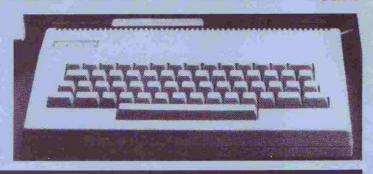
LYNX USER GROUP

NEWS SHEET

June 1984



Introducing LUG

The main purpose of this news sheet is to introduce LYNX owners to a new users group, to be called the LYNX USERS GROUP, or LUG.

The organ of LUG is to be the LUG magazine, which will be initially on a bi-monthly basis, that is 6 issues a year. If the membership increases to a satisfactory level, and subject to incoming material then publication WILL be increased to more issues a year.

The intended aims of LUG are listed below:-

- 1. There will be a minimum of 6 issues a year of the magazine LUG.
- 2. Further news sheets will be issued free to LUG members in addition to the magazine.
- It is intended to provide a balanced publication between machine code and BASIC programming.
- There will be provision for individuals to advertise their 'odds and ends' entirely free of charge subject to available space.
- Application for affiliated membership to the Association of Computer Clubs has already been made.
- It is a prime intention of LUG to put LYNX owners in touch with one another subject to their agreement.
- 7. As an addition to 6) above, local area membership listings will be available on either a County or in the case of places like LONDON on a regional basis. If any member requires a full membership list then a charge will be made for the listing.
- 8. It is intended to produce LUG as a quality magazine, both as regards printing and paper quality. **Note:** members will be supplied with on joining, a seal-close plastic bag to keep their issues in a clean condition.

- 9. For advertisers and for those who feel they would like to advertise, the advertising rates, at least initially, is to be kept to a low of £80 per page. Less than this page area is to be based on a 1/8 page basis at £10 per small advert.
- 10. All articles which are accepted for publication, will be paid for at the rate of £10 per page, less than this, is pro-rata.
- 11. Articles which are required are, software reviews, programs in BASIC and machine code, hints and tips, constructional projects or anything else which would be of interest to other owners. Of particular interest is any programs, no matter how short using LYNX FORTH.

As can be seen from the above, that it is intended that the magazine LUG shall be as dynamic as is possible. Further suggestions from members concerning the content or styling of the magazine will be taken seriously into account in improving following issues.

So

JOIN the LYNX USERS GROUP NOW.

The Lynx's future

After much speculation concerning the future of the LYNX in all the trade journals, it seems to still have a future. A company spokesman this week hinted that there is hopefully a strong chance that the LYNX could be saved from extinction. This is welcome news for all owners who must be wondering what to do. The advise of LUG is to wait and see, in any case there are many software writers who are even now designing software for the LYNX.

Amongst the usual complaints about the machine is the apparent lack of software available. This is of course untrue, for there are currently approximately 150 programs, with many more in the 'pipeline'. If any owners are thinking of changing to any of the new machines, please bear in mind that it could be several months before any new software becomes available. Any item of software, whether it be games or utilities, takes several man-weeks to program, mass produce and market, in spite of the claims that are made!

As any owner should be aware, the LYNX computer has an unusual but an extremely powerful implementation of BASIC, with the added bonus of a machine code monitor as standard, even on the 48K. How many micro's now on the market offers the ability to study the inner workings of the ROMs? The answer is of course NONE!!! What is badly needed is an advanced book on the BASIC to illustrate what can be done with a high level language. So how about it, you budding authors!!!

There are also many misconceptions about the LYNX, especially by so-called reviewers in the commercial press, so beware these reports, they are often inaccurate, even after this time, one of the most recent claimed that in the high resolution mode ??? that the memory was 'gobbled up'. The LYNX does not in the general sense have any form of 'mode' for its screen. Unless the command 'TEXT' is called. the LYNX is in HIGH resolution all the time because the video memory is entirely separate from user memory. The LYNX was the FIRST of the paged micro's and it is only recently that other manufacturers have considered this technique, please note also that as well as the LYNX, all the new machines use the Z80 as being the most popular and the most flexible amongst all the 8-bit processor chips. It is also accepted as the standard chip for running CP/M business programs, even the 'seed of the oak's computer' is double the price of the

LYNX to run CP/M. Incidently there are several thousand CP/M business programs available for business users.

As an argument for the LYNX's BASIC, just compare program listings for other micros and see how flexible and powerful the LYNX BASIC really is. There are as with any micro still some 'bugs' in its implementation, but the latest version of the 96K has many of these eliminated including a vastly improved tape routine, for LOADing and SAVEing.

Beware a certain new computer sporting 'a proper keyboard', there is still a painted contact system underneath the keys with all its inherent unreliability. The LYNX has a proper keyboard and is easy on the fingers for prolonged typing.

Another feature that is made of in the new micro's, is the ability of producing 'WINDOWS', but they only offer a possible maximum of 8, the LYNX can offer from BASIC as many as you like, the author of this article has written a short program for a 'cross-hatch' generator to set up his monitor as regards convergence etc. This program will be published in LUG. The program is about 10 lines long and provides not just 4 nor 8 but 48 windows!!!! There is no limit, subject to the number of pixels, about how many windows can be generated, and what shape they take!

