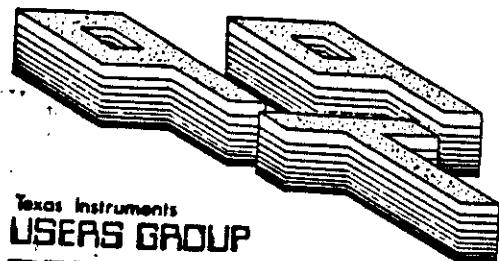


# Newsletter Nine-T-Nine

## June/July 1990

### Double Issue



Texas Instruments  
USERS GROUP  
TORONTO



*"Actually, Doctor, I wouldn't mind hearing voices if the little buzzards knew Basic."*

From:  
9T9 Users Group  
109-2356 Gerrard St.E.  
Toronto, Ont., M4E-2E2  
CANADA

To:

**9T9 USERS GROUP EXECUTIVE COMMITTEE**  
PRESIDENT Steve Mickelson (657-1494)  
VICE-PRESIDENT Neil Allen (255-8606)  
SECRETARY/MEMBERSHPS Randy Rossetto (469-3468)  
TREASURER/OFFICER AT LARGE Cecil Chin (671-2052)

**LIBRARY DIRECTORS**

Gary Bowser (960-0925)  
Andy Parkinson (275-4427)  
Steve Findlay (416) 727-6807  
Erik Wiklund (416) 827-4858

**NEWSLETTER EDITOR**

Steve Mickelson (657-1494)

**MEMBERSHIP FEES**

FULL MEMBERSHIP ..... \$30.00 / year  
NEWSLETTER SUBSCRIPTION ..... \$20.00 / year  
DISK OF THE MONTH subscription,add... \$30.00 / year  
(Delphi Memberships add \$3.00 for credit card fees)

All memberships are household memberships. A newsletter subscription is only for those who do not wish to attend meeting but wish to receive our newsletter and have access to our library. You are welcome to visit one of our general meetings before joining the group. If you wish more information contact either our president, in writing, at the club address on the front cover or phone him.

The meetings are usually held on the last Thursday of each month,(exceptions are December's meeting date, usually mid-month and the months of July and August, when there are no meetings. Consult this issue of Newsletter 9T9 for the date and time of the next meeting. Meetings are usually held in the lecture room main, at Canada Remote Systems, 1331 Crestlawn Dr., Unit D, Mississauga ,(Eglinton Ave./Dixie Road Area), from 7:30 - 10:30 PM.

**BBS**

The 9T9 Users Group supports the Toronto BBS, The TI Tower BBS #(416) 921-2731, 300/1200/2400 BPS, 24 hrs. Sysop, Gary Bowser.

**MAILING ADDRESS:**

9T9 Users Group, 109-2356 Gerrard St.East, Toronto, Ont. M4E-2E2, Canada

**COMMERCIAL ADVERTISING**

Any business wishing to reach our membership may advertise in our newsletter.

The rates are as follows. (width by height):

FULL PAGE (7" x 10") \$30.00  
HALF PAGE (7" x 5") \$15.00  
QUARTER PAGE (7" x 2 1/2") \$ 7.50

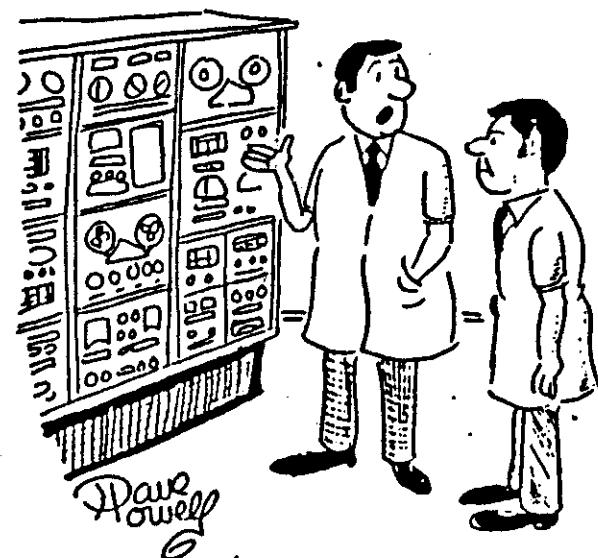
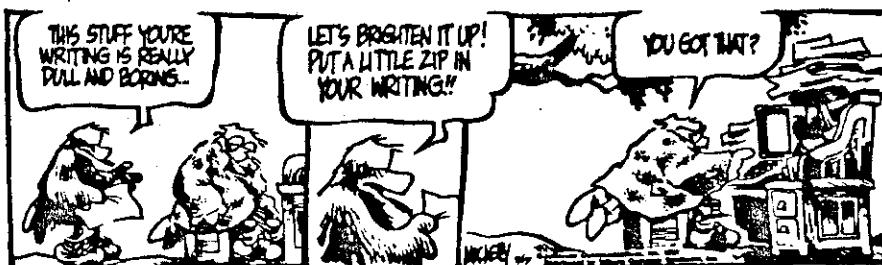
Please have your ad's camera ready and paid for in advance. For more information contact the editor. Don't forget, that any member wishing to place ads, may do so free of charge as long as they are not involved in a commercial enterprise.

**NEWSLETTER ARTICLES**

Members are encouraged to contribute to the newsletter in the form of articles, mini programs, helpful tips, hardware modifications, jokes, cartoons and questions. Any article may be submitted in any form by mail or modem. We welcome the reprinting of any article appearing in this newsletter providing credit is given to the author and 9T9. If more information is required, call the editor. The names, 9T9, Nine-T-Nine, Newsletter 9T9, 9T9 Users Group, and Nine-T-Nine Users Group are Copyright,(c), 1982,1983,1984,1985,1986,1987,1988,1989,1990, by the 9T9 Users Group of Toronto, Canada, all rights reserved.

**DISCLAIMER**

Opinions expressed in this newsletter are those of the writers and are not necessarily those of the 9T9 USERS' GROUP. 9T9 cannot assume liability for errors or omissions in articles, programs or advertisements. Any hardware modification or project is presented for informational purposes, and the author, newsletter editor, staff and/or 9T9 Users Group &cannot be held liable for any damage to the user's equipment. All such projects are done at your own risk!



*"I feed my problems into this computer and all it does is multiply them!"*



Tldbits

#40

-By Steve Mickelson, President 9T9 Users Group  
Compuserve 76545,1255; Delphi SMICKELSON; GEnie S.Mickelson

Boone No Show:

Those reader who attended the last meeting are full aware that Bob Boone was a no show. I must take the blame for this one, as I neglected to confirm with Bob the verbal acceptance he gave for a May visit, when he was here last fall. Sorry folks!

All Wasn't Lost:

All wasn't lost, though, as Gary gave us a pretty good synopsis of the Ottawa, Boston and Lime Fairs. Randy gave us a visual report of Lime in the form of some really great pictures and a binder full of hand-outs/fliers collected from the Lime do. The quality of Randy's "snaps" was really outstanding!

Asgard's Late Arrival, or mini-editorial department:

Asgard's publication finally arrived. Though bearing the name "Reflections", the layout and look is quite good, though the content is still mainly Asgard News, with an always favourable bias,(towards Asgard), reflected in content.

While there is a visible attempt to cover "other" hardware and software, with a couple of snipes taken against Myarc for delays and bugs in respective hardware and software, blame for the lateness for his publication is pinned upon the loss of an editor, prioritizing the release of spring software, and other excuses. The absence of "The Press" placed more or less upon Charles Earl, not to mention bugs in Hardmaster.

The much touted 80-column card, has yet to make its appearance. I suspect that the glitches and bugs experienced by Asgard are pretty much the same as Myarc's woe's, and the editorials seem only an example of the pot calling the kettle black.

In spite of the opinion skew, the publication does contain a number of timely news reports and press releases from various hardware and software sources, as well Harry Brasher's and Jack Sughrue's offings.

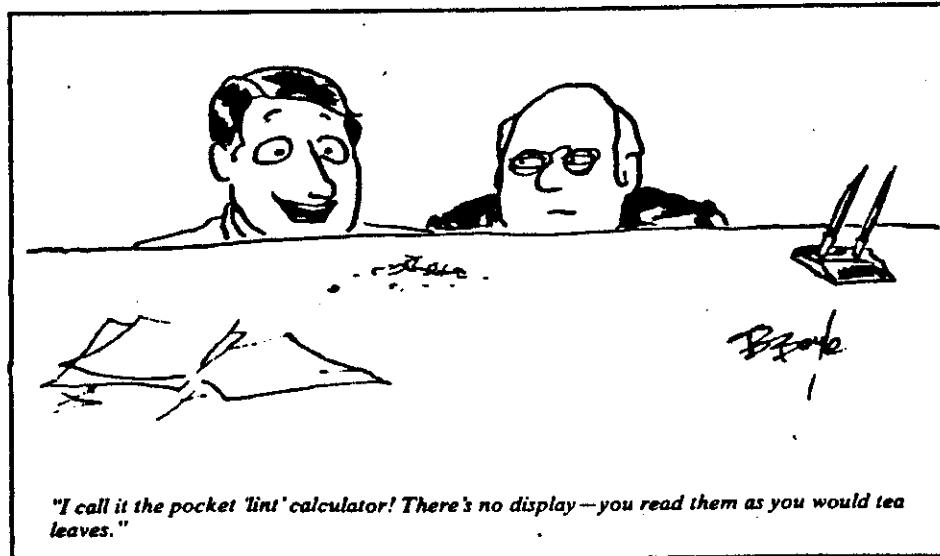
If Asgard can keep a production schedule and meet promised deadlines to paying subscribers, Reflections could well evolve into a first-rate publication. I might be a bit heavy handed in my criticism, but since this publication is on our mailing list, I feel that a more "just the news" approach in reporting TI articles and keeping the comments for the editorial section would give this publication a 100% improvement in the content department, as the form is just fine.

Mike's Back:

We have another installment of Michael O'Dowd's "Butterfingers Repair Section", unfortunately for those who read this on the commercial databases, is a photocopy of his hardcopy and not in software format.

Summer hiatus:

This will be our last issue until the August/September issue comes out in September. Hope all our readership have a safe and happy summer.



# MEMBERSHIP REPORT JUNE 1990

Just a quick note to bring everyone up to date on YOUR TI-99/4A Computer Club, 9T9 USER GROUP.

At the latest count we have 28 members and 29 subscribers, of which 6 are Disk Of the Month Subscribers. These numbers have not changed much over the last 2 or 3 years as it seems that as some TI users move onto other systems new users and or those who rekindle their interest in the TI seem to spring up to join the TI community.

Our user group exchanges have been cut back to only those groups that publish and exchange newsletters, but this has allowed the numbers to creep back up with new and interesting user group newsletters being made available to be shared by all members. We now exchange with 41 other user groups, of which 2 subscribe to the Disk Of the Month. Remember that other UG newsletters offer a wealth of information and are essentially the GLUE that will hold this TI community together.

Have a good summer----->Randy Rossetto, Secretary, 9T9UG.

## SENDING PACKAGES TO CANADA, EH!! WARNING ! WARNING ! WARNING ! WARNING!

The above header is titled such to attract attention to a situation that I think is truly CANADIAN in nature and is addressed to ALL of our good friends in the U.S.A. and abroad who, at times, generously send packages containing diskettes and video tapes and TI hardware to our User Group and/or individuals who make buy/sell arrangements for their own personal uses.

