

**TANDY**  
ELECTRONICS

The biggest name  
in little computers

# MICROCOMPUTER NEWSLETTER

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Prices may vary at individual Stores and Dealers

## NEW SOFTWARE

### DEVELOPMENT SOFTWARE

#### FORTRAN: \*

Now available for the TRS-80 Model I (32K with Disk) is a complete FORTRAN package which conforms to the American National Standard FORTRAN language (ANSI X3.9-1966) with the exception of COMPLEX data types. The FORTRAN package includes FORTRAN-80, EDIT-80, LINK-80 and LIBRARY — everything you need to create, compile and execute FORTRAN programs on your TRS-80.

If you are already familiar with FORTRAN you should have no trouble using TRS-80 FORTRAN, if you are a beginner you will need to study a good introductory text to give you a 'Feel' for the language. If you are a competent BASIC programmer you are well on the way to being able to program in FORTRAN.

The TRS-80 FORTRAN package includes two TRSDOS diskettes with F80, L80, EDIT/CMD and FORLIB/REL plus three user manuals: FORTRAN-80 Reference Manual, which is a complete FORTRAN language manual, the LINK-80 manual and an EDIT-80 manual.

We think you will like TRS-80 FORTRAN. It's another step towards keeping Tandy, the Biggest Name in Little Computers.

**FORTRAN. 26-2201 ..... 139.95**

#### DISK EDITOR/ASSEMBLER: \*

This package includes everything the experienced programmer needs to create, compile and execute Z-80 or 8080 Assembly Language Programs.

Your programs are created using EDIT-80, the same editor that is used in the FORTRAN package. Object code is compiled using MACRO-80. This powerful assembler creates absolute or relocatable code.

MACRO-80 contains 25 pseudo-ops which allow a wide variety of assembler controls, including conditional assembly (IF-ELSE), numeric bases (RADIX) from 2 to 16, COMMON (memory blocks which are compatible with FORTRAN COMMON statement), Z-80 or 8080 op codes, and more.

The LINK-80 Linking Loader is used to load object code and any needed library functions and if required produce a TRS-DOS executable file.

The CREF-80 Cross Reference Facility provides you with a listing file in which each

source statement contains a cross reference number. In addition an alphabetic list of all variables used and those lines which reference them.

**EDITOR/ASSEMBLER. 26-2202 ..... 139.95**

### BUSINESS SOFTWARE

#### ACCOUNTS RECEIVABLE:

If you consider the General Ledger the heart of the accounting department, then the Accounts Receivable must be considered the pulse of the company. The flow of cash (from goods sold) must be monitored precisely to keep a company healthy. Anything that will assist in getting statements out to customers quickly, and accurately, can be a vital aid to a company. The Tandy Accounts Receivable System (ARS) is such an aid.

ARS will produce professional Receivables statements, aging reports and General Ledger posting summaries. Each data diskette can handle up to 300 accounts with 1000 transactions per month. If an extra disk drive is added the capacity is increased to 500 accounts and 2500 transactions per month.

Requires a minimum of 2 disk drives and 32K RAM.

**Accounts Receivable. 260-1555 ..... 139.95**

#### BUSINESS MAILING LIST:

The Tandy Mailing List System (MLS) is a fast storage and retrieval system for names and addresses. The system provides two formats compressed and expanded. Other features include:

- Sorting on both name and post code
- Random access to any record on file
- Easy error recovery and correction
- Prints both listings and labels
- Prints your own return address labels
- Revision and update of any record

#### System Capacities:

##### Compressed Format

990 names with minimum system  
1980 names with 32K RAM and 3 disk drives  
2970 names with 48K RAM and 4 disk drives

##### Expanded Format

660 names with minimum system  
1320 names with 32K RAM and 3 disk drives  
1980 names with 48K RAM and 4 disk drives

MLS also allows up to 8 categories which can be used to selectively print portions of the mailing list.

Requires a minimum of 32K RAM and 2 disk drives plus a tractor feed line printer.

### EDUCATIONAL SOFTWARE

#### TEACHER AIDE

Teacher Aide is designed to reduce the burden of paperwork that is usually associated with the teaching profession. Teacher Aide will calculate student grades assign classroom seats, keep track of absences, tardies, overdue books and report cards. It will also maintain an up-to-date personal file on each student.

Teacher Aide will store information on a per class basis. Up to 35 students per class per cassette tape. You can rearrange classroom seating, enter raw scores, convert raw scores into A,B,C,D,E and F grades, add grades to a cumulative total and then save results to tape.

Teacher Aide provides a unique percentile guide which lets you see a student's standing in terms of percentage of individuals below the student.