Many people must be wondering about the new LYNX, the 128K. First of all it is a new design although similar in concept to the 48K and 96K. It provides like the 96K about 60K of programming space, plus double the memory devoted to the screen, namely 64K, hence its title. This gives a total pixel coverage of 512 x 248, and a text coverage of 80 columns by 24 rows. It is also possible to switch to a 'LO RES' mode which produces the same screen appearance as the 48K and 96K. Among other enhancements is the ability to produce ellipses using the 'CIRCLE' command, increased speed by using a 6 MHz clock, the Z80B being the new processor. This gives faster screen access and a more rapid response to keyboard commands. There is also available a 'FONT' feature, as well as supplying English characters from the keyboard, there are German, French, and others readily available.

From a home user's point of view, as well as increased power to the CIRCLE command, it is possible by colour mixing the pixels, to generate 56 shades of colour on the screen. But by far the most interesting of the graphic commands is the new 'FILL' facility. First a character is designed eg a simple 'X', then to set the foreground and background colouring

of this character and then . . . to use FILL to cover any defined area with this coloured character. The effect is 'eye blowing', one could even design wall paper!! When thought about, the permutations are nearly endless and there is NO micro on the market which can offer this!

So summing up, the LYNX is potentially one of the most powerful micro's currently on the market, and needs YOU to give it your full support in what ever form that may take. One of the best ways, is to join the LYNX USER GROUP or LUG for short. By giving LUG a voice, it can provide the producers of the LYNX with valuable information from the user's point of view. So, join LUG, the only regular publication for the LYNX.

Reviews

Assembler Reviews

by R.B. Poate

To my knowledge there are now four 'assembler' products available for the Lynx. There are two 'instant' assemblers (CODER and MODER-80) and two full assemblers (ZEN and COMPASS). In order not to confuse you I will explain the difference between them before reviewing the products.

The purpose of an assembler is to make the creation of machine code programs as easy as possible. It does this in several ways although most notable is the use of mnemonics which are easy to remember and understand. Instead of entering hex codes like '76' you enter 'HALT' and the assembler will translate the 'HALT' into the code '76'. The increase in legibility is obvious. Even if you are not familiar with Z80 mnemonics I'm sure you can guess what HALT does to the Z80 processor. Assemblers also work out jump and call addresses and provide pseudo opcodes to make life even easier. They have a file of source code which the user enters (eg HALT etc). When the user is ready he instructs the assembler to convert the source code into machine code. Hence it is a two stage process.

The 'instant' assemblers are different in that they assemble the instructions as they are typed in. This means that they can't work out jump or call addresses so the user has to supply these in one way or another.

Keyboard Aid from Peripheral Products

by R.B. Poate

Peripheral Products have launched a keyboard aid for the LYNX. The total package consists of a stand and a set of three cards giving information about which keys do what.

The stand is made of grey acrylic and it can be fitted over the LYNX or used separately. It can support the cards or a magazine without tipping over.

The cards are quite large at about 350mm by 180mm and are covered in plastic. This means that you can write on them and then wash them clean for re-use. The first card has a keyboard layout on the front on which the

standard keys are documented. For each key the following information is displayed:

- 1. The normal letter/symbol.
- 2. The shifted letter/symbol.
- 3. The single key entry.
- 4. The ASCII code for 1 above.
- 5. The ASCII code for 2 above.

On the back of the card is a blank keyboard layout which allows you to document your own user defined keys.

The second card is printed in red and has the information for the CONTROL 1 mode of operation. There is another blank layout on the back.

The third card has a blank layout on the front and some information regarding the conversion of numbers from one base to another (ie hex to decimal).

Overall, I view the cards as useful but I would have preferred to see them A4 compatible. They would have only needed to be reduced by about 15% to do this.

The cards cost £4.95 and the stand & cards £14.95. I understand that the stand is available separately for £11.95.

These reviews are extracts from NILUG issue No. 4.

Error Messages

There is a very nice feature of the LYNX Basic which impressed me when I found it. The error routine picks up a pointer to the list of error messages from 629A. It points to a null before the first error message. The pointer at 629A may be changed to point to a list of your own error messages. This could be used to make the LYNX ultra user-friendly.

In the short program which follows a list of error messages is set up which simply say "ERROR xx" (where xx is the error number). Its really a demonstration program rather than of any practical value. Doing it this way allows a lot of error messages to be set up very easily. In practice the messages should be a lot more helpful than those normally issued. As an example the seventh error message "SYNTAX ERROR" could be rewritten as "You have typed something I don't understand". To save space comments appear on the end of the lines in square brackets. Don't type them in!

This article is an extract from NILUG issue No. 1.

KEYBOARD AID

UNIQUE DATA STAND AND DATA CARDS

The Data Stand has been designed to help in typing the programs from published material and is made from one piece of acrylic plastic. It can be used either over the Lynx or to one side without tipping over with a magazine placed on it.

