    N-NLQ    I-ITALICSD-DOUBLE
WIDTH       U-UNDERLINE"; OVER 1;AT 14,0;"_____________________
__________"; OVER 0
9710 PRINT AT 16,0;"a-S          e-N          i-I    b-S+D
f-N+D        j-I+D  c-S+U        g-N+U        k-I+U  d-S+D+U
h-N+D+U      l-I+D+U";AT 20,9;"Please choose"
9720 POKE 23658,8: LET i$=INKEY$: IF i$="" THEN GOTO 9720: REM P
OKE to set CAPSLOCK
9730 IF i$<"A" OR i$>"L" THEN GOTO 97209740 IF i$="A" THEN LET p
$="Standard": GOTO 9860
9750 IF i$="B" THEN LET p$="S+D": POKE @6,1: LPRINT CHR$ 27;CHR$
 87;CHR$ 1;: POKE @6,0: GOTO 9860
9760 IF i$="C" THEN LET p$="S+U": POKE @6,1: LPRINT CHR$ 27;CHR$
 45;CHR$ 1;: POKE @6,0: GOTO 9860
9770 IF i$="D" THEN LET p$="S+D+U": POKE @6,1: LPRINT CHR$ 27;CH
R$ 87;CHR$ 1;CHR$ 27;CHR$ 45;CHR$ 1;: POKE @6,0: GOTO 9860
9780 IF i$="E" THEN LET p$="NLQ": POKE @6,1: LPRINT CHR$ 27;CHR$
 120;CHR$ 1;: POKE @6,0: GOTO 9860
9790 IF i$="F" THEN LET p$="N+D": POKE @6,1: LPRINT CHR$ 27;CHR$
 120;CHR$ 1;CHR$ 27;CHR$ 87;CHR$ 1;: POKE @6,0: GOTO 9860
```

```
9800 IF i$="G" THEN LET p$="N+U": POKE @6,1: LPRINT CHR$ 27;CHR$
 120;CHR$ 1;CHR$ 27;CHR$ 45;CHR$ 1;: POKE @6,0: GOTO 9860
9810 IF i$="H" THEN LET p$="N+D+U": POKE @6,1: LPRINT CHR$ 27;CH
R$ 120;CHR$ 1;CHR$ 27;CHR$ 87;CHR$ 1;CHR$ 27;CHR$ 45;CHR$ 1;: PO
KE @6,0: GOTO 9860
9820 IF i$="I" THEN LET p$="ITALICS": POKE @6,1: LPRINT CHR$ 27;
CHR$ 52;: POKE @6,0: GOTO 9860
9830 IF i$="J" THEN LET p$="I+D": POKE @6,1: LPRINT CHR$ 27;CHR$
 52;CHR$ 27;CHR$ 87;CHR$ 1;: POKE @6,0: GOTO 9860
9840 IF i$="K" THEN LET p$="I+U": POKE @6,1: LPRINT CHR$ 27;CHR$
 52;CHR$ 27;CHR$ 45;CHR$ 1;: POKE @6,0: GOTO 9860
9850 IF i$="L" THEN LET p$="I+D+U": POKE @6,1: LPRINT CHR$ 27;CH
R$ 52;CHR$ 27;CHR$ 87;CHR$ 1;CHR$ 27;CHR$ 45;CHR$ 1;: POKE @6,0:
 GOTO 9860
9860 RETURN
9870 REM
9880 REM set variables default values
9890 REM
9900 LET t$="": LET z$="": LET s$="Anything you want to print.":
 LET p$="Standard": LET row=13: LET col=0: LET ok=0: LET left=8:
 LET right=72: LET posn=0: LET width=right-left: LET cde=0
9910 CLS: PRINT AT 10,0;"PLEASE ENSURE THAT PRINTER IS ON"'"AND
PRESS ANY KEY TO CONTINUE": PAUSE 0
9920 POKE @6,1: LPRINT CHR$ 27;CHR$ 64;CHR$ 27;CHR$ 108;CHR$ lef
t;CHR$ 27;CHR$ 81;CHR$ right: POKE @6,0: REM reset printer & set
 initial margins
9930 RETURN
9940 LOAD !"TASWORD"
```

And now the alterations/additions to the Basic part of Tasword 2.

