

```

10  RDBUFF  MACRO  &BUFADR,&RECLTH,&INDEV
15  .
20  .      MACRO TO READ RECORD INTO BUFFER
25  .
30          CLEAR  X          CLEAR LOOP COUNTER
35          CLEAR  A
40          CLEAR  S
45          +LDT    #4096      SET MAXIMUM RECORD LENGTH
50  $LOOP   RDCHAR  &INDEV     READ CHARACTER INTO REG A
65          COMPR  A,S        TEST FOR END OF RECORD
70          JEQ    $EXIT      EXIT LOOP IF EOR
75          STCH   &BUFADR,X   STORE CHARACTER IN BUFFER
80          TIXR   T          LOOP UNLESS MAXIMUM LENGTH
85          JLT    $LOOP      HAS BEEN REACHED
90  $EXIT   STX     &RECLTH    SAVE RECORD LENGTH
95          MEND

```

(a)

```

5  RDCHAR  MACRO  &IN
10  .
15  .      MACRO TO READ CHARACTER INTO REGISTER A
20  .
25          TD     =X'&IN'    TEST INPUT DEVICE
30          JEQ    *-3        LOOP UNTIL READY
35          RD     =X'&IN'    READ CHARACTER
40          MEND

```

(b)

```

-RDBUFF  BUFFER, LENGTH, F1

```

(c)

Figure 4.11 Example of nested macro invocation.