As you all may well know by now, anything of value being sent to Canada must have a declaration of value put on the package, namely by using a little green stick-on label called Customs C 1, Form 2976, normally available where one can buy stamps, etc.

This is just fine as long as you put a value on it! If you don't, like a package we received last week, the highly educated employees of Canada Customs will open the said package for inspection, evaluate the contents, classify the contents for tariff purposes and in their best wisdom with the total knowledge of all things retail and/or wholesale, will put a value on it, reseal the package and send it on its way with an invoice for duties and taxes owing.

That works very well in most cases, but you know how hard it is to get good help these days, SO, I was very alarmed to get a (one) VHS video tape in the mail that had been inspected by Customs with a value of \$120.00 put on it. The sender had graciously sent it to the UG for free and therefore put a value of \$0.00 on the C 1 form and some idiot at customs in his/her absolute wisdom determined that a home made video tape had a value of \$120.00.

After a phone call to Customs, it was determined that the only way to clean up this situation, and it would be a lasting situation because every invoice has a number that would continually come up on the Customs computer, would be to either get back to the person who sent the package and get a letter stating the value of the contents, or take the package to a post office and have it "Returned To Sender", making sure the Customs invoice was stamped as such and return the stamped invoice to Customs, or go down to a customs office and argue with maybe the same idiot that evaluated the package in the first place.

The main point of all this is to ask anyone who sends "stuff" to Canada to keep using the Customs C 1 form and value the goods with an value noting that many items valued at \$40.00 OR LESS do not normally get charged tariffs, so place your values accordingly AND if your item is a gift mark it as such AND even if you think that an item is worth \$0.00 at least put down \$1.00 or \$2.00 so that our fine customs people can do their usual fine job!!

Thanks. Author unknown!

The following TI modules are required to round out my collection so I am enquiring within the TI community ( and beyond ) if anyone out there has any of these modules available at a reasonable price. If you do call me at (416) 469-3468 or drop a line to: Randy Rossetto, 33 Ladykirk Avenue, Toronto, Ontario, M4L 3K8, Canada

### TI MODULES REQUIRED

-----  
PHM 3000 DIAGNOSTICS  
PHM 3001 DEMONSTRATION --- Manual  
PHM 3011 SPEECH EDITOR --- Manual  
PHM 3012 SECURITIES ANALYSIS  
PHM 3017 TERMINAL EMULATOR  
PHM 3024 INDOOR SOCCER  
PHM 3033 BLACKJACK AND POKER  
PHM 3034 HUSTLE --- Manual  
PHM 3040 TI LOGO  
PHM 3045 SMU ELECTRICAL ENGINEERING LIBRARY  
PHM 3048 READING RALLY  
PHM 3084 COMPUTER MATH GAMES I  
PHM 3085 COMPUTER MATH GAMES III  
PHM 3086 COMPUTER MATH GAMES IV  
PHM 3090 ADDITION  
PHM 3091 SUBTRACTION  
PHM 3092 MULTIPLICATION  
PHM 3093 DIVISION  
PHM 3096 DECIMALS  
PHM 3097 PERCENTS  
PHM 3116 DEMOLITION DIVISION

PHM 3125 E.T. THE EXTRA-TERRESTRIAL  
PHM 3131 MOONMINE --- Manual  
PHM 3148 CHAMPIONSHIP BASEBALL  
PHM 3149 SPACE BANDITS  
PHM 3150 SEWERMANIA  
PHM 3151 BIGFOOT  
PHM 3152 METEOR BELT  
PHM 3153 SUPER FLY  
PHM 3154 TERRY'S TURTLE ADVENTURE  
PHM 3155 I'M HIDING  
PHM 3156 HONEY HUNT  
PHM 3157 SOUNDTRACK TROLLEY  
PHM 3168 TREASURE ISLAND  
PHM 3169 WORD INVASION  
PHM 3185 WORD RADAR  
PHM 3197 SLYMOIDS  
PHM 3207 CROSSFIRE  
PHM 3227 CONGO BONGO

AND ANY 3RD PARTY MODULES THAT MAY BE OF INTEREST. THANKS!

# 9T9 LIBRARY TREASURES

BY

ANDY PARTRIDGE  
LIBRARY DIRECTOR

NEW SOFTWARE  
FOR JUNE 90

## FILE MAINTENANCE <FORTH>

DATABASE PROGRAM SSSD \$2.00

## WILL OF THE WISP <XB/32K>

ADVENTURE GAME SSSD \$2.00

## RECIPIES I & II <XB PRNTR>

GOOD SELECTION 2-SSSD \$4.00

## ARTIST PICTS 6-SSSD EA. \$2.00

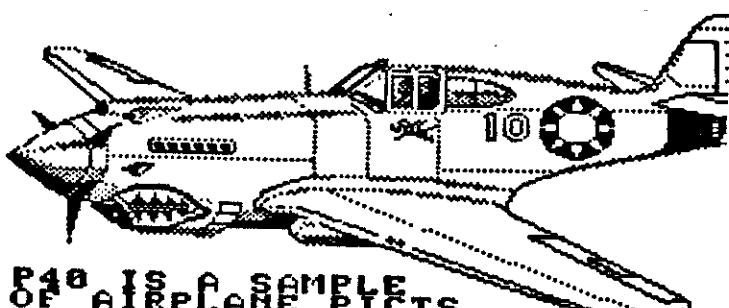
(IF, IB, JF, JB, KF, & KB)



## MULTIPLAN UPDATE vers. 4.0

REWRITE OF DISK FILES  
BY ART GREEN TO SPEED  
UP OPERATIONS TRIWARE  
STANDARD VERS. \$2.00  
GRAM DEVICE VERS. \$2.00

## TELCO 2.3 TERMINAL EMUL. TRIWARE 2-SSSD \$4.00



P10 IS A SAMPLE  
OF AIRPLANE PICTS  
3 FULL PLANE DISKS  
ART2PICJF, JB, KF



ALL MAJOR LEAGUE LOGOS DISK KB



## DISKS OF THE MONTH

9T9-90/4 APRIL FEATURES:  
BOOT LOADER, BOOT DISK,  
CHANGER, & TETRIS (GAME)

9T9-90/5 MAY FEATURES:  
GIF DEMO, ALIENRAIM,  
HIRES HOPPER WORD (GAME),  
& LOADERS TO LOAD PGMS,  
& TI ARTIST PICS TO XB

Library Disks Cost \$2.00 ea.  
per SSSD. Disk of Month's  
Cost \$3.00 each Order by  
Mail or Pick Up Your Copy  
at the Meetings

Ad was done with Picasso

MIKE'S CORNER  
OR  
Butter Fingers Repair Section

My last article discussed resistors and in this issue we will explore some more of those gimmicks in a computer . We will not become experts on electronics but at least I hope that we will be able to stumble through a circuit without doing too much damage and if any of you get the electronic bug visit your local library or book store for further study.

CAPACITORS.

Capacitors store Electric charges , (old folk know them as condensers ) the higher the capacity the greater the electric charge can be stored . A capacitor is two conductors seperated by an insulator . Some insulators are paper and plastic film, the conductors are foil or aluminum plates used on variable capacitors.

- (a) They can store Energy.
- (b) They will block the flow of DC and
- (c) they will allow AC to Flow.

Capacitors are marked with the voltage and capacitance rating . They are measured in microfarads (uf) and picofarads(pf). A voltage higher than the rated voltage can damage a capacitor but a capacator with a higher voltage rating can be used as a substitute in a circuit. For example , if a capacitor in a circuit was 1uf 8 volts a 1uf 15 volt could be used with no problems but you could not use a 1uf 7 or 6 volt in the circuit.

There are Polyester , disc ceramic , electrolytic , and variable capacitors .Some capacitors are marked with the value and some are marked with a code. Polyester capacitors are usually green and called green caps they look like a glob of wax with two wires sticking out of it.

Disc Ceramics are simillar and look like small discs . Electrolytics are marked so that the connections cannot be mixed . Variable capacitors vary in value by a shaft turning. We shall discuss the value of calpacitors later. In computers the value is very low.

Capacitors marked by a code are read almost the same as a resistor . It is worked out in picofarads , and a metric multiplier will have to be used.

If a capacitor is marked 104k which is the first two figures followed by a multiplexer and also there may be a single letter code for tolerance .

104k is read as 10 , the 4 is four zeroes and the letter 10% This capacitor is rated 10,0000pf with a tolerance of 10% . This is 0.1uf as only capacitors below 0.001uf are written in picofarads. There will probably be a voltage rating marked on it which is the maximum voltage that it can take. Capacitors are rated in farads,which is a rather large unit so smaller units are used . One pico farad (uf) is .00000000001 farads. There are also nano farads. (.000000001 farads) Later we will study this a little deeper.

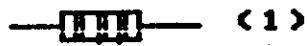
DIODES.

The conductivity of a material varies, some materials are good conductors and others are better conductors than insulators. The semiconductor diode is very important in solid state electronics. It is made of slpecially treated semiconductor material ; silicon ,germanium and selenium is used in making diodes .The silicon diode is used in power handling and switching applications. There is a hell of a lot of theory in this which I will cover if it is necessary as we progress.

## TRANSISTORS.

Transistors vary in shape and size ,they replaced the vacuum tubes or valves in electronic circuits. Transistors have three leads and they must be connected properly for the transistor to operate. The leads are called the base (B), the collector (C) and the emitter (E). Some transistors have a fourth lead named the shield (S)to cut down noise. The transistor is used as a switch and an amplifier. Transistors such as "NPN" and "PNP" types are similliar in appearance so take care . The Arrow on the emitter lead points outwards on an "NPN", and inwards on a "PNP". More about this later .

The sketches should help you identify the components in these articles.



(1)

FIXED RESISTER



(2)



(3)

POLYESTER CAPACITOR



(+ END)

(- END)

DISC CERAMIC. ELECTROLYTICS.



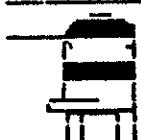
(5)



(6)

VARIABLE CAPACITOR

POWER DIODE.



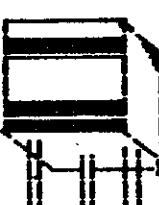
(7) LIGHT EMITTING DIODE  
(LED) ON YOUR DISK DRIVE

U U



(8)

"NPN"



(9)

"PNP"

TRANSISTOR

TRANSISTOR

NINE T NINE USERS GROUP  
Income Statement

June 11th 1990

INCOME		EXPENSES	
Membership Fees	1375.49	Newsletters	474.68
Library/Copying	357.85	Misc. Expenses	18.71
Interest	5.04	Contest Prizes	.00
	/	Downloads	72.00
		Stamps/Stationary	335.91
		Diskettes	9.81
		Bank Charges	1.00
		BBS Subsidy	250.00
		Mail Box rental	43.00
		Excess	533.27
			1738.38
			1738.38

BALANCE SHEET			
CURRENT ASSETS		LIABILITIES	
Bank	580.43	Capital	900.00
Cash in Hand	.00		
<b>CASH ADVANCE</b>			
Steve Mickelson	125.00		
Randy Rossetto	117.80		
<b>FIXED ASSETS</b>			
CLUB System	537.80		
Library :-			
Disk / Apes Modules	250.00	Prior Year's	327.76
Library (printed)	150.00	Current earnings	533.27
			1761.03
			1761.03

Cecil G. Chin  
Treasurer

Fun for Young and Old!