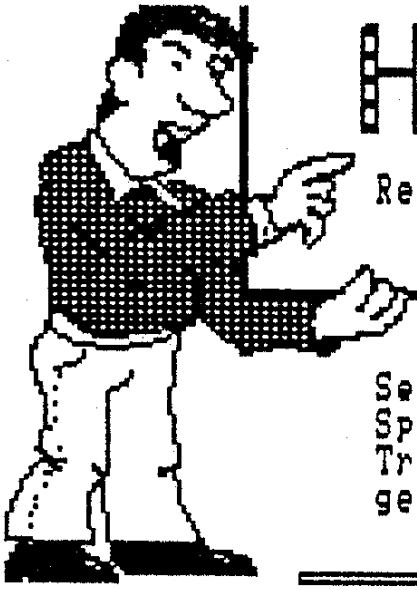
```
  15 POKE 23609,2: CLEAR 31999: GOSUB 4000: LOAD D*"TASCODE"CODE
: LET a=USR 59081: SAVE !"TASWORD" LINE 5: GOTO 5

 200 CLS: GOSUB 4000: PRINT AT 4,7;"PRINTER OPTIONS": PRINT: PRI
NT "Do you wish to"'"(1) Print text, or"'"(2) Enter typewriter
mode"
 201 LET a$=INKEY$: IF a$="" THEN GOTO 201
 202 IF a$<>"1" AND a$<>"2" THEN GOTO 201
 203 IF a$="2" THEN LOAD !"TASTYPE"
 205 IF a$="1" THEN CLS: GOSUB 4000: PRINT AT 4,8;"PRINT OPTIONS
": PRINT "  just press ENTER for default    values given in brac
kets"
```

Finally, if anybody has any changes to make which they feel are particularly worthwhile then I should be glad if they will write to me at the following address:-

BRIAN J. COUTTS,
12, GLEN MARK,
EAST KILBRIDE,
GLASGOW G74 3UT
TEL. EAST KILBRIDE 41750

I will then try to include the best ideas in a follow-up article in a future issue.



HINTS & TIPS

Readers Hints & Tips to help everyone get the most from their DISCiPLE.

Send your Hint or Tip for the DISCiPLE or Spectrum to the address on page 2.
Try to keep them short and sweet so we can get as many as possible in.

SNAPSHOT POKES

Unlike version 2 ROM, the new version 3 requires you to press the CAP-SHIFT key at the same time as the SNAPSHOT button. In some games CAPS-SHIFT is used as a control key so this may cause problems when trying to SNAP the game at just the right point. On version 2 it was to easy to knock the SNAPSHOT button and, if there was no disc in the drive, cause the program to crash.

To get the best of both worlds I have developed the five POKE @'s given here. They alter the DOS code so you don't need to press the CAPS-SHIFT key, but will allow a return to the program if the SNAP was accidental (Just press the SPACE key). Enter as direct commands and resave your system file to disc.

```
POKE @65024,127: POKE @65029,200: POKE @65073,24557:
POKE @65075,0: POKE @65079,198
```

S.J.NUTTING. Cambridge.

BOOTing

When, having loaded a program from tape ready for transfer to disc, you find you have forgotten to BOOT the disc operating system entering RUN then merely runs the program. You don't have to switch off and start again. The answer is to enter RUN with a high (invalid) line number. So typing "RUN 10000" and then ENTER will BOOT up your system, without losing the program in memory provided there was no AUTOload file on the disc. If there is an AUTO file then "RUN boot" will do the job on version 3 DISCiPLEs.

HAROLD BURTON. Edinburgh.

TLW POKES

Users of older versions of The Last Word may like to use the following Pokes to producing a DISCiPLE version. Follow the instructions to convert for the GORDON disc system and then load the GODON2CODE file and do these Pokes.

