ATOM WORD PROCESSOR REVIEW

The low-cost Seikosha GP-80 printer coupled with WordPack can transform the Acorn Atom into a word-processing system capable of dealing with most applications outside the office. Norman Kirby reviews.

AT £230 INCLUDING VAT, the Seikosha GP-80 is the least expensive wide printer available. The Tandy Personal Line Printer VII is now about £10 more expensive and following it is the new, more sophisticated Roxburgh RX-8000-FF at slightly more than £250. The Tandy machine is made by Seikosha, but is a different model from the GP-80 — Tandy claims it is a more advanced one — and to interface it to non-Tandy computers requires an effort.

The GP-80 is available in three or four sub-models but it is not always easy to spot the difference between them. Some have European characters as well, and the standard interface is different. They all seem suitable in principle for most computers. I shall describe the GP-80M sold by Nottingham-based Leasalink Viewdata Ltd, the main distributors of all Acorn products, and others which can be used on the Atom.

Leasalink charges £232 for the printer including carriage and complete with a 3ft. ribbon cable, a plug and a socket to connect the printer and the Atom, 6ft. of mains cable and 100 sheets of paper.

To prepare a minimal Atom, a 6522 versatile interface adaptor (VIA) and a LS-244 buffer must be plugged into the appropriate sockets already on the board. Also, you must solder a 26-way PCB plug on to the board as described in the Atom manual. A simple wire link needs to be soldered between two pins in the board — only a 20-minute job if you follow Leasalink's instructions. Use a soldering iron with an iron tip about 1mm. in diameter to avoid the risk of bridging pins. The VIA and

buffer cost £10.35 but are, of course, available from many suppliers; the PCB plug costs £4.75.

Be careful when inserting integrated circuits into sockets: the pins are easily bent. I use a jeweller's eyeglass and inspect meticulously while the circuit slides home. The socket at the Atom end of the ribbon cable can be inserted the wrong way round. The cable should fall downwards when viewed with the Atom the right way up.

Printed result

The printer produces the full 96-character ASCII set and uses the common five-by-seven dot-matrix system. Like many other similar inexpensive machines, it cannot underline and does not print lower-case descenders. Underlining can easily be done manually; descenders cannot. This is, however, no problem and you soon grow used to them.

The printed result is very clear and neat with a satisfactory degree of uniformity. It is

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not, perhaps, as sharp and clear as more expensive five-by-seven dot-matrix machines, but it is good.

To enable the printer, you must execute Print $2 either from the keyboard or from a program, or press CTRL and "B". Everything printed on the screen will go to the printer. To disable, execute Print $3 or press CTRL and "C".

The printer can also print double-width characters which, by an optical illusion, appear higher. The result is the appearance of a larger type-face which is very impressive for headings to, say, letters and tables.

To obtain this, you execute Print $14, and to cancel it, Print $15. It prints as fast as any home computer user could wish — 30 characters per second, with up to 80 characters per line. The average A4 sheet typed with a conventional typewriter in a small type-face fits about 70 characters into the line.

Fan-fold paper is available at about £8 per 1,000 sheets including VAT, plus carriage.
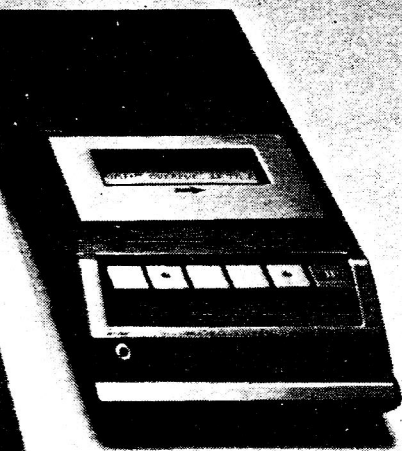
That is a reasonable price although a little more than stationers' A4 paper. It is of adequate quality for most applications. The paper is 8in. wide with tear-off perforations every 12in. That is a little narrower and longer than A4 and the maximum width the printer can take is 8in. — the minimum is 4.5in.