While Extended BASIC programmers will certainly appreciate the utility of The Animator, anyone who has ever marveled at the artistry of Disney™ cartoons or just wanted to play games with the computer will find The Animator provides endless hours of enjoyment.

With nothing more than a joystick and a few keyboard commands you can easily create up to 20 frame animation sequences, displayed in any order you like with any combination of repetitions of groups of frames. The results can be as simple as a cat running across the screen and as complex as the limits of your imagination. The results can be animated in several sizes, and even simultaneously up to 16 times on the screen!

An Extended BASIC programmers delight!

With The Animator, Extended BASIC programmers can create highly detailed demonstrations and games with dozens or even hundreds of simultaneously animated objects in mere hours instead of days or weeks. The compact, fast and efficient assembly code included allows all this to happen in the background while your Extended BASIC program takes care of the rest.

You create your animation frames and define their sequences in The Animator editor, convert them to Extended BASIC format in The Animator Converter (which will also allow you to Import In TI-Artist™ artwork), and then combine them with the package of Assembly routines included to animate your creations. Your Extended BASIC program only has to concentrate on logic, interacting with the user, etc. Your resulting program can be distributed any way you like with no legal strings attached - create games and demonstrations for your friends, to distribute as freeware, or even sell commercially! What's more, the comprehensive manual includes a complete step-by-step description of the process used to create and include animation sequences into Extended BASIC - any half-way experienced Extended BASIC programmer can create animated scenes quickly and easily therefore only possible in Assembly language.

The Animator requires at a minimum 32K, Extended BASIC and one disk drive. A printer (any kind) is recommended, but not required.

Suggested Retail \$14.95  
84H U.S. Add \$1.00, Can. \$2.00, AUS \$3.00

A s g a r d S o f t w a r e  
P.O. Box 10306 • Rockville, MD 20849

# The Animator

The Animator, by Brad Snyder, is a fascinating program that makes animation on the TI-99/4A and the Geneva simple and even fun!

While other programs allow you to generate animation sequences, none other allow you to do so with such ease, and put the results to such good use.

An Extended BASIC programmers delight!

With The Animator, Extended BASIC programmers can create highly detailed demonstrations and games with dozens or even hundreds of simultaneously animated objects in mere hours instead of days or weeks. The compact, fast and efficient assembly code included allows all this to happen in the background while your Extended BASIC program takes care of the rest.

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Library :-	
Disk / Apes Modules	250.00
Library (printed)	150.00

100 I DO NOT REMOVE ITCTALKTOEV2.0 FOR SPEECH EDITOR CONVERTED TO EXTENDED BASIC  
 & (C)1989 BY STEVE MICKELSON & PRESENTED TO 9T9 U.G. 3/30/89  
 110 ! SEE FAIRWARE NOTE IN LINE 6000.  
 120 ! PRESCAINED, COMPRESSED AND AN ASSEMBLY VERSION OF WPUTIL2 ADDED BY IR  
 WIN HOTT 11/09/89  
 130 D1N C(9) M(72,5):: CALL INIT :: CALL LOAD(6196,63,248):: CALL LOAD(16376,65,  
 32,32,52,52,255):: CALL LINK("BSETUP"):: GOTO 170  
 140 MS,R,CO,X,SR,SC,SP,S1,C,D,C1,RAND,KEY,S1,E,OXS,W(G,C1),Q,Y1,X1,X2,REP  
 Z,XX1\$,\$Y1\$,XX2\$,K,BEAT,Y,DUR,HZ,WAIT,CL,N1,N2,N3,QS  
 150 CALL SCREEN :: CALL CHAR :: CALL CLEAR :: CALL CHAR :: CALL COLOR :: CALL S  
 AY :: CALL SOUND :: CALL VCHAR :: CALL KEY :: IGP-  
 170 CALL SCREEN(2):: PRINT :  
 \* COPYRIGHT 1989\*: :-BY STEVE MICKELSON":  
 180 CALL CHAR(153,"0103070F1F3FFF"):: CALL CHAR(154,"#FF73F1F0F070301"):: CALL  
 CHAR(155,"#FFFEFC0F0F0E0C080"):: CALL CHAR(156,"#FFFFFFFFFFFFFF"):: MS=\$030351562  
 190 MS=="15015622":: GOSUB 230 :: CALL NCHAR(3,25,152):: CALL NCHAR(4,26,152):: CALL  
 R=5 TO 8 :: CALL NCHAR(R,CO4,152):: CALL NCHAR(R,CO+27,152):: CALL NCHAR(R  
 CO+3,154)  
 200 CALL NCHAR(R,CO+26,154):: CO=CO+1 :: NEXT R :: CO=30 :: FOR R=10 TO 13 :: CA  
 LL NCHAR(R,CO,153):: CALL NCHAR(R,CO-23,155):: CALL NCHAR(R,CO-1,153):: CALL NCH  
 AR(R,CO-24,153)  
 210 CO=CO-1 :: NEXT R :: CALL NCHAR(4,3,156):: CALL NCHAR(9,7,156):: CALL NCHAR(1  
 14,3,156):: CALL NCHAR(9,30,156):: CALL NCHAR(4,25,154)  
 220 CALL NCHAR(14,26,155):: CALL NCHAR(15,25,155):: CALL NCHAR(14,25,153):: GOSU  
 B 1670 :: GOSUB 1770 :: GOTO 240  
 230 CALL NCHAR(VAL(SEG\$(MS,1,2)),VAL(SEG\$(MS,3,2)),VAL(SEG\$(MS,5,3)),VAL(SEG\$(MS  
 8,2))):: RETURN  
 240 CALL CLEAR :: CALL SCREEN(2):: CALL COLOR(1,16,2):: CALL COLOR(2,16,2):: CAL  
 L COLOR(3,13,2):: CALL COLOR(4,13,2):: FOR X=5 TO 8 :: CALL COLOR(X,6,2):: NEXT  
 X  
 250 FOR X=9 TO 12 :: CALL COLOR(X,9,2):: NEXT X :: CALL COLOR(13,11,2):: CALL CO  
 LR(14,14,2):: CALL COLOR(15,8,2):: CALL CHAR(136,"0E0703810E07035")  
 260 CALL CHAR(137,"03070E1C3870E0C0"):: CALL CHAR(144,"0F13F7FF0E0E0E0"):: CALL  
 CHAR(145,"#FOFBFC0F07070707"):: CALL CHAR(146,"E0E0B0E0F73F1F0F")  
 270 CALL CHAR(147,"0F7070F7FECF8F0"):: CALL CHAR(128,"#0183C7E7E1C1800"):: MS="W  
 ELCOME TO TIC-TALK-TOE Y2 key:" :: SR=1 :: SC=2 :: GOSUB 1440 :: MS="123" :: SR  
 =2 :: SC=28 :: GOSUB 1440 :: MS="789" :: SR=4 :: SC=28 :: GOSU  
 B 1440 :: IF SP=2 THEN 300  
 290 CALL SAY(("HELLO+HELLO+HERE+ME+GO"))  
 300 GOSUB 1610  
 310 CALL NCHAR(9,10,128,16):: CALL SOUND(1000,262,6):: FOR X=1 TO 300 :: NEXT X  
 :: CALL NCHAR(14,10,128,14):: CALL SOUND(1000,262,6,330,6):: FOR X=1 TO 300 :: N  
 EXT X  
 320 CALL VCHAR(5,14,128,14):: CALL SOUND(1000,262,6,330,6,392,6):: FOR X=1 TO 30  
 0 :: NEXT X :: CALL VCHAR(5,19,128,14)  
 330 CALL SOUND(1500,330,6,392,6,49,6):: FOR=X=1 TO 300 :: NEXT X :: IF S1=1 THE  
 N 410 MS=="PRES\$" :: SR=20 :: SC=3 :: GOSUB 1440 :: MS="19" :: SR=21 :: SC=4 :: GO  
 SUB 1440 :: MS="INT MOVE" :: SR=22 :: SC=2 :: GOSUB 1440 :: IF SP=2 THEN 360  
 350 CALL SAY(("GET+READY TO START+NOW"))  
 360 MS="YOU ARE 'X'" :: SR=20 :: SC=21 :: GOSUB 1440 :: IF SP=2 THEN 380  
 370 CALL SAY(("YOU+ARE X"))  
 380 MS="I AM 'O'" :: SR=21 :: SC=24 :: GOSUB 1440 :: IF SP=2 THEN 400  
 390 CALL SAY(("1+AN O"))  
 400 RANDOMIZE  
 410 G=G+1 :: IF G>72 THEN 430  
 420 G=1  
 430 FOR I=1 TO 9 :: C1=0 :: D=0 :: C1=0 :: RESTORE :: RAND=RND :: IF  
 RAND<.5 THEN 470  
 440 MS=""\*\*\* I'LL GO FIRST \*\*\* :: SR=24 :: SC=6 :: GOSUB 1440 :: IF SP=2 THEN 46  
 0  
 450 CALL SAY(("WILL+MOVE+FIRST"))

```

1100 IF C(7)=Q THEN 1080
1110 IF C(2)>Q THEN 1130
1120 IF C(B)=Q THEN 1080
1130 IF C(4)>Q THEN 1150
1140 IF C(6)=Q THEN 1080
1150 Q=C(1)::: IF Q=0 THEN 1200
1160 IF C(2)>Q THEN 1180
1170 IF C(3)=Q THEN 1080
1180 IF C(4)>Q THEN 1200
1190 IF C(7)=Q THEN 1080
1200 Q=C(9)::: IF Q=0 THEN 1250
1210 IF C(3)>Q THEN 1230
1220 IF C(6)=Q THEN 1080
1230 IF C(7)>Q THEN 1250
1240 IF C(8)=Q THEN 1080
1250 Q=0 ::: RETURN ::: GOTO 5190
1260 SP=6 ::: SC=11 ::: GOSUB 1470 ::: RETURN
1270 SR=6 ::: SC=16 ::: GOSUB 1470 ::: RETURN
1280 SP=6 ::: SC=21 ::: GOSUB 1470 ::: RETURN
1290 SR=1 ::: SC=11 ::: GOSUB 1470 ::: RETURN
1300 SP=11 ::: SC=16 ::: GOSUB 1470 ::: RETURN
1310 SR=11 ::: SC=21 ::: GOSUB 1470 ::: RETURN
1320 SR=16 ::: SC=11 ::: GOSUB 1470 ::: RETURN
1330 SR=16 ::: SC=16 ::: GOSUB 1470 ::: RETURN
1340 SR=16 ::: SC=21 ::: GOSUB 1470 ::: RETURN
1350 MS="DRAW" ::: SR=11 ::: SC=21 ::: IF SP=2 THEN 1370
1360 CALL SAY("THEI+GAMES+1+DRAW")
1370 GOSUB 1440 ::: GOTO 1550
1380 MS="YOU WIN" ::: SR=12 ::: SC=2 ::: IF SP=2 THEN 1400
1390 CALL SAY("YOU WIN+*YOU WIN+")
1400 GOSUB 1440 ::: GOSUB 1610 ::: GOTO 1550
1410 REM +++IYA NYA SONG+++
1420 FOR REP=1 TO 2 ::: CALL SOUND(900,131,6,262,6)::: CALL SOUND(600,110,6,220,6)
1430 CALL SOUND(200,147,6,294,6)::: CALL NCHAR(SR,SC+1,137)::: CALL NCHAR(SR+1,SC,137):::
1440 REM +++PRINT CHARS+++
1450 FOR X=1 TO LEN(MS)::: CALL NCHAR(SR,SC,ASC(SEGS(MS,X,1)))::: CALL SOUND(10,88
0,6)::: SC=SC+1 ::: NEXT X ::: RETURN
1460 REM +++XO PRINT+++
1470 IF OS$="On" THEN 1520
1480 IF SP=2 THEN 1500
1490 CALL SAY("GOOD MOVE")
1500 CALL NCHAR(SR,SC+1,136)::: CALL NCHAR(SR,SC+1,146)::: CALL NCHAR(SC+1,SC,137):::
CALL NCHAR(SR+1,SC+1,136)
1510 FOR Z=1 TO 20 ::: CALL SOUND(1,440,3)::: NEXT 2 ::: RETURN
1520 IF SP=2 THEN 1540
1530 CALL SAY("I+MILL+MOVE+HERE")
1540 CALL NCHAR(SR,SC,144)::: CALL NCHAR(SC+1,147)::: GOTO 1510
1550 XX1$=STR$(X)::: YY$=STR$(Y)::: XX2$=STR$(X2)::: MS="SCORE:"::: SR=0 ::: SC=2
6 ::: GOSUB 1440 ::: MS="you -"&XX1$ ::: SR=11 ::: SC=26 ::: GOSUB 1440 ::: MS="me -"
9YY$ ::: SR=12 ::: SC=26 ::: GOSUB 1440 ::: MS="ties-MEXX2S
1560 SR=13 ::: SC=26 ::: GOSUB 1440 ::: MS=PRESS ANY KEY TO PLAY AGAIN ::: SR=24
::: SC=3 ::: IF SP=2 THEN 1580
1570 CALL SAY("ARE+YOU+READY+TO+START+AGAIN")
1580 GOSUB 1440
1590 CALL KEY(O,K,S)::: IF S=0 THEN 1590
1600 S=1 ::: FOR X=5 TO 18 ::: CALL NCHAR(X,1,32,32)::: NEXT X ::: CALL NCHAR(24,1,
32,32)::: GOTO 310
1610 REM INTRO VICTORY TUNE
1620 BEAT=100 ::: FOR X=1 TO 2 ::: RESTORE 1640 ::: FOR Y=1 TO 15 ::: READ DUR,HZ :::
CALL SOUND(DUR,BEAT,HZ,2)::: NEXT Y ::: FOR X=1 TO 1 ::: RESTORE 1650 :::
FOR Y=1 TO 13 ::: READ DUR,HZ ::: CALL SOUND(DUR,BEAT,HZ,2)::: NEXT Y ::: NEXT X :::
RESTORE 1660
1630 FOR X=1 TO 7 ::: READ DUR,HZ ::: CALL SOUND(DUR,BEAT,HZ,6)::: NEXT X ::: RESTOR
E 1640 ::: FOR X=1 TO 15 ::: READ DUR,HZ ::: CALL SOUND(DUR,BEAT,HZ,2)::: NEXT X :::