```
POKE 50023,30: POKE 50026,31: POKE 50029,38: POKE 50032,39
```

```
POKE 50039,0: POKE 50040,0: POKE 50043,10: POKE 50111,49
POKE 50118,48: POKE 50120,40: POKE 50134,35: POKE 50138,34
POKE 50142,33: POKE 50146,27: POKE 50150,26: POKE 50154,25
POKE 50186,9: POKE 50187,0: POKE 50190,10
```

The following pokes are for numbers of Disc Drive in LOAD & SAVE.

```
POKE 50470,50 (LOAD)
POKE 64501,2  (SAVE)
```
then save TLW to disc.

To get the printer working enter TLW and alter the 'PC Token', Extended Mode 'T', to zero. Go into Basic and add the line 3000 POKE @6,1:(+ the rest of original line) and resave TLW

GEORG DAHL. Sweden.

VU-3D REVISITED

As a follow up to the article on VU3D last month which may be of interest to FORMAT readers.

In line 830 change COPY to either COPY SCREEN$ or SAVE SCREEN$ (depending on which DOS you have). In version 3 you could use the A4 dump if you like by entering SAVE SCREEN$ 2.

In 128k mode the menu is not displayed correctly since the UDG 'T' (which corresponds to the keyword PLAY) is used for the left arrow. There are three spare UDG's A,Q & U. Graphic U can't be used since it is the keyword SPECTRUM so either A or Q should be used instead. The following routine will alter Graphic 'A' to the left arrow symbol. Line 5110 of the program alters the UDG area to address 31501, so the changes are made to this part of memory.

```
CLEAR 31500: LOAD D1"c" CODE: LET A=31501: LET U=31661: FOR N=0
TO 7: POKE A+N,PEEK (U+N): NEXT N: SAVE D1"c" CODE
```

Now delete the keyword PLAY in lines 110, 220, 400 & 710 and replace it with the new UDG.

BRIAN J. COUTTS. Glasgow.

DUEL STANDARD DISCS

I have now fitted the version 3 ROM to my DISCiPLE but a friend still uses V2c (not being into programming, and not having a 128, he feels 2c is still good enough for him. Because we often loan each other discs it becomes a problem with two different system files floating around. To solve this we record both 3a and 2c systems on each disc. Conflict is avoided because 2c looks for the first (odd number) file beginning with 'SYSTEM' while 3a looks for the first file beginning with just 'SYS'.

So on a V3 DISCiPLE, with a blank disc, SAVE D1"Sys 3a" CODE 0,6656 then save any file (I use an autoload menu file) to the disc to take up the P2 position. Now take the disc to the 2c DISCiPLE and SAVE D1"System 2c" CODE 0,6124 (which goes into the P3 space). If you now BOOT the disc on either version of the DISCiPLE the right version of the system file is loaded.

J.DOWN. London.

UPDATE

UPDATE is a new section which will appear from time to time if there are any UPDATE's needed to your GDOS operating system.

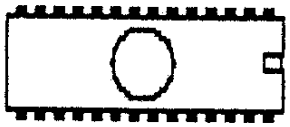
Each amendment will be made as a series of POKE's to the 'Copysys' file on your system disc (the one created when you first set up your DISCiPLE with the supplied tape. The file may just be called 'Copysys' or it may have '3a' or '3b' after it. We will make 3a the starting point as this is the one most widely in use.

To find out which version you have, BOOT your system (switch on and type RUN), when loaded the screen will be headed '(c) Miles Gordon Technology DOS 3x' where x is either 'a' or 'b'. If you were one of the few who purchased version 3 very early on (end of May, early June) and you find there is no letter after the '3' then do not run this program. Instead contact Rockfort products and ask for a copy of 3b to be sent to you, the early release you have contains errors, and printer routines which where completely replaced in 3a and, as the whole DOS was reassembled, addresses do not match up.

If you already have version 3b then read no further but note that we will handle future upgrades in the same way, so keep a look out in future issues of FORMAT.

