The Assist 16 is a Japanese language word processor that runs on Apple IIe and IIc computers. It requires no special hardware, and with an Epson-type printer will print Chinese character text in two sizes. For Japanese language teachers in the U.S. who cannot afford dedicated word processors this is a convenient way of editing and printing Japanese text.

KEYWORDS: word processors, Japanese, Assist 16, Apple Chinese characters.

Just when you thought you'd seen everything for the Apple along comes this Kanji word processor from ESD Laboratory, Japan. Strange as it may sound, this is a full Japanese word processor that requires no special hardware. If you have a 48K Apple IIe or IIc type computer, two disk drives, and an Epson compatible bit image printer capable of printing 960 dots per line, you are ready to go. The product I have experience with is an earlier version, called Apple Kanji Writer, which worked on Apple II's. The new version, called Assist 16, works only on Apple IIe's and IIc's. I have not personally used the newer version.

The Software

When I say that this is a full word processor, I mean that it has most of the functions you would normally associate with a word processor, but since this is a Kanji (Chine character) processor there are some special features and limitations to be taken into consideration.

First let me generally describe the software. The program consists of two main parts; the word processor itself and the Kanji font. The Kanji font is the JIS (Japanese Industrial Standard) first standard font. This consists of 2965 characters (quite enough for most purposes), but this can be expanded by the user since a facility for entering new characters is included. On the new Assist 16 version the user can also record the 500 jukugo (character combinations) which are used most frequently.

Besides the Chinese characters, the main program supports both the normal keyboard characters and full Hiragana and Katakana character sets. The Kan keyboards are changeable between the JIS arrangement and the alternate a-i-u-e-o arrangement. Because all characters (including Roman letters) are drawn on the graphic screen, input is necessarily slow. When entering pure Japanese text this probably won't be too noticeable, but it is very easy to out-type the computer in the alphanumeric mode.

Although you pay a price in speed, the graphic production of characters allows certain tricks that you won't find on Roman word processors. For example, characters can be superimposed on other characters for special effects. Characters can be printed in inverse (white on black). And the text can be rotated 90 degrees counter-clockwise to give normal Japanese columnar printing (see Figure 1). In addition, several sizes of print (big, normal, small, and big-small) can be selected and mixed in a single text (see Figure 2). The examples shown are mostly in the large font for legibility. Although the normal size print is quite legible, interested readers will probably want to use this word processor for educational purposes and the larger type is easier for students to read. The small size type works only for the Roman font. There is also a half height-font illustrated in the manual, which for some reason doesn't appear on my printer (which is not an Epson). This half-height font is a little hard to read if you are not a fluent reader of Japanese.
The normal procedure for entering Japanese text on my version is to go into Kanji mode (ctrl-K) and type the kana key that represents the pronunciation of the Kanji that you want. (I am told by the sales people that the Assist 16 version supports Roman input.) At the bottom of the screen nine Kanji will appear. If yours is there, you can select it with one of the number keys (1-9). If your Kanji is not displayed, you then use arrow keys to page through the font, nine characters at a time, until you find the one you want. In some cases, this can be quite time consuming. After you have selected the Kanji you want, it appears on the screen and you drop back automatically into kana mode. This computer remembers, however, which page of the font you were on, and if you select that same kana again (in Japanese or Kanji mode) you will see that page first. The Japanese mode (ctrl-J) is like the Kanji mode, except that after you select the Kanji you are not dropped back into kana mode but stay in Kanji mode.

Limitations
Since every character is graphically represented, memory is a problem. Only about 400 characters can be held in memory at one time. This represents, depending on the density of the text, only about one to two screens. When you have filled up the memory you must save the current part of the document that you are working on. This is called a page. In other words this is a page-oriented word processor. The amount of memory left is always displayed on the screen so you can plan your paragraphs, etc.

The idea of a page is a little difficult to get used to at first. The pages of the document are memory pages. They do not correspond to screen pages or printed pages (the length of which can be set separately). When your document is printed the memory pages are chained automatically.

The capacity of the disk is also a problem as one disk will hold only about 4400 characters or about nine full memory pages. It is not as bad as it sounds because normal documents often have a lot of empty space, and in fact quite a
few printed pages should fit on a disk. These are hardware limitations though, and cannot be blamed on the software
designers (unless they have overlooked some compression schemes).

The 13-line screen display consists of nine twenty-character document lines, two lines of Kanji font display, one line
for memory space display, and one line for command display. There is a cursor that moves both horizontally and
vertically. There is also an end marker which shows where the used area stops (spaces after the end of the text are
counted in memory allocation). This is not a what-you-see-is-what-you-get word processor so all print function codes
actually appear on the screen, but since word wrap usually isn't necessary in Japanese this isn't a problem. If you want
the text to line up in some fancy way, considerable care will be required.

Having said that, this word processor includes numerous layout parameters that allow you to control the space
between characters, both vertically and horizontally, as well as the usual paper and margin adjustments. Both single and
double underlines are available, as well as a way of drawing boxes around your text (see Figure 3).

Program Documentation

The 100 page manual seems only barely adequate. Its weaknesses may be due to my Japanese reading ability rather
than lack of clarity. At any rate, when you are combining the many printing codes to produce various sizes of text with
lines and boxes some pretty strange things will occasionally happen. A little practice will straighten out most of these
problems, I have found. ESD tells me that a new manual has been written for the Assist 16. Needless to say, it is
completely in Japanese, but if you are thinking of writing Japanese, I presume you can read it too.

The program itself is unprotected and listable. Theoretically, this means you could modify or improve the program if
you are so inclined. It relies on numerous machine language CALLs, however, so this is no job for beginners. Even so,
there are instructions in the manual for modifying the program in several ways. One of the most useful might be to
transfer the Kanji font to a RAM disk and then have the word processor access the font from that slot.

Availability

Assist 16 is available from ESD Laboratory, Yushima 4-1-11, Bunkyoo-ku, Tokyo 113. I called them and told them I
was writing this review, and asked for information about ordering from overseas. The man I spoke to promised to speak
to his superiors and get back to me with that information. I have yet to hear anything. In Japan the program sells for
Y35,000, which equals about U.S.$135 (depending upon the current exchange rate).

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