```



The following guide was downloaded from Delphi. Not only is it useful to users of the TI Writer clones, it greatly simplifies a somewhat esoteric and technical jargon filled manual that comes with TI Writer. It covers, well, most of the fundamentals:

TI WRITER REFERENCE GUIDE - UGOC RELEASE 1.2  
TI WRITER REFERENCE GUIDE

UGOC Release 1.2 - January 6, 1989  
(Re-Edited for Newsletter 919 - by Steve Mickelson)

## INTRODUCTION

This reference guide is presented as a service to the TI-99/4A community by UGOC - the User Group of Orange County (California). Comments and suggestions should be sent to:

UGOC c/o  
Jim Sneedow  
7301 Kirby Way  
Stanton, CA 90680

If you would like a response, please include a stamped, self addressed envelop. Thank You.

The "<>" signs are used to indicate a key or keys that should be pressed or typed (for example, "press <ENTER>" or "type <PF5>"). <CTRL C> means hold the <CTRL> key down with one finger and then press <C> with another finger. Release both keys together.

These files are ready for printing through the Formatter. For examples on how many formatting commands are used, print them through the Editor using Print File. See "<-READ-ME>" for printing instructions.

## TEXT EDITOR EDITING KEYS

.HE TEXT EDITOR EDITING KEYS (continued)

NOTES: The 'current line' is a line that the cursor is on. Where more than one key is shown, either will work.

BACK TAB <CTRL T>: Moves the cursor one tab setting to the left.  
BEGINNING OF LINE <CTRL V>: Moves the cursor to the beginning of the current line.

COMMAND ESCAPE <FCTN 9> <CTRL D>: Invokes the Command Mode. Also escapes (aborts) most commands.

DELETE CHARACTER <FCTN 1> <CTRL F>: Deletes the character at the cursor.

DELETE TO END OF LINE <CTRL K>: Deletes all characters from the one at the cursor to the end of the line.

DELETE LINE <FCTN 3> <CTRL H>: Deletes the current line.

DOWN ARROW <FCTN Y> <CTRL Y>: Moves the cursor down one line.

DUPLICATE LINE <CTRL S>: Replaces the current line with the line above the cursor.

HOME CURSOR <CTRL L>: Moves the cursor to the upper left corner of the screen.

INSERT CHARACTER <FCTN 2> <CTRL G>:

WORD WRAP: Splits the current line into two so that text can be inserted. Insert Mode is terminated by Reformat.

FIXED: Pushes the remainder of the current line to the right. Text pushed past the right margin is lost.

INSERT LINE <FCTN 8> <CTRL O>: Inserts a blank line above the current line. CTRL key is the letter O.

LAST PARAGRAPH <CTRL 6> <CTRL H>: Moves the cursor to the beginning of the preceding paragraph.

LEFT ARROW <FCTN S> <CTRL S>: Moves the cursor to the left. Does not erase text.

LEFT MARGIN RELEASE <CTRL Y>: Temporarily disables the left margin.

LINE NUMBERS <FCTN 0>: Removes or displays line numbers on the screen. FCTN key is the number zero.

NEW PAGE <CTRL Q> <CTRL P>: Inserts a blank line with a 'new page' and a 'carriage return'. Causes printer to begin a new page in both the Editor and the Formatter.

NEW PARAGRAPH <CTRL 8> <CTRL H>:

WORD WRAP: Starts a new paragraph by inserting a carriage return and a blank line.  
FIXED: Does not function.

NEXT PARAGRAPH <CTRL 4> <CTRL J>: Moves the cursor to the beginning of the next paragraph.

NEXT WINDOW <FCTN 5>: Displays the next overlapping horizontal window of the 80 column screen.

OPPS! <CTRL 1> <CTRL 2>: May recover deleted text. Removes characters typed on a blank line.

QUIT <FCTN 8>: Invokes the Command Mode.

REFORMAT <CTRL 2> <CTRL R>:  
WORD WRAP: Fills text to Editor margins to close spaces left by deletions and insertions. Stops when a Carriage Return is encountered.  
FIXED: Terminates Insert Mode.

RIGHT ARROW <FCTN D> <CTRL D>: Moves the cursor to the right. Does not erase text.

ROLL DOWN <FCTN 4> <CTRL A>: Displays the 24 lines that follow the last line on the current screen.

ROLL UP <FCTN 6> <CTRL B>: Displays the 24 lines that precede the first line on the current screen.

SCREEN COLOR <CTRL 3>: Displays the next combination of screen and character colors.

SPECIAL CHARACTER <CTRL U>: Changes to Special Character Mode (cursor becomes a line). Accesses ASCII 0 to 31 characters. See chart.

TAB <FCTN 7> <CTRL I>: Moves the cursor one tab setting to the right.

UP ARROW <CTRL E> <CTRL E>: Moves the cursor up one line.

WORD TAB <CTRL 7> <CTRL Up>: Moves the cursor to the first character of the next word on the right.

WORD WRAP <CTRL 0>: Switches between Word Wrap Mode (solid cursor) and Fixed Mode (hollow cursor). CTRL key is the number zero.

#### FUNNELWEB 4.10 EDITING KEYS

LOWERCASE <CTRL .>: Changes the character at the cursor to lower case.

UPPERCASE <CTRL ;>: Changes the character at the cursor to upper case.

ROLL DOWN <CTRL A>: Displays the 24 lines that follow the last line on the current screen.

ROLL UP <CTRL Q>: Displays the 24 lines that precede the first line on the current screen.

#### SPECIAL CHARACTER KEY PRESS CHART

ASCII PRESS	KEY	CODE	PRESS	ASCII CODE
0	<SHIFT F2>		22	<SHIFT V>
11	<SHIFT K>			

#### TEXT EDITOR COMMAND MODE COMMANDS

##### ...TEXT EDITOR COMMAND MODE COMMANDS (continued)

NOTES: When using line numbers, <E> means after the last line and <0> (zero) means before the first line. If a range of lines is called for and you only want to impact one line, use that number twice (for example, <23 23>). Many Editor keys work in the Command Mode.

COPY: Copies a line or block of lines from one place to another.

Type <C> and then press <ENTER>.

Type the line number of the first line to be copied, a space, the line number of the last line to be copied, a space and the line number of the line after which the copied text is to be inserted. Then press <ENTER>. For example, <13 27 4> would insert a copy of all text on lines 13 through 27 after Line 4.

DELETE: Deletes a line or a block of lines.

Type <D> and then press <ENTER>.

Type the line number of the first line to be deleted, a space and the line number of the last line to be deleted. Then press <ENTER>. For example, <23 E> would delete all text from line 23 to the end of the text buffer.

#### DELETE FILE: Deletes a file from a disk.

Type <DF> and then press <ENTER>. Type the name of the file you want to delete <DSKn.FILENAME> and then press <ENTER>.

EDIT: Invokes the Edit Mode.

Type <E> and then press <ENTER>.

FIND STRING: Locates a string of text.

Type <FS> and then press <ENTER>.

TO FIND A STRING: Type a slash </>, the string you are searching for and a slash. Then press <ENTER>. For example, /hi/ would search for the two letters "hi". The search starts at the cursor location.

TO LIMIT THE SEARCH TO SPECIFIED COLUMNS: Type the first column number, a space, the last column number, a space, a slash, the search string and a slash. Then press <ENTER>. For example <2 14 /hi/> would search for the two letters "hi" ONLY in columns 2 through 14.

LOAD FILE: Loads or merges all or part of a file. Loading replaces the contents of the text buffer. Hanging adds text to the buffer.

Type <LF> and then press <ENTER>.

TO LOAD ALL OF A FILE: Type any valid filename <DSKn.FILENAME> and then press <ENTER>.

#### LOAD FILE (continued)

TO LOAD PART OF A FILE: Type the line number of the first line to be loaded, a space, the line number of the last line to be loaded, a space, the line number of the first line to be merged, a space and any valid filename. Then press <ENTER>. For example, <23 23 DSKn.TEXTFILE> would load line 23 from DSKn.TEXTFILE.