Requires 16K RAM Level II.

**Teacher Aide. 260-1713 .....**

### AMUSEMENT GAMES

The following three games are now available from your nearest Tandy Store.

#### Formula I

This game simulates driving down a winding road. You have to avoid oncoming traffic and road side guide-posts. Every 250 kilometres, a slip-zone appears, entering this zone causes sluggish reaction in the steering of the car. When you leave this slip-zone, the speed of the car increases. An average score is 500, scores of 2000 are possible, but very difficult!

Requires 4K Level II.

**Formula I. 26-7911 ..... 9.95**

#### INVADERS:

Save the Earth from the Alien invaders! You must shoot down 50 Invaders before they land

or before you lose your three lives. If your score reaches 1500 you get another life. If you are a good shot you can get a score of 3000 but don't forget the Aliens shoot back and the fewer there are, the faster they move. Requires 4K Level II  
**Invaders. 26-7912 ..... 9.95**

**BOWLING:**

This program simulates the game of Ten Pin Bowling. You can even control the curve on the ball. Complete with amusing graphics just to break your concentration! For one or two players.  
 Requires 16K Level II  
**Bowling. 26-7913 ..... 9.95**

**SOFTWARE REPLACEMENT**

For those of you who have queried our policy on replacement of faulty software this is the procedure we follow:

- A). If a program is faulty and the original media is not damaged, then the program will be re-recorded free of charge.
- B). If a program is faulty and the original media is damaged, then the media will be replaced and the program re-recorded for the cost of the media only. (Tape or diskette).

C). If the original media is not returned then the full cost of a replacement program package will be charged.

The above applies to all Tandy/Radio Shack programs.

**D.O.S. Diskettes**

The above conditions apply to D.O.S. diskettes with the exception of free Version/Release updates. These are shipped at no charge to all owners of 26-1160 Mini Disk Drives. If faulty copies are received by customers then conditions A to B, above, apply.

**HINTS AND ERRORS**  
**BASIC Program Lister**

The following program was written to produce listings of any disk BASIC program. To use this program, the file that you want to list must be a BASIC file, stored on disk using the,A option (ASCII format). Simply RUN "LISTER/BAS" and answer the questions and you will be able to list programs using any line length with file name and date headings.

Many thanks to Terry Smith for his modifications to the format.

```

1 'LISTER/BAS 2.1 - Basic File Lister
2 'COPYRIGHT (C) TANDY CORP. 1979      MODIFIED BY:- T.SMITH.
3 CLEAR1000:DEFINTA-Z
4 CLS:PRINTTAB(20)"Basic File Lister":PRINT
5 LINE INPUT"Enter Filespec: ";F$
6 ONERRORGOTO69:OPEN" I",1,F$
7 ONERRORGOTO72:PG=0
8 'First character of line is 0 to 9 48 to 57 or file is not ASCII
9 LINEINPUT#1,L$:D=ASC(LEFT$(L$,1))
10 IFD<48ORD>57THENPRINT"Not ASCII BASIC file -":GOTO5
11 LINEINPUT"Enter title : ";TL$
12 IFLEN(TL$)>50PRINT"TITLE TO LONG.":GOTO11
13 LINEINPUT"date : ";DT$
14 LINEINPUT"Enter page width : ";WD$
15 IFWD$="" THENWD=79:PRINTTAB(18);CHR$(27)WDELSEWD=VAL(WD$)
16 IFWD<64ORWD>132THENPRINT"* Bad width (64 to 132 only) *":GOTO14
17 INPUT"Do you want each ' statement ' on a separate line";SL$
18 IFSL$="" THEN SL$="NO":PRINTTAB(51);CHR$(27)SL$
19 IF LEFT$(SL$,1)="Y"OR LEFT$(SL$,1)="y" THEN F1 =1ELSE F1=0
20 '*****
21 'Make sure printer is ready
22 '*****
23 PRINT:LINEINPUT"Ready printer - Then press ENTER >";A$
24 POKE16424,67:POKE16425,1
25 GOSUB44:GOTO30
26 GOSUB44
27 IFEOF(1)THEN42
28 LINEINPUT#1,L$
29 IFF1=1THENGOSUB45:GOTO27
30 W1=WD:T=0
31 W=W1:IFLEN(L$)<W THENW=LEN(L$)
32 J=INSTR(L$,CHR$(10))
33 IFJ>0THENW=J-1ELSEIFLEN(L$)>W1THENG=-1
34 LPRINTTAB(T);LEFT$(L$,W)