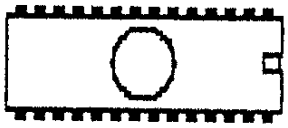
If you have 3a then enter and run this short program. Enter the name of your original file in line 40. Then amend the Basic program called "Loader" so it looks for Copysys 3b (line 510) and saves the System and Copysys files (lines 300 & 420) with 3b in their titles.

```
 10 REM GDOS 3a TO 3b converter
 12 REM
 14 REM (c)INDUG 1987.
 16 REM
 20 CLEAR 42239
 30 LET Pnt=42240
 40 LOAD d1"Copysys 3a"CODE Pnt,6656
 50 POKE Pnt+500,243: REM =DI
 51 POKE Pnt+501,0: REM =NOP
 52 POKE Pnt+502,0: REM =NOP
 60 POKE Pnt+1071,251: REM =EI
 61 POKE Pnt+1072,0: REM =NOP
 62 POKE Pnt+1073,0: REM =NOP
 70 POKE Pnt+1074,0: POKE Pnt+1075,118: POKE Pnt+1076,27: REM =
LD HL,7030
100 POKE Pnt+6624,CODE "b"
110 SAVE d1"Copysys 3"+CHR$ (PEEK (Pnt+6624))CODE Pnt,6656
120 PRINT AT 10,7; FLASH 1;"Copysys 3";CHR$ (PEEK (Pnt+6624));"
SAVED": BEEP .5,1
```



HARDWARE SPOT

RS232 INTERFACE



This is the first part of an article (second part next month) covering the design for an RS232 interface that is compatible with the DISCIPLE. Although the circuit has been kept as straight forward as possible, it is advisable that those attempting to build this project should have had previous experience in the construction of such circuits.

The circuit (shown on next page) is built around the Intel 8251A USART (Universal Syncronous/Asyncronous Receiver Transmitter), with a Baud rate generator U5, some I/O address decoding U1/U3, U2 serves to divide the Spectrums clock frequency by two (the Spectrums clock frequency is too fast for the 8251!). U6 and U7 convert the TTL signals to RS232 levels and vice-versa.

A detailed desciption of the 8251 would take up several pages of text and diagrams, so for the purpose of this article, only information relating to the operation of the basic circuit will be discussed. For more information on the device, reference should be made to the data sheets, and this may be required at a later date when attempts are made to connect up the interface to other equipment.

Communications between host computer and the 8251 take place via the internal registers of the 8251, namely :-

CONTROL (I/O address 127 Write) for programming the mode of operation.

STATUS (I/O address 127 Read) for checking handshaking lines data errors etc.

DATA (I/O address 119 Read/Write) for the transmitting and receiving of RS232 data.

The I/O addresses (127/119) were chosen so as not to conflict with those already used by the Spectrum or DISCiPLE (either internal or external), and if alternatives are to be selected then it should be with this criteria in mind.