TO MERGE ALL OF A FILE: Type the line number of the line in the text buffer after which the file is to be merged, a space and any valid filename. Then press <ENTER>. For example, <0 DSKn.TEXTFILE> would merge all of DSKn.TEXTFILE at the beginning of the text buffer (before line 1).

TO MERGE PART OF A FILE: Type the line number of the line in the text buffer after which the file is to be merged, a space, the line number of the first line to be merged, a space, the line number of the last line to be merged, a space and any valid filename. Then press <ENTER>. For example, <0 DSKn.TEXTFILE> would merge all of DSKn.TEXTFILE after line 92 of the text buffer.

MOVE: Moves a line or a block of lines from one place to another.

Type <M> and then press <ENTER>.

Type the line number of the first line to be moved, a space, the line number of the last line to be moved, a space and the line number of the line after which the text is to be inserted. Then press <ENTER>. For example, <13 27 4> . For example, <13 27 4> .

would move all text on lines 13 through 27 from its current location to after line 44.

**PRINT FILE:** Prints the contents of the text buffer. Use <FCN 4> to abort printing. Text can be sent to any legal device. Type <PF> and then press <ENTER>.

**TO PRINT ALL OF THE TEXT BUFFER:** Type the device name and then press <ENTER>. For example, you could enter <P10> or <DSKn.SAVEFILE>.

**TO PRINT PART OF THE TEXT BUFFER:** Type the line number of the first line to be printed, a space, the line number of the last line to be printed, a space and the device name. Then press <ENTER>. For example, <34 51 P10> will print lines 34 through 51 on your P10 printer.

**OTHER OPTIONS:** Adding <C> will cause the line numbers to be printed; <C> will suppress any control codes added with <CTRL U>; and, <F> will cause the file to be printed as a fixed 80 column width. For example, <F DSKn.FIXFILE> will print a display fixed 80 file. In the same manner, <L P10> will print the text buffer with line numbers. When the L option is used, text to the right of column 74 is not printed.

**PURGE:** Empties the text buffer contents. The contents may be recovered with Recover Edit.

Type <P> and then press <ENTER>. Type </> for Yes or <H> for No. Then press <ENTER>.

**QUIT:** Quits the formatter. Can also invoke Purge and Save File.

Type <Q> and then press <ENTER>. Type one of the following:

<S> to save a file (see Save File).  
<P> to purge the text buffer (see Purge).  
<E> to exit the Editor and return to the main menu.

Then press <ENTER>.

**RECOVER EDIT:** May recover all but the first line of a purged text buffer.

Type <RE> and then press <ENTER>. Type </> for Yes or <H> for No. Then press <ENTER>.

**REPLACE STRING:** Replaces a text string with another string. Either string can be empty. The search starts at the cursor location. Type <RS> and then press <ENTER>.

**TO REPLACE A STRING:** Type a slash </>, the string you are searching for, a slash, the replacement string and a slash. Then press <ENTER>. For example, </hi/bye/> would replace <hi> with <bye>. Likewise, </hi//> would delete <hi> (that is, replace it with nothing).

**TO LIMIT THE SEARCH TO SPECIFIED COLUMNS:** Type the first column number, a space, the last column number, a space, a slash, the search string, a slash, the new string and a slash. Then press <ENTER>. For example, <2 14 /hi/he/o/> would search for the two letters <hi> in columns 2 through 14 and replace them with <he/o>.

When the search string is found, you have these options:

<A> Replace all strings found without stopping again.  
<Y> Replace this string.  
<N> Do not replace this string.  
<S> Stop the Replace String function.

**WARNING:** In Word Wrap Mode, each replacement causes a reformat. THIS CAN BADLY MANGLE SOME TEXT. In Fixed Mode, if the new string is longer than the old string, text will be moved to the right. Text pushed past the right margin will be lost.

**SAVE FILE:** Saves all or part of the text buffer in a file. Type <SF> and then press <ENTER>.

**TO SAVE ALL OF THE BUFFER:** Type any valid file name <DSKn.SAVEFILE> and then press <ENTER>.

**TO SAVE PART OF THE BUFFER:** Type the line number of the first line to be saved, a space, the line number of the last line to be saved, a space and any valid file name. Then press <ENTER>. For example, <13 45 DSKn.SAVEFILE> will save lines 13 through 45 in DSKn.SAVEFILE.

**SHOW:** Locates a line in the text buffer and displays it as the first line on the screen.

Type <SP> and then press <ENTER>. Type the line number and then press <ENTER>.

**SHOW DIRECTORY:** Catalogs a disk on screen.

Type <SD> and then press <ENTER>. Type the disk drive number and then press <ENTER>.

**TABS:** Sets margins, tabs and paragraph indentation.

Type <T> and then press <ENTER>. Beneath the desired column number type:  
<L> Left Margin  
<R> Right Margin  
<T> Tab Stop  
<I> Paragraph Indent  
<SPACE> Delete a setting.

Press <ENTER> when done.

Editor Margin settings are used by the Formatter UNLESS fill <.FI> is on. Even when Fill is on, the Text Editors Paragraph Indents are observed. The Text Formatter's Indent <.II> is a more powerful and versatile way to control paragraph indentation.

Tab settings are saved as the last line when the file is saved with Save File. Tab savings are not saved when the file is saved with Print File.

## TEXT FORMATTER COMMANDS

### ... TEXT FORMATTER COMMANDS (continued)

**NOTES:** Commands can be chained on one line with semi-colons. For example, <.FI;AD;LM 3;RM 75;IN +3>. Some commands, like Transliteration <.TL>, will not work in a chain.

In the following material, "tw" stands for text, "nw" for a number and "fp" for a file name.

**ADJUST <.AD>:** Right Justifies printed text. Adjust will not work unless it is preceded by a Fill command <.FI>.

**ALTERNATIVE INPUT <+n>:** Used with the mailing list option to define one of up to 99 variables that can be called from a Mailing List value file <.ML> or by a Define Prompt <.DP>.

**BEGIN PAGE <.BP>:** Causes the printer to start a new page. If the new page is the first page on which a header <.HE> appears, the Header command must precede the Begin Page command.

**CENTER <.CE n>:** Centers the next n physical lines. To center only the next line use <.CE>.

**COMMENT <.CO t>:** Adds a text comment "t" which is not printed by the Formatter.

**DEFINE PROMPT <.DP n>:** Defines an on screen text prompt "t" for Alternative Input n.

**FILL <.FI>:** Puts as many words as possible on each line without exceeding the right margin. Margin and Indent Commands <.LM, -RM and .IN> will not function unless Fill is on.

**FOOTER <.FO t>:** Prints the text "t" as a footer on each page. If % is used in the footer text, it is replaced with the page number. Footers always start in column 1. The command <.FO> disables a previously defined footer. See Required Space.

**HEADER <.HE t>:** Prints the text "t" as a header on each page. If % is used in the header text, it is replaced with the page number. Headers always start in column 1. The command <.HE> disables a previously defined header. See Required Space.

**INCLUDE FILE <.IF f>:** Prints the file "f" <.SKN.PRINTFILE> at that point. Any legal file name is permissible.

**INDENT <.IN n>:** Indents the first line of each paragraph n spaces. If n is an absolute number (5), the first line of each paragraph will start in column n. If n is preceded by a plus sign (+5), each paragraph will be indented n spaces to the right of the left margin. If n is preceded n spaces to the left of the left margin. Disables paragraph indent with <.IN +0>. If the left margin is changed, the indent command must be reset. If margins have not been reset and Fill is on, the default is <5>, otherwise the default is <40>.

**LEFT MARGIN <.LM n>:** Sets the left margin at column n. Absolute or relative (+ or -) numbers can be used. Using a positive +> number moves the margin to the right while a negative moves it to the left. For example, <.LM +3> will move the left margin three spaces to the right of the current margin

setting. <.IN +0> does not change the margin. The default is 0 (zero).

**LINe SPACE <.LS n>:** Tells the formatter how many spaces to leave between lines. For example, use <.LS 2> for double spacing. The default is <.LS 1> or single spacing.

**MAILING LIST <.ML f>:** Calls the file f <.SKN.VALUEFILE> from which text is read for variables defined by Alternate Input commands.

**NO ADJUST <.NA>:** Turns Adjust off (default setting).

**NO FILL <.NF>:** Turns Fill off (default setting). If Adjust <.AD> is on, it is also turned off. All subsequent margin (<.LM, -RM and .IN>) commands are ignored and all margin setting revert to those used in the Editor.

**OVERSTRIKE <>:** Causes the printer to overstrike subsequent characters until a space is encountered. To overstrike a group of words, string them together with Required Spaces. If Fill and Adjust are on <.FI;AD>, however, this may cause uneven spaces between other words on the same line. To avoid this, place an a before each word (for example, Overstrike Beach &ord). To print an "at" sign, type <a> - it will print as @. See Underscore and Required Space.

**PAGE NUMBER RESET <.PA n>:** Resets the page number in Headers and Footers to n. Absolute or relative (+ or -) values can be used.

**PAGE LENGTH <.PL n>:** Sets the number of lines per page to n. The default is 66. Absolute or relative (+ or -) values can be used.

**REQUIRED SPACE <>:** Joins words for purposes of filling, adjusting, underscoring and overstriking. It is also used to set the left margin for Headers and Footers. Prints as a space. See Overstrike and Underscore.

**RIGHT MARGIN <.RM n>:** Sets the right margin at column n. Absolute or relative (+ or -) numbers can be used. The default is 60. See Left Margin.

**SPACE <.SP n>:** Causes the printer to skip n lines before printing the next line. To skip one line, use <.SP>.

**TRANSLITERATE <.TL n1:n2,n3...nn>:** Replaces the character n1 with the string n2,n3...nn where n1, etc. are ASCII values. To reset a character to its original value, use <.IL n1:n1>.

**UNDERSCORE <>:** Causes the printer to underline subsequent characters until a space is encountered. When required spaces are used between words, the spaces will also be underlined. To avoid this, place an & before each word (for example, Underline Beach &ord). To include an "and" sign, type &@ - it will print as @. See Required Space and Overstrike.

**ASGARD PRODUCT LISTING**

Due to many requests, this is a complete list of all the products offered by Asgard Software as of 4/14/90. This listing only contains the prices => on individual products, and does not list any special package deals - nor supersedes them.

For information on the majority of these items, refer to the Fall/Winter '89 Catalog. For information on new products, write to:

Asgard Software - P.O. Box 10306  
Rockville, MD 20849 - (703)255-3085

Finally, please note the new pricing on some items. Some items have been discounted substantially - up to 50% in some cases. This pricing will be valid until the formal 1990 catalog is released.