There are no perforations vertically along each side to allow removal of the sprocket holes but these can easily be cut off with a razor to improve the appearance of a letter. The copy paper available means you can obtain two duplicates simultaneously.

The paper is easy to feed in — aided by a feed-forward wheel — but I would have appreciated some way of moving the paper backwards without having to disengage and re-engage it. The ribbon is in a replaceable cassette. The manual is satisfactory.

The Seikosha can also print graphics. Since each dot is the size of a pinprick the resolution is very high. Leasalink supplies a medium-length assembler program to dump to the printer a full screen of Atom Mode 4 graphics. A screen holds 256 spots horizontally and 192 vertically.

You generate a screen of graphics in the usual way and, having previously assembled the dump program, Link to it — other computers would use USR. The graphics are then printed occupying an area of 3.6in. wide by 3.5in. high. It takes about three minutes. The Leasalink program prints the graphics in the middle of the page with a thin border but this software could easily be modified.

Briefly, a word processor is a keyboard, a screen, a printer and a memory store. It allows you to create and edit text on the screen. You can correct errors, change letters, words, sentences or paragraphs, and interchange passages, until you are satisfied. When all is as you require, you can obtain a printout of the text. Further alterations can be made after printing by amending only the parts to be changed, and reprinting. The whole page or document need not be typed again. The text following the change is respaced to allow for the insertion, or contracts after a deletion.

Novel feature

The Atom word processor, WordPack, costs £30 including VAT and is available from Acornsoft, Leasalink and several other dealers. It is a 24-pin ROM which fits into the spare utilities socket provided on even the minimal SK-24 Atom board. A novel feature is that the top of the ROM has a small transparent window through which you can see the chip.

The Atom will continue to operate normally but will accept two new commands — Edit and Text; the first spawns 43 further instructions. The advantage of a ROM over a taped or disc program is, first, that the ROM does not use precious RAM, and secondly, there is no time-consuming loading — not such a significant plus if you have a disc.

To use the WordPack, execute Edit and the screen will clear as for Mode 4 graphics. Answering the prompt "Old text?" produces a rectangular end-of-text marker at top left with p01> at bottom left. That means "page 1" followed by a prompt. Type "e" and enter some text. Press Copy and it will be deleted and transferred to the top of the screen. The

keyboard works just like a normal typewriter, with upper- and lower-case letters selected by Shift.

If you continue to enter text, it is transferred to the top of the screen from time to time in blocks of up to 488 characters. When you want, the text at the top can be edited. There is an underline-type cursor which can be moved using the normal cursor-control keys. Position it under a character, press delete, and it will disappear. If you press "i" and a single character key, that character will be inserted immediately before the cursor.

Press "x" for exchange and a single character key, and that character will be exchange for the one above the cursor. Alternatively, if you press "a" and enter a passage of text up to 488 characters long, press "copy", the passage will be inserted immediately after the cursor. By pressing "b" the same can be accomplished before the cursor.

Another editing technique is to move the cursor to the start of a piece of text which needs attention. Press "@", move the cursor to the end of that piece, so marking it. You then can either press Delete and the marked piece will disappear or press "r", enter a passage of text, and press Copy. The new passage will replace the marked piece. Alternatively, press "t" for transfer and the marked piece will be deleted and stored in a temporary buffer.

Powerful command

Using the "a" or "b" operation described will then insert it in another place of your choice in the text. In this way sentences and paragraphs can be repositioned. The displayed text can be paged forward and back using single keystrokes, and it can be scrolled up.

A powerful feature is the find-and-replace command. You can ask WordPack to find and present a specific word or string of words each time they occur. Equally, you can ask WordPack to substitute another word or string of words. After examining each individual instance, you decide whether it should be replaced, or you can specify that it should be replaced throughout the text.