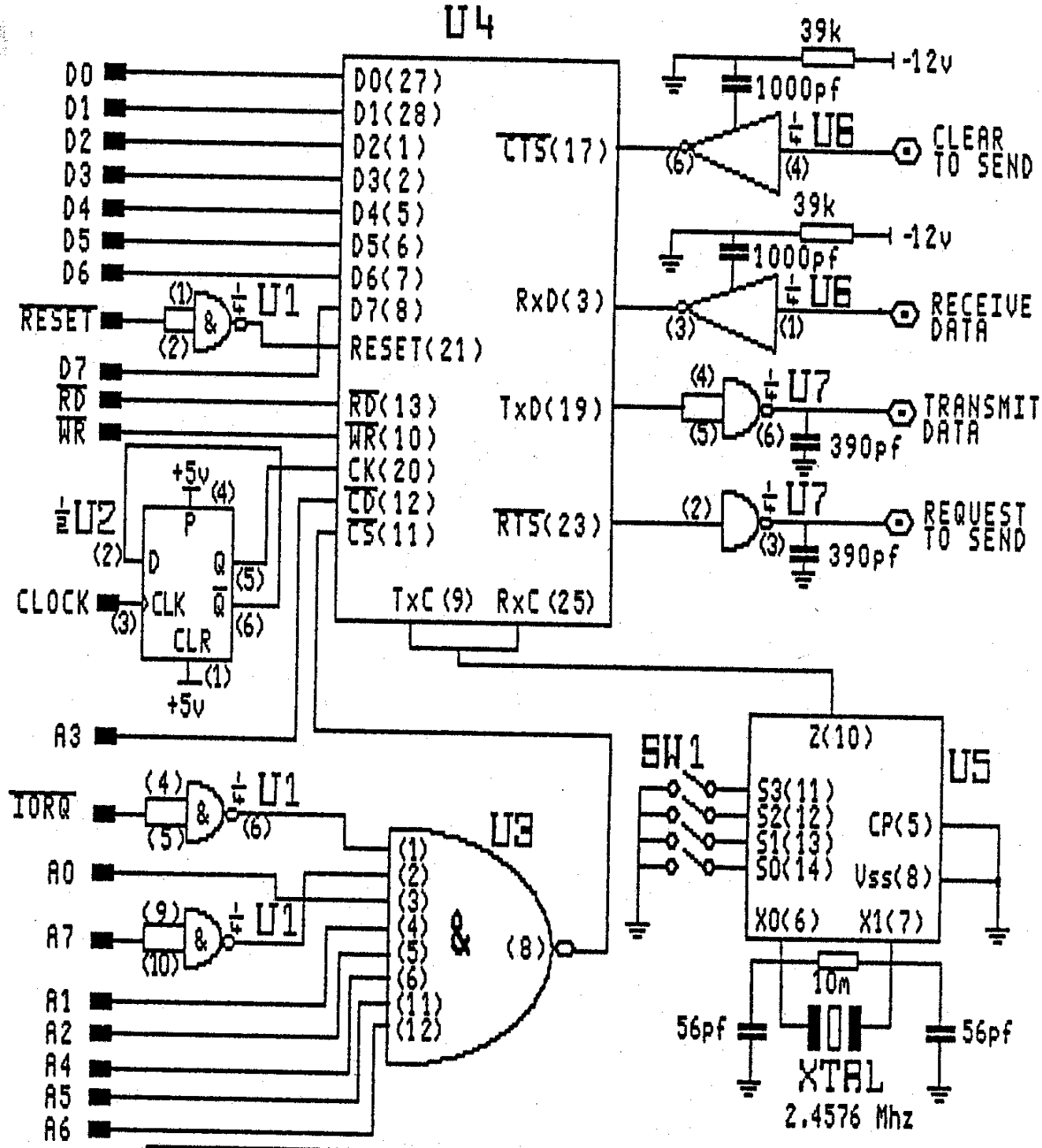
Prior to data transmission or reception, the 8251 must be loaded with a set of control words. These control words specify the exact mode of operation of the device, and must be loaded immediately following a reset (either internal or external).

The MODE instruction defines the general operating conditions of the 8251 and must be sent immediately following a reset.

The COMMAND instruction controls the actual operation of the selected MODE and would normally be sent immediately following a MODE instruction, however, a new COMMAND instruction can be sent at any time in the transmission sequence thereafter.

NEXT MONTH we will look at construction and testing the interface, and detail the driving software.

SPECTRUM/DISCIPLE EDGE CONNECTOR



BAUD	SW1/1	1/2	1/3	1/4
110	O	O	O	O
300	O	C	O	O
600	C	O	O	O
1200	O	O	C	O
2400	C	C	O	O
4800	O	C	C	O
9600	C	C	C	O

O=OPEN C=CLOSED

EXTRA CONNECTIONS					
IC	TYPE	+5v	GND	+12v	-12v
U1	74LS00	14	7	-	-
U2	74LS74	14	7	-	-
U3	74LS30	14	7	-	-
U4	8251-A	26	4	-	-
U5	4702-B	16	8	-	-
U6	1489	14	7	-	-
U7	1488	-	7	14	1

SPECTRUM-DISCIPLE RS232 INTERFACE

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