**ENTERTAINMENT****Adventure Software**

- Balloon Wars!
- Column Attack
- Game-Pack
- High Gravity
- Tris (Module)
- Tris (M-DOS)
- Rock Runner
- Mission Destruct
- Karate Challenge
- Doom Games I & II (disk/cassette)
- Doom Games III (disk/cassette)
- The Volcano Fortress (disk/cassette)
- Legends II: The Sequel
- Oliver's Twist (disk/cassette)
- Witch's Brew (disk/cassette)
- Wizard's End (disk/cassette)
- Zoom Flume (disk/cassette)
- Rattlesnake Bend (disk/cassette)
- Castle Darkholm (disk/cassette)

**TI-Artist companions and Utilities**

- Artist Borders #1
- Artist Borders #2
- Artist Borders #3
- Artist Borders #4
- Artist Fonts #1
- Artist Fonts #2
- Artist Fonts #3
- Artist Fonts #4
- Artist Fonts #5
- Artist Instances #1
- Artist Instances #2
- Artist Instances #3
- Artist Instances #4
- Artist Instances #5
- Artist Instances #6
- Artist Instances #7
- Artist Instances #8
- Artist Instances #9
- Artist Instances #10

**PRODUCTIVITY**

- |                                       |          |
|---------------------------------------|----------|
| Artist Instances #11                  | \$14.95* |
| Artist Instances #12                  | \$14.95* |
| Artist Enlarger                       | \$7.95   |
| Font Writer II                        | \$9.95   |
| Disk of Dinosaurs                     | \$9.95   |
| GRAPHX Companions and utilities       | \$9.95*  |
| GRAPHX Companion Set                  | \$19.95  |
| GRAPHX Slideshow                      | \$5.95   |
| My-Art companions                     | \$5.95*  |
| My-Art Coloring Book                  | \$5.95*  |
| Picasso software                      | \$14.95  |
| Picasso 2.0                           | \$14.95  |
| Picasso Utilities                     | \$9.95   |
| Picasso Enlarger                      | \$9.95   |
| Picasso Borders                       | \$7.95   |
| Using Picasso                         | \$5.95   |
| Page Pro 99, companions and utilities | \$24.95  |
| Page Pro 99                           | \$14.95  |
| Page Pro Utilities                    | \$14.95  |
| Pix Pro                               | \$14.95  |
| Sports Pics                           | \$9.95   |
| Page Pro Borders                      | \$7.95*  |
| Page Pro Fonts #1                     | \$7.95   |
| Page Pro Fonts #2                     | \$7.95   |
| Page Pro Fonts #1&2                   | \$14.95  |
| Page Pro Pics #1                      | \$6.95   |
| Page Pro Pics #2                      | \$6.95   |
| Page Pro Pics #3                      | \$6.95   |
| Page Pro Pics #4                      | \$6.95   |
| Page Pro Pics #5                      | \$6.95   |
| Page Pro Pics #6                      | \$6.95   |
| Page Pro Pics #7                      | \$6.95   |
| Page Pro Pics #8                      | \$6.95   |
| Page Pro Pics #9                      | \$6.95   |
| Page Pro Pics #10                     | \$6.95   |
| Page Pro Pics #1-10                   | \$49.95* |
| Page Pro Titles #1                    | \$6.95   |
| Page Pro Titles #2                    | \$6.95   |
| Page Pro Titles #1&2                  | \$11.95* |
| Page Large Fonts                      | \$7.95*  |
| Page Pro Templates #1                 | \$6.95   |
| Page Pro Templates #2                 | \$6.95   |
| Page Pro Templates #3                 | \$6.95   |
| Page Pro Templates #4                 | \$6.95   |
| Page Pro Templates #5                 | \$6.95   |
| Page Pro Templates #6                 | \$6.95   |
| Page Pro Templates #7                 | \$6.95   |
| Page Pro Templates #8                 | \$6.95   |
| Page Pro Templates #9                 | \$6.95   |
| Page Pro Templates #1-9               | \$53.95* |
| Bonus Disk                            | \$3.00*  |

**CALENDAR MAKER 99**

- |                       |          |
|-----------------------|----------|
| Calendar Maker Utils  | \$19.95  |
| Cassette Labeler      | \$9.95*  |
| Recipe Writer 2.0     | \$4.95*  |
| Electronic Gourmet #1 | \$14.95  |
| Electronic Gourmet #2 | \$4.95   |
| Music Pro             | \$6.95   |
| Stamp Manager         | \$17.95  |
| Spell It! (SSSD)      | \$9.95   |
| Spell It! (DSDD)      | \$24.95* |
| Spell It! (HFDC)      | \$19.95* |
| Total File            | \$34.95* |
| TypeWriter 99(Disk)   | \$9.95   |
|                       | \$14.95  |

TypeWriter 99 (Module)	\$24.95
TypeWriter 99(M-DOS)	\$14.95
<b>UTILITIES</b>	
Batch-It!	\$9.95*
Beyond Video Chess	\$9.95*
EZ-Keys Plus	\$14.95
Hardmaster	\$14.95
PreEditor	\$14.95*
Quick-Run	\$9.95
RAMBoot	\$9.95
TOD Editor	\$19.95
The Animator	\$19.95*
<b>EDUCATIONAL</b>	
Edu-Pack (module)	\$24.95*
Edu-Pack (9840 disk)	\$14.95*
<b>PUBLICATIONS</b>	
Adventure Reference Guide	\$9.95
Communicating Computer	\$9.95
Orphan Survival Handbook	\$9.95
Home Publishing on the TI-99/4A	\$12.95
Asgard Mouse	\$49.95*

Note: All prices are in U.S. Dollars.

**Final note:** These prices do not reflect shipping and handling charges. To order any of these items include \$0.75/item S&H and mail order to:

ASGARD SOFTWARE, P.O. BOX 10306, ROCKVILLE, MD 20849, U.S.A.

\* New Price

▲ New Product

Downloaded from Delphi:

**AIR TAXI** by Don Shorrock,  
reviewed by Jim Peterson

I have always wished that there were more educational programs above the 2+2? level, for our computer. And I have always thought that the best educational programs were those that took advantage of computer capabilities to entertain while teaching.

Also, I have always much preferred games that require me to exercise my mind, rather than depending on quick reaction or blind guessing. And, being a programmer, I admire efficient, memory-saving programming.

All that is why I was so very impressed by the new game, Air Taxi, recently released by Don Shorrock. It is uniquely educational, very entertaining, and so compactly programmed that the basic version is available on cassette!

The game can be played alone, as it usually will be, or by up to 8 players. Don customizes each game with the default names of whatever number of players you choose and with your home town as the starting point. Each player may select his own handicap level, ranging from A to Z for 6 to 81 cities, and his skill level ranging from 1 to 9 which determines the target size.

A black silhouette map of the entire United States and southern Canada is then displayed; the only features are the Great Lakes, Great Salt Lake, and the coast lines. You are randomly offered a destination to fly to. Since all your friends bum rides from you, and TI users are cheapskates (that is my comment, not Don's!), you are not even paid for your gas for this first trip. It may therefore pay you to refuse any offer to a distant destination - however, each refusal costs you \$2.00.

When you accept an offer, you then use the S and D keys to set your initial flight direction, in 45 degree increments (i.e., north, northeast, east, etc.) and press Q. You hear the sound of the motor revving up, and a small cursor dot begins moving from your town in the direction you selected, while your gas gauge shows your fuel being used up. You can use the S and D keys to change direction. If you get close enough (depending on the skill level you selected) before your fuel runs out, the cursor will stop the motor revs down, and you will be shown the cost of the fuel expended and your remaining bank balance. If your fuel runs out to soon, you will glide to the nearest airport and you must then set your direction from that point and try to reach your original destination. However, if you were too far from any airport when your gas tank ran dry, you will be returned to your home town and will be assessed repair costs.

Once you have reached your first destination and said goodbye to your freeloading friends you will then be randomly offered fares at prices depending on distance, from that point to another city. You have the option to refuse offers, at a cost of \$2.00. If you can fly to that point with a minimum of maneuvering, the fare will more than cover the cost of fuel, and you will make money - plus an occasional tip.

There are too many other features to describe here. The program comes with four pages of printed documentation, and the disk version includes three additional files, which can be merged in, to add many more cities or to convert the program for use with a joystick.

At the handicap and skill level X which Don set for me as defaults, I found that I was able to stay ahead of the game by refusing most fares except coastal cities and then cruising along the coast until the airport radar picked me up and brought me in. Trying to find Kansas City or Cheyenne on that black silhouette map would be very difficult without consulting a regular map - and in doing so, you would learn a great deal about the relative location of cities.

This is a commercial program, not fareware, and it is customized for each purchaser. The price is \$15 for the disk version, \$20 for the cassette version. To get an order form, on which you can specify your own default options, write to Don Shorrock, P.O. Box 501, Great Bend KS 67530.

**New Products For 9640**  
This file should be called "info.txt" on your computer.

April 13, 1990

**To: All 9640 FORTRAN Owners**

A mailing of version 4.4 of 9640 FORTRAN has been completed on April 13, 1990 to all registered 9640 FORTRAN owners.

If by April 30, 1990, you do not receive your upgrade kit and you are a 9640 FORTRAN owner, then you probably did not send in your owner's registration.

To obtain your upgrade, send in your warranty registration. The most important item is your serial number (e.g. 89150). This is required to process your upgrade.

As promised when 9640 FORTRAN was first introduced, I am distributing version 4.4 to all users who purchased 4.3. 4.4 is a significant upgrade to 9640 FORTRAN. It includes a number of problem fixes (many caused by newer versions of DOS), and new features such as complex arithmetic functions, etc.

This version is being distributed in advance of the final DOS release.

The primary reason is that MYARC has made no indication of when or if a final release of DOS will take place. Rather than hold up this version to 9640 FORTRAN owners, I am distributing this version.

If and when the final version of DOS is released, I will offer an upgrade to registered 9640 FORTRAN owners (if needed). This upgrade is targeted to be priced at \$10.00.

Thank you for your continued support.

Alan L. Beard  
LGMA Products

p.s. 99 and 9640 FORTRAN continued to be offered through your supported TI-99 and 9640 FORTRAN dealers, namely:

Disk Only Software  
Delphi (on TINET)  
Quality 99 Software  
LaFlamme and Wrigley Wholesale  
TENEX Computer Express (99 FORTRAN Only)

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MOUSE DRIVER RELEASE

Date: 4-JUN-1990; by 9640NEWS

Ordering Info for Interrupt driven Mouse driver for Geneve  
File is in ascii for easy online reading or capture.

Keywords: SOFTWARE, 9640NEWS, MOUSE, DRIVER, GENEVE, 9640

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PRODUCT ANNOUNCEMENT

TI NET Product Services is pleased to announce the availability of  
WINDOWS 9640 for the Geneve 9640 computer from the publisher  
of 9640 News Diskazine.

WINDOWS 9640

TI NET Product Services is pleased to announce the availability of  
the Mouse Driver Programmer's Development Kit.

Now add mouse support to your DOS programs with a minimal of  
effort utilizing Bruce Hellstrom's Mouse Driver software.

This is the same driver some of you may have seen in action with  
Beery Miller's Windows 9640 program.  
What you get -

Complete documentation on programming with the Mouse Driver:

A disk containing the following:

- A registered development copy of the Mouse Driver software
- A Mouse Driver test program with well commented assembly source code to give an example of how to access the many features of the Driver software
- A readme file with any late breaking updates that are not included in the manual.

The Mouse Driver is an interrupt driven utility that takes care of all the hassles of adding mouse support to an DOS program. Once loaded from the command line, the Driver becomes a part of the DOS interrupt routine and will remain loaded until the computer is turned off or a cold boot is done. The driver once activated controls all functions of the mouse including updating the sprite pointer continuously. It even has a flashing text cursor for text video modes that don't allow sprites. The programmer interfaces with the Driver through registers located in execution page 7.