```

```

35 IF J <> 0 AND T = 0 THEN T = 5 : W1 = W1 - T
36 IF J > 0 THEN W = W + 1
37 L$ = RIGHT$(L$, LEN(L$) - W) : IF L$ = "" THEN 40
38 IF PEEK(16425) > 62 THEN LPRINT CHR$(12) : GOSUB 44
39 GOTO 31
40 IF PEEK(16425) < 63 THEN 27
41 LPRINT CHR$(12) : IF EOF(1) THEN 43 ELSE 26
42 LPRINT CHR$(12)
43 GOSUB 57 : PRINT : PRINT "* End of LISTING *" : END
44 GOSUB 57 : GOSUB 58 : RETURN : ' PRINT THE ----- AND HEADING.
45 NN = 0 : FOR J = 1 TO LEN(L$) : V$ = MID$(L$, J, 1) : L = L + 1
46 LPRINT V$ : IF L >= WD THEN LPRINT " " : GOSUB 53 : LPRINT TAB(10) : L = L + 10
47 IF V$ = CHR$(34) AND NN = 1 THEN NN = 0 : GOTO 49
48 IF V$ = CHR$(34) AND NN = 0 THEN NN = 1
49 IF V$ = " " AND NN <> 1 THEN LPRINT : GOSUB 53 : LPRINT TAB(5) : L = 5
50 NEXT J
51 LPRINT : L = 0
52 GOSUB 53 : RETURN
53 IF PEEK(16425) > 62 THEN LPRINT CHR$(12) : GOSUB 44
54 RETURN
55 '
56 ' Print dashed lines for perforations
57 LPRINT STRING$(WD, "-") : GOSUB 66 : RETURN
58 ' Print heading and page number
59 '
60 PG = PG + 1 : LPRINT USING "PAGE ###" : PG :
61 LPRINT TAB((WD/2) - (LEN(TL$)/2)) : TL$ :
62 IF DT$ <> "" LPRINT TAB(WD - LEN(DT$)) : DT$
63 LPRINT TAB((WD/2) - (LEN(TL$)/2)) : STRING$(LEN(TL$), "=")
64 '
65 ' Print two blank lines
66 LPRINT : LPRINT : RETURN
67 '
68 ' Error trapping
69 IF ERR/2 + 1 = 54 THEN PRINT "* FILE NOT FOUND *" : RESUME 5
70 IF ERR/2 + 1 = 65 THEN PRINT "* BAD FILE NAME *" : RESUME 5
71 PRINT : PRINT "Print error # " : ERR/2 : " in " : ERL : STOP
72 RESUME

```

**NOTE: \***

Both the FORTRAN and the Editor/Assembler programs will run on a single drive, 32K RAM Level II system. However, the order that the files are on disk will have to be changed (that is two programs will have to be swapped).

The disks will need to be set up in the following manner:-

Editor/Assembler-Disk 1  
M80/CMD and FORLIB/REL  
  
Disk 2  
LINK/CMD and EDIT/CMD

FORTRAN-Disk 1  
F80/CMD and FORLIB/REL  
  
Disk 2  
LINK/CMD and EDIT/CMD

This of course will require two disk drives! If you wish your files placed so that you can use a single drive, return your diskettes to your nearest Tandy store and they will arrange to send them to Rydalmer for modification.

**WORD PROCESSING:**

If you have a need for word processing, but have not been able to find a suitable program with the power and flexibility you require. Good news SCRIPSIT is here!

SCRIPSIT is the name of the new word processing package soon to be available

from Tandy. It has all the features you need in an easy to use package. SCRIPSIT features:-