There are 3 Data Cards supplied with the stand as follows:-

Card 1 provides the user with all the data on the keyboard, i.e. all ASCII codes and single key entry commands.

Card 2 shows the 'hidden' keyboard under control I mode, i.e. where all the Lynx graphics are and how to access user defined characters directly whilst remaining in the alpha mode. It is printed in red for ease of use.

Card 3 is of general use, for easy conversion to binary, hex, or decimal. All cards have a blank keyboard printed on the reverse and are laminated for easy cleaning.

A fully descriptive leaflet is available on request, send a sae.

Data Stand & Data Cards £9.50

Data Cards only £3.00



209 KENTON LANE KENTON MIDDX Telephone 01-907-3406

LYNX 48/96K SOFTWARE

QUAZAR COMPUTING

Siege Attack £5.95	Reversals £4.75
Puzzle Pack £5.95	Space Trek £4.75
The Worm £5.95	Disassembler £4.75
Labyrinth £4.75	Midnight Blitz £4.75
Chancellor £4.75	

GEM SOFTWARE

Monster Mine £7.95	Oh Mummy £7.95
Golf £7.95	Gamespack I £7.95
Sultan's Maze £7.95	Spanner Man £7.95
Gempack IV £7.95	

LEVEL 9 COMPUTING

	Colossal Adventure	£9.90
	Adventure Quest	£9.90
	Dungeon Adventure	
	Snowball	£9.90
Compass	(Compression Assem	bler) £15.00

ABERSOFT

Mazeman	•					8		£4	.9	5

LYNXMAN

Vorlon Invaders £5.00

FL SOFTWARE



LYNX MACHINE CODE **PROGRAMS**



"ROADER"

A roadrace game with twisting fast road obstacles, fuel, time and distance display, real time clock, hiscore etc. Fuel consumption increases as you leave the track. How far can you travel and how fast before your fuel runs out or you crash? 100% Machine Code with fast graphics (yes fast) and sound.

"CODER"

£7.50

£5.95

This is the assembler we use to write our games. It is also a disassembler, machine code editor, and test tool. What other assembler works with CODE LINES, RAM or ROM, includes a FAST BLOCK PRINT routine to demonstrate BANK SWITCHING, has an integral Dis-assembler and costs only £7.50?

AND FROM ANDREW GOSLING

A highly addictive series of a favourite arcade game. With 4 levels of play, 11 sheets to clear and hiscore. Deadly enemies such as mutant rubber ducks, submarines, crocodiles, blobmen and harpoons must be avoided to reach the gaps in the coral reef. Once 3 of your "TOES" have reached the gaps in the coral reef they may safely board the waiting boats which then sail off and a new sheet appears. Each sheet becomes progressively harder. 100% machine code with fast graphics (yes fast) and sound.

SEND CHEQUE OR P.O. TO:-

QUAZAR COMPUTING DEPT. N.

29 WESTERN ROAD, NEWICK, EAST SUSSEX, BN8 4LE

overseas - add 10%

LUC members 10% discount - quote memb. No.

Reset/NMI (Non Maskable Interrupt)

Have you ever crashed the system and had to switch off and start again? My other micro has a very simple way out of this problem - you press the reset button. This starts execution at 0000 which is where the MONITOR is. You may then warm start Basic (a cold start is like the NEW command and you lose your program). Unfortunately, although the LYNX has the RESET line coming out the back it is not possible to use it because if the reset button were pressed the LYNX would cold start and you would lose everything.

There is, however, a Non Maskable Interrupt line which could be used. The Z80 recognises three types of maskable interrupts (ie it can be programmed to ignore them) and one NMI. The NMI executes at 0066. This jumps to 6294 which jumps to 3B32 and prints 'NOT YET IMPLEMENTED'. Location 6294 could be POKEd to point back into the Basic code. this would, in effect, give the LYNX a reset facility. I'll write the code of someone will design the hardware. Any offers?

This article is an extract from NILUG issue No. 1

Back Issues of NILUG

A complete set of the 6 issues of NILUG can still be obtained from:-

> Mr. R. Poate 53 Kingswood Avenue Sanderstead S. Croydon CR2 9DO

Please send a cheque or P.O. for £9.00.

LYNX USERS GROUP

209, KENTON LANE, KENTON. HARROW. MIDDX, HA3 8TL

VORLON INVADERS

The city of VORLON is experiencing an asteroid storm. The asteroids are burnt up in the atmosphere. Your enemy has decided to attack using missiles to destroy the atmosphere and guided mines to destroy your defence satellite. When the atmosphere is destroyed the asteroids will destroy Vorlon. A fast action game exploiting the versatile graphics of the LYNX. With numerous fastmoving aliens, missiles and asteroids on the screen it requires tactics as well as good coordination. How well can YOU defend

VORLON INVADERS by LYNXMAN Price £5.00

(10% Discount for LUG members)

270 Tithe Pit Shaw Lane Warlingham, Surrey CR2 9AQ