This command allows you to correct, say, a certain spelling mistake you have discovered. It also allows you to use abbreviations to save typing: when the text is complete, you replace each abbreviation with the full word — for example, "b.s." could stand for building society.

Because a computer program can be edited just like text by using the Text command, spaces can be eliminated and fully-written commands can be replaced by their abbreviations — Goto replaced by "G".

You must, of course, include commands for indentation, lines per page, page numbering, justification or not, single or double spacing, automatic centring or not of individual lines, preventing a table or list being split between two pages, starting a new page, stopping printing for a new piece of paper — if you are using single sheets — and printing in single or double-width characters. You can also set the right-hand margin.

These commands take the form of a full stop followed by a lower-case letter, and must be

placed at the beginning of a line. For example, ".i10" means indent 10 spaces until further notice; ".160" means 60 lines per page, ".o14" means print double-width characters until further notice and "o15" cancels that; ".t4" calls for an indent of four for that line only. They default to the most convenient arrangement if no command is given.

Text can be saved to cassette or disc and loaded without interfering with the display, and the commands are a simpler version of the usual ones. Pressing "w" will give the address of the first free memory location after the text, allowing the *Load command to append a further file of text on the end.

Acornsoft's high-speed cassette-saving and loading program can be used to speed up these processes. The Atom's highly-reliable loading is a boom. A saved file can, of course, be loaded and amendments made, then printed. The only typing involved is that for the actual amendments.

The only significant omission I can find is the lack of a tabulation command. Acorn says that it will be releasing a cassette which contains software to add that facility together with the ability to print a title repeatedly on each page. Acorn is also producing a disc system for the Atom at about £299.

The memory requirements are 6K of RAM in the upper text space for displaying the text, and whatever you have in the lower. The text starts at location # 2800 if the floating-point ROM is fitted, # 2900 otherwise. Here 5K will hold the equivalent of three A4 pages of conventional single-spaced typescript using a medium-sized type-face. The Atom can hold up to 21K in this area. Larger documents can be split and entered, processed, saved and printed as consecutive sections.

It is acceptably crashproof. Acorn has ensured that nearly all invalid key strokes are ignored. However, I have managed to crash it a few times. Usually, pressing Break, executing Edit, and making a minor repair to the beginning of the text effect a recovery.

WordPack is a delight to use and I never want to touch a conventional typewriter again.

Of course, £30 will not turn your Atom into an expensive, office-type word processor, but you have the essentials. It is definitely a serious package and in no way a toy.

It is useful for letters, club membership and fixture lists, leaflets, articles, recipes, reports and circulars. It is worth considering for office use — the whole cost of an Atom, printer and ROM is slightly more than £550 including VAT but excluding a cassette recorder and TV or monitor. It would be pointless, however, to consider it without a printer.

CONCLUSIONS

■ The Seikosha Printer at about £230 including VAT, ribbon cable and some paper is the least expensive wide printer on the market, and it should interface easily to most computers.

■ It prints all 96 standard ASCII characters in a five-by-seven dot matrix but lower-case letters do not have descenders. Double-width characters can be printed.

■ The printed result is neat and attractive and can be used for letters although it is not, of course, as good as expensive letter-quality machines.

■ It can also print graphics which, at least with the Atom, are very attractive. With each dot the size of a pinprick, the resolution is very high.

■ With a printer, the £30 WordPack ROM turns the Atom into a thoroughly practical tool for the home, club and also the small office. The ROM plugs into the spare utilities socket on the Atom board. The computer works normally but WordPack is instantly available on executing one command.

■ Computer programs can also be edited and transferred to the upper text space for running.

■ All the really essential facilities of word processing are available. The only significant omission is the ability to specify tabulations. However, Acorn is producing software on cassette to add this and repetitive page headings.

■ The word processor is a delight to operate and makes the conventional typewriter seem an anachronism. It is good value for money. ■