Power Transformer Program

Thank you very much for the article 'Program for Design of Power Transformer' in the March '86 issue of your magazine. I have 'run' the program on BBC Micro and have found that Dimension Statement, i.e. statement no. 25, is incomplete. It has provided DIM for three variables only whereas there are nine variables, dimensions for which are to be provided. Except this the program runs and it is quite a useful program. However, I would like to modify statement no. 10 and 500 to 570 for a better printout of the results.

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Dimension statement has not been given for subscripted variables such as T, S, S$, I, Q and V.

Program is correct up to statement no. 105. But while executing statement no. 110, if the statement is true, instead of going to statement no. 130 it should execute statement no. 135. If statement no. 110 is false then the computer should execute statement no. 115, 120 and so on.

The modified list is given below for the correct logic from statement no. 110 to 130.

```
110 IF A$ = "Y" THEN 135
115 INPUT "SEC. VOLTAGE IN VOLTS", V(2)
120 INPUT "SEC. CURRENT IN AMPS.", I(2)
122 PRINT "ASSIGN 0 VALUE FOR BALANCE VOLTAGE
    AND CURRENTS"
123 REM. P2 IS OUTPUT POWER
125 P2 = V(2) * I(2)
130 GO TO 160
```

The rest of the program is alright.

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The author, Mr Anil Kumar Malik, replies: First of all I would like to thank Mr Saxena and Mr Gupta for having gone through my article in detail and taken pains to point out difficulties/suggestions in running the program.

In BASIC, each variable reserves ten memory locations, if it is not dimensioned in DIM statement. That is why subscripted variables were not included in DIM statement, as these used only six memory locations. As BASIC has many versions, this statement will have to be modified, depending upon one's computer and the BASIC's version. However, it is better to dimension each variable in DIM statement to save memory, as well as disc storage capacity.

One can always use TAB function to get better printout depending upon one's preference for presenting the results.

In the program under reference, TAB function was not used, as results were printed under only two columns. This can however easily be achieved by using "," in PRINT statement as it also behaves like 'TAB' function.

I don't agree with the modifications suggested by Mr Gupta. The three additional statements suggested by him, numbering from 122 to 125, are superfluous and don't increase the efficiency or save CPU time. Instead he has duplicated these three statements without achieving anything.

I want to clarify that each variable is initialised to zero when the program is run, and it remains zero till a value is assigned to it. The statement 130 PRINT "ASSIGN 0 VALUE FOR THE BALANCE VOLTAGES AND CURRENTS" is used to tell the operator to assign '0' value to the balance variables if the transformer has more than one secondary windings but less than five. Suppose, the transformer has three secondary windings, then V(5), V(6) and I(5) and I(6) will be assigned '0' value.