There is no need for your program to loop to keep everything current, it's all done for you. A must for any serious programmer. It's available for \$12.95 plus shipping/handling from either of the following places:

Bruce Hellstrom  
7055 N. Sepulveda Blvd. #5  
Van Nuys, CA. 91405  
P.O. Box 752465  
Memphis, TN. 38175-2465  
Questions can be directed to myself or Beery Miller here on Delphi,  
BLHELLSTROM or 9640NEWS or you can call Beery at (818) 782-2307

Credit card orders for all products may be placed in the TI NET Electronic Shopping area on Delphi or by calling the TI NET Product Services at 1-800-736-4951 (U.S. or Canada) 24 hours a day or send your orders to P.O. Box 244, Lorton, VA, 22199, USA.  
TI NET Product Services accepts Visa, MasterCard, and American Express credit cards. A 10% credit card surcharge will be added to your total order.

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PRODUCT ANNOUNCEMENT

(c) 1989, 1990 by Beery Miller and 9640 News

WINDOWS 9640 has broken the barrier for multi-tasking on the Geneve 9640. It is now possible to run more than one program simultaneously with another with YOU maintaining control of the operating system. WINDOWS 9640 provides background utilities that are available to any program (accessed via XOP's for the programmer's information with documented support).

WINDOWS has been successfully tested running three copies of Advanced Basic simultaneously with each ABASIC copy running (it's program (some restrictions do apply as explained below).

WINDOWS 9640 provides a host of additional utilities immediately available such as formatting a disk with verification off, cloning, sleeping a disk, or any other DOS feature at the touch of a MOUSE button. The ability to toggle between any running DOS application to a window of the DOS command line interpreter and back to the application is immediately available. You may select up to 7 additional programs (8 counting WINDOWS) that can run at the same time. The option is up to you depending upon your system configurations.

An additional feature has been added to WINDOWS to promote a host of new utilities. The first mouse driver, written by Bruce Hellstrom, that installs and becomes a resident portion of the operating system, just as WINDOWS is capable of doing, provides independent use of the mouse across various programs.

WINDOWS does have limitations as some programmers have followed non-standard programming protocols. Any new programs that follow protocols set forth by WINDOWS will allow complete control over all video display and keyboard input that previously was not possible. This is accomplished using new DOS routines called XOP's to the assembly language programmer. If your not an A/L programmer, WINDOWS will still permit a host of features as many programs are already available that will run under WINDOWS with only minor difficulty if any difficulty at all.

WINDOWS 9640 now has added additional support for the keyboard if you do not own a mouse, but the use of the MOUSE is highly suggested. Support for composite or RGB monitors is now available using 40 or 80 columns. The minimum system requirements are a monitor and a Geneve. A mouse is highly suggested and additional memory via the MEMEX provides the capability to have additional programs resident in memory.

As promised, subscribers to 9640 NEWS will be receiving WINDOWS 9640 at a discount from the normal \$25.00 price. Subscribers will receive their personalized copy for \$15.00.

Please specify which package below you would like to order:

Package A) WINDOWS 9640, \$15.00, current subscribers of 9640 News.

Package B) WINDOWS 9640, \$25.00, non-subscribers of 9640 News.

Package C) WINDOWS 9640 and the first 5 issues of 9640 News (retail price of 9640 News, 5 disks, is \$25.00) for \$40.00

Shipping: Price includes shipping in U.S. and Canada. All others, add \$4.00.

Order today, and be on your way to reaching the potential of the Geneve.

To order WINDOWS 9640, send your check or money order (U.S. funds) to:

Beery V. Miller  
5655 Marina Cove #1  
Memphis, TN 38115  
U.S.A.

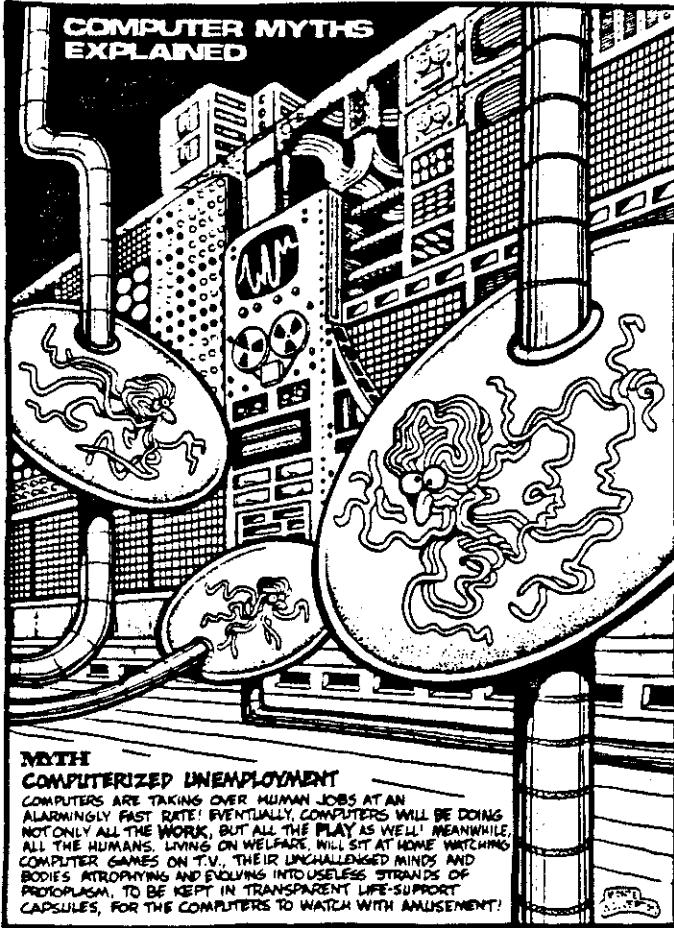
Credit card orders may be mailed to:

TI NET Product Services  
P.O. Box 244  
Lorton, VA 22199

or call their 24 hour product order line:

1-800-736-4991 (U.S. and Canada)

Credit Cards orders may also be placed in the Electronic Shopping Area on TI NET/Delphi and by sending and Email message on CompuServe to 74405,1207.  
XXX



Dear Fellow TI Enthusiasts:

The following is a press release about the new TI Base Version 3.0. This new and long awaited version is complete and shipping now. Please read the press release completely; it discusses the improved and added features of this new product and also describes how you can upgrade your present TI Base version to 3.0.

Please contact us if you have any questions regarding TI Base V3.0 or how to upgrade. Our address and telephone number is listed below.

Thank "you" for your continued support.

Steve Lambert,  
President of Texaments

(Note!! If you elect to upgrade to TI Base V3.0 please follow the upgrade instructions contained in the press release. All upgrade orders must be placed by mail as described -- phone orders will not be accepted.)

For Immediate Release...

TEXAMENTS Micro Computer Specialists 53 Center Street, Patchogue, New York 11772, (516)475-3480, 8BS (516)475-6463

For more information contact:

Steven C. Lambert  
(516) 475-3480

#### TEXAMENTS RELEASES TI BASE(TM) VERSION 3.0

Patchogue, New York, May 1, 1990 -- Texaments announced today the release of TI Base Version 3.0, the first major upgrade of its popular TI-99/4a database system in almost two years.

Incorporated into the new release of TI Base are several significant enhancements, including new directives, a report generator, the ability to alter the structure of a database without losing the data, expanded command line editing features, the ability to install command files into VDP memory, and several modifications and fixes to existing directives. Availability for the new release is immediate.

New to TI Base is the database-driven Report Generator. Designed in much the same way as the existing Printer Database, the Report Generator permits report formats to be created, saved, and later recalled when needed. Using the Report Generator the user will be able to define the header, footer and body of the report. In addition, local variables can be created and used from within a report, and various options are available to assist you in the creation and debugging of reports.

Using TI Base Version 3.0 the structure of a database can be altered without loosing the data currently stored in it. Now, whenever a database structure is modified, the user will be able to choose what happens to the old data; it can be destroyed, used in the existing database only, or restored into the new database

structure.

Whenever a database structure is modified, and the old data is transferred into the new database structure, a copy of the old database is retained for backup.

Command file processing has also been greatly enhanced. Users can now optionally install into, and execute command files from, high-speed VDP memory. Running command files from this area of memory increases the speed at which various processes running them from a slow device such as a floppy drive. Multiple command files may be loaded, removed, and catalogued while in VDP memory. In addition, the entire command file area may be cleared, saved to disk, and loaded from disk.

Expanded command line and editing features have been added to TI Base. From the dot prompt, the current line can be erased and the last non-blank line entered can be retrieved using function-key commands. TI Base will now accept character input using decimal identification; this includes both printable and non-printable characters with codes ranging from 0 to 255. Plus, any directive can be retrieved by depressing the control key and the first character of the directive desired, greatly reducing the amount of typing required when using TI Base.

Other enhancements and modifications that are included in TI Base Version 3.0 are:

- In most places a variable may now be used in place of an absolute number.

- The CLOSE command has been modified so that if nothing has been changed in a database, nothing will be written to the device when it is closed. This allows write protect tape to be used on data disks where the data is used for information only and will not be modified.

- SCOPE has been added to DELETE and RECALL directives. For example, DELETE RECORD ;FOR 1=1 will delete all records in the current database.

- The catalog operation has been enhanced to function better:  
- New \$ operator allows a comparison of a string within a string. For example, given a database with a character field named ITEM that has records with the following contents:

Record #1	ABCD
Record #2	ACBD
Record #3	BODA
Record #4	DABC

the command DISPLAY ;FOR "B\$C" \$ ITEM will cause records 1, 3 and 4 to be displayed because string "B\$C" appears somewhere in the string.

- New LEN operator will return the length of a string. The LENGTH value may be stored in a variable.

- New SUBSTR operator will return the portion of the string specified. For example:

LOCAL C C 10  
REPLACE C WITH SUBSTR("ABCDE",2,3)  
will place "BCD" in C

- READCHAR directive has been added; it operates much like the READSTRING directive, however it accepts only a single character of input. This command should greatly enhance the development and use of single keystroke menus.
- The MODIFY COMMAND editor has been enhanced to display the filename being edited and the line number currently being processed.
- The SUM directive has been modified to allow the result to be stored in a variable.

- An AVERAGE directive has been added; it takes an average of a database variable. Like the SUM directive, the result may be stored in a variable.

- The SET directive has been modified to allow printed output to be redirected to the screen. It will also permit crlf suppression when printing to a file.

- Literal strings may now be PRINTED and DISPLAYED.

- Added the capability for PRINT and DISPLAY to repeat a specified character.

- Using the WRITE directive, characters and strings can now be displayed using inverse video effects.

- Added the directive GO. For example, GO 5 will position the current database at record number 5.

- Added APPEND FROM which allows data from one database to be appended to an existing database.

- Device filenames of up to 29 characters are now legal.

"Over the last two years we have been listening to the feedback we have received from our customers regarding TI Base," stated Steven Lamberti, President of Texaments. "This release of TI Base is the direct result of that feedback."

TI Base Version 3.0 is available for \$24.95 (plus \$2.50 for shipping), included with TI Base are the system and tutor disks, keyboard overlay, quick reference card, and a comprehensive instruction manual. TI Base requires a disk system, 32K memory expansion, and either an Extended BASIC, Editor/Assembler or Mini Memory cartridge to operate. TI Base has been tested (but is not guaranteed) to be compatible with the Genie 9640 (in GPL mode), all Nyarc and CorComp peripheral expansion cards, and the New Horizon's RAIDisk.

