

Q10: I would be interested in knowing how you "creatively" get around the problem of control characters (for the printer) being counted during line fill-in in Apple Writer.

A10: It's a truly fun and exciting process! First, you print out the file normally, with no control characters in place. Then, on each line where control characters are to be inserted, you break the text with a <CR> at the end of the line, in the same place where AppleWriter broke it during printing. Then you establish the following conditions with embedded commands:

```
.pm 0
.lj
.rm (+ the number of control characters to be
      inserted, plus one)
      - or -
.rm (what it is now, plus the control characters,
      plus one)
```

The right margin control may require a little explanation. Assume that you've got the margin set at 73. You want to put the printer into italics mode for one word and then return it to normal mode. For an Epson printer, this control requires an <ESC>4 to start italics and an <ESC>5 to turn it off; that's a total of four characters. You would need five extra character spaces on the line, so you set the margin with either of these embedded commands:

```
.rm +5
- or -
.rm 78
```

Basically what you are doing is bypassing all of AppleWriter's justification code and forcing the creation of a special line. The extra character space needed is to get round the <CR> that you've inserted, to prevent it from causing a line break before the last word that you want on the line.

Now insert the control characters in the text, and add spaces to justify, in the same places where Applewriter put them. Then, on the very next line, re-establish your previous paragraphing and margin controls with further embedded commands.

When you print this altered text, it should come out all properly justified. If it still misses, you can play with it a bit; things should be quite easy after you've printed it once with the control characters in place.

Cheers,
Dick Binder (The Stainless Steel Rat)