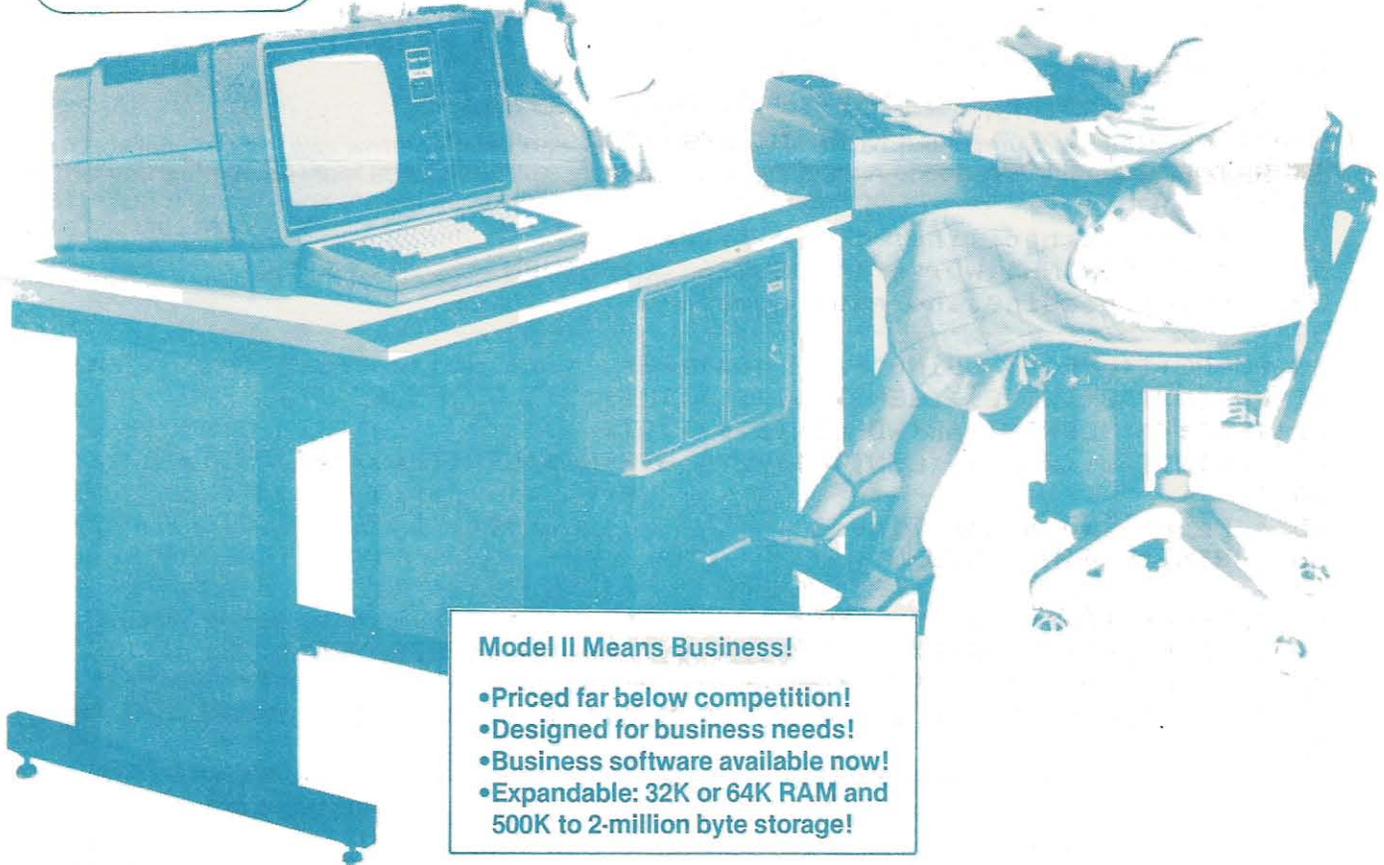
- Total document formatting
- Error correction by deletion, insertion, overwriting, exchanging
- Automatic headers, footers and page numbers
- Global replace, find and delete
- Operator defined block designation for hyphenation and editing.

SCRIPSIT will drive either a serial or parallel printer in both upper and lower case. You can even display lower case on the screen, providing you have the Tandy Lower Case modification.

SCRIPSIT should be available by the end of April — just ask at your nearest Tandy store for availability.

# Tandy Electronics Introduces a second computer breakthrough!

**NEW!**  
**TRS-80**  
**Model II**



#### **Model II Means Business!**

- Priced far below competition!
- Designed for business needs!
- Business software available now!
- Expandable: 32K or 64K RAM and 500K to 2-million byte storage!

Our first microcomputer breakthrough put "personal" computing into orbit worldwide — the fabulous TRS-80 Model I, which continues in our line at \$100 off the 1979 price! New Model II adds business-oriented speed and power for those who need it, *at 1/3 to 2/3 off the price* of comparable equipment made by IBM and others. A breakthrough? The facts speak for themselves! Designed and built by Tandy/Radio Shack in the USA. Better believe it!

#### **Is Model II a Micro or a Mini?**

Good question. No easy answer. It's all an 8" floppy disk system: one built in, room for three more. True 30.4cm monitor, twice the size of the IBM 5110, for example. Twice the operating speed of Model I. Upper and lower case. New state-of-the art 76-key keyboard. Level-III expanded BASIC. Systems starting at \$5300. Illustrated 64K 4-disk system with line-printer III and all furniture shown (except the chair) only \$13164.95. Personal? Sure! Mini or micro? Heads you win, tails you win. But obviously the biggest buy in computer history.

**TANDY**  
ELECTRONICS

Call into your nearest Tandy Store or Participating Dealers  
and pick up the new four-page brochure — available now!

**THE BIGGEST NAME IN LITTLE COMPUTERS**