Previous owners of TI Base may upgrade to Version 3.0 for only \$14.95 (plus \$2.50 for shipping) by returning their original disks (both the system and tutor disks) along with their upgrade fee. Anyone who purchased TI Base after April 1, 1990 may upgrade to Version 3.0 for only \$2.50 (the cost of shipping) by returning their original disks and a dated sales receipt. A documentation supplement will be sent with all upgrades.

All orders for TI Base Version 3.0 and TI Base Version 3.0 upgrades should be directed to Texaments at 53 Center Street, Patchogue, New York 11772 (516)675-3480. Texaments can also be contacted through its free 24-hour multi-user bulletin board service TI Sources(tm) at (516)475-6463.

Here's the way to patch M-Dos 0.97n so you can access floppys with Archiver 3.0sg, Telco, etc...

Remember that any modification to M-Dos is made at your own risks. You must also know that I've been using this patch for over a week now without any problems. In order to make this modification, you'll need the following: An empty diskette, A sector editor with Find String function, An internal Raidisk with a capacity of over 481 sector (120K + the Fixrardisk program provide 509 sectors) and a bit of courage and patience.

First make a back-up of your copy of M-Dos 0.97n (That's what the diskette is for). If anything goes wrong, you'll be able to recover from there. Next, copy M-Dos to your raidisk.

Once this is done, load your sector editor. We're looking for an Hex string. So here's what the original string look like:

```
>C320 >A1CC >1300 >0320 >8350 >098C >C34C >022C >8300 >022D >A000  
>CF30 >CF3D  
>CF3D >020C >834A >020D >A04A >CF3D >CF3D >CF3D  
>CF3D
```

Of course, this will be too long for a search string. What I suggest is that you enter a part of this search string starting at >1300 and look for the balance of it. If you have copied M-Dos as the first AND only file on the raidisk, this string should begin at byte >0Fc of sector >11A but this is not a certitude.

Once you have found this string, type over the following:

```
>D820 >5C24 >F114 >C320 >A11C >1300 >D320 >8350 >098C >C34C >022C  
>8300 >022D  
>A000 >CF3D >CF3D >CF3D >020C >834A >020D >A04A >CF3D  
>CF3D >CF3D
```

Once this has been typed over, write the sector to the raidisk. In fact, you'll have to write two sectors because the start of the patch is at the end of one sector. This will simply return the proper memory page for the >8000 - >9FFF location so informations will be returned at >834A and up.

Once this is completed, write back the file from the raidisk to your hard disk and reboot the system. Then reload your sector editor and try to edit sector >100 of any floppy. If no error occur, you have completed the patch correctly. You should now be able to use Archiver, Telco etc... with your floppy drives.

I must add that Paul Charlton (author of M-Dos) helped me a lot when he told me that the problem was from a "forgotten" memory page switch at >8000.

Even if I've learned everything about computers from books and from some exploring of my own (never studied it in school), I've been able to figure out the balance.

As a suggestion you should also edit the version number from 0.97n to 0.97J (I could be confused with 1) just to make a distinction between the official 0.97 version and the patched version.  
I hope this file helped you fix some M-Dos bugs..

In the past I've mentioned about some of the good stuff that HUG gets through the exchange of newsletters. This section will also become a regular part of the newsletter. The following is a small example of some of that info:

THE ALL-NEW, SUPER-DUPER, HANDY-DANDY, 98 CENT, DO-IT-YOURSELF, WAXPAPER

R. L. E. DIGITIZER

BY: RAY KAZMER, SFV 99ers

When I saw my first R.L.E., I thought, "GOLLLL-LEEEE! I'd SHORE like to draw ME a pit-chur like THAT!!" Then I found out that it takes something called a "digitizer" to make an R.L.E. and THOSE things could cost a LOT more than my '66 Chevy (fer-shirrrrr!) Since my TI-ARTISTIC talents were FAR from perfect, I decided I'd try to make a CHEAP digitizer, one which required very little talent to use, but would yield a fairly good R.L.E.

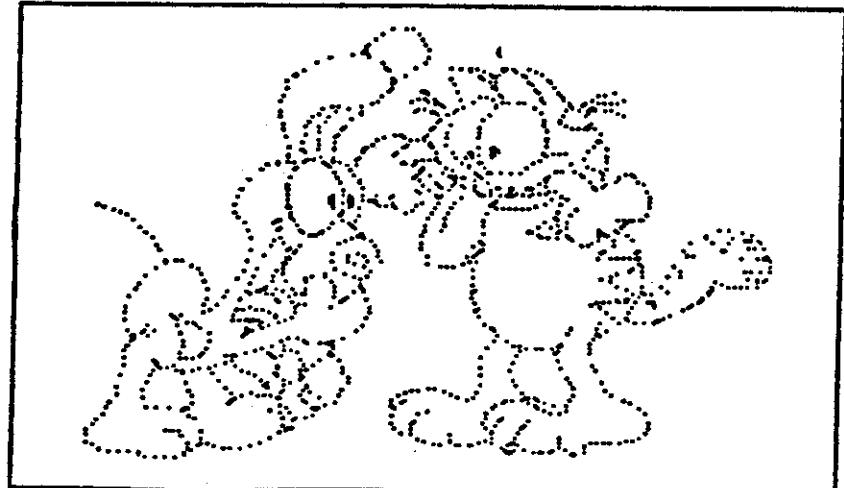
"Tracing" a picture, then sticking the paper to my TV screen, so I could move TI-ARTIST's cursor under it (drawing as I went) seemed a good idea, but regular tissue paper wouldn't let me see my cursor CLEARLY enough! I tried "plastic wrap," which certainly DID allow me to see the cursor but wouldn't hold ANY kind of ink! Besides, one touch and it was all SMUDGE, SMUDGE! And you know how it LOVES to "cling to itself!" Mur-der!

While shopping, I spotted a roll of WAXPAPER (98 cents for 100 feet) AND a (9"X12") cardboard folder (with "pockets" inside) used by school kids. Though the folder was way too big for my TV screen, the drawings of ODIE and GARFIELD on the cover (my favorites!) seemed to be just about right!

At home, I taped a hunk of waxpaper onto the folder, then QUICKLY traced over every line, "etching" the image into the waxpaper with a mechanical pencil (with the lead retracted.) THAT WAS A MISTAKE!!! If you decide to try my "digitizer" yourself, trace with GREAT CARE! Make your tracing as ACCURATE as possible! Care NOW, will save you LOADS of "correcting time" later, when you are completing your "on-screen" master-piece! Be SURE to hit ALL lines, BEFORE you remove the waxpaper copy from your "original."

Next, load TI-ARTIST and put a "frame" around the drawing screen, which helps to align the copy vertically, and can be erased later. Be SURE the copy lies WITHIN this frame, THEN tape it to your screen.

**THIS PART IS MOST IMPORTANT!**  
Find a comfortable position, "head-on" to the screen, and begin to "outline" the copy, by placing "DOTS" BEHIND the waxpaper lines. (See sample)  
DO NOT shift your head sideways! That causes DISTORTION and is HARD to repair later!



(more)

AGAIN, the same words of CAUTION apply when placing the dots as when you were making your WAXPAPER tracing, which is: TAKE YOUR TIME! Do NOT rush to finish it fast! CAREFULLY place each dot, as CLOSE to the "center" of each line, as possible! Although this will SEEM like a long, TEDIOUS job to you (and it IS) try to think of it as "building a strong foundation."

There is NO WAY you can follow a "traced" line by just pushing your joystick and mashing the fire-button! You'll see the cursor "weave all over the road" like a drunk driver! Before trying to make your first WAXPAPER R.L.E., plan to spend several hours with it. Be patient! Persevere! Your determination and care WILL be rewarded with a real work of art! (AMEN!)

It gets easier now as you play "connect the dots." You may find the ZOOM feature a real help with this. Another tip: SAVE the picture frequently! If you make a major boo-boo, you won't lose a TOO much time and sweat by simply reloading the SAVED picture, rather than struggling to repair it.

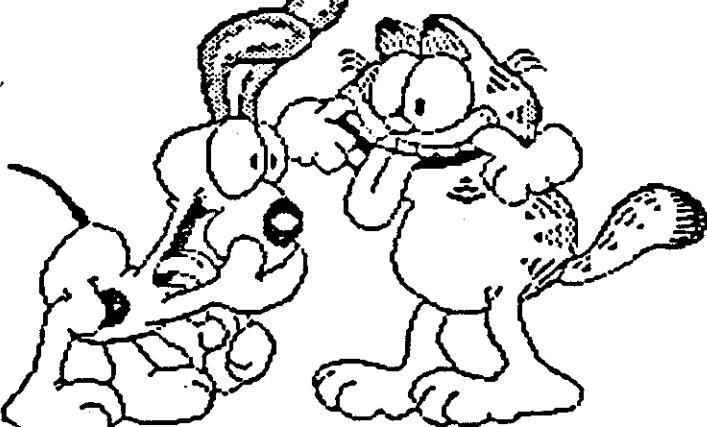
The FINAL STEP is to give your picture a good "polishing," OR what I had referred to earlier as "correcting time." If you took the time to do all the first steps PROPERLY and your picture is now "connected" simply view "THE BIG PICTURE" and all the "rough spots" will LEAP RIGHT OUT at you!! Adding or erasing a single pixel here and there, is all that remains. It sounds simple, doesn't it? (THIS is the HARDEST part!) After you've done all the "correcting" you THINK you can find, SAVE it, then store it away someplace (for a week or two) THEN reload it and compare your picture to the original. If you can't find ANYTHING else wrong with it, it is DONE! (Use MAX-RLE to convert your TI-ARTIST "PICTURE\_P" file into a MAX-RLE.)

Some last tips: DON'T strive for ABSOLUTE PERFECTION! That's IMPOSSIBLE! (Garfield's "stripes" nearly ran me up a wall!!!) BUT, by the same token, if you've waited those two weeks and you spot another "flaw," DO attempt fixing it! IF (due to limitations inherent in our consoles or TI-ARTIST, OR due to approaching blindness) you CAN'T fix it (after trying for five or six years) make up some "logical sounding" excuse, when you debut the master-piece. If you make it "high-tech" enough, ANYBODY will buy it! MY winning line is: "Well, NOBODY can draw a PERFECT, curved zig-zag line!"

So, here it is! My COMPLETED work of art! It's NOT a 100% PERFECT copy of the original but what can you expect from a console with an overloaded framistan in it's quadilop?!

There are TONS of "copyable" pictures, for your "WAXPAPER R.L.E. DIGITIZER!" (Coloring books for children, atlases, magazines, calanders, etc.,) and if any 99'ERS out there, try doing some PLAYBOY stuff well, I'd appreciate a copy, (before I go totally blind!)

## ARE WE HAVING FUN YET?



CARFIELD-1 R.L.E. BY RAY KATNER SAN FERNANDO VALLEY 93'ERS

After ALL THAT WORK, it's time for some FUN! Here's a RIDDLE for all you sharp-eyed TI-RUNNER players. WHERE (in TI-RUNNER) do the initials "IBM" appear on screen? HERE'S A CLUE: Play the game up to Level 28, then look in the bricks, but don't look TOO CLOSELY, or you MIGHT miss them!) R.K.