

**Telengard
Avalon Hill (1982)**

Comments by Dan Boris (2008)

DSKTEL.BAS

Variables		
Variable	Initial Value	Function
ARRW	8000	Pointer to user input prompt routine
B\$	RED YELLOWGREEN BLUE	Button Names
B()		Box contents
C		Misc
C\$		Character returned from GetChr
C128	128	Numeric Constant
C20	20	Numeric Constant
CB		Button step
CH		Current Hit Points
CLWND	17000	Sub Constant (Clear Window)
CM\$	WXADSHQPC????	Commands
CR\$	23 Right Arrows	String Constant
CS		Current Spell Units
CX		Player X position
CY		Player Y position
CZ		Player Z position
D		Cast spell in combat flag 1 = In combat 0 = Not in combat
D\$		Data return from player input subroutine
DB		Monster damage bonus
DR		Chance of drain level
E		Experience gained
EIG	8	Numeric Constant
EN		
EX		Experience
EX()		<i>Is saved and load with the game but doesn't seem to be used</i>
FH()		Monster hit point stack
FIVE	5	Numeric Constant
FL()		Monster level stack
FM()		Monster type stack
FNLF	1718	USR Constant (Get bits 2,3)
FNS	1680	USR Constant (Get upper 8 bits)
FNT\$	WHITEGREENCLEARRED BLACK	Constant (Fountain description)
FNUP	1698	USR Constant (Get bits 0,1)
FO\$	FCE&	Fighting options
FOUR	4	Constant
GD		Gold
GTCHR	16000	Constant
HI		
HP		Hit Points
I		Temp variable
I()		Inventory
II		<i>See notes on line 20110</i>

IN1		Inn description index 1
IN1\$		Inn description 1
IN2		Inn description index 2
IN2\$		Inn description 2
IN3		Inn description index 3
IN3\$		Inn description 3
IQ		Temp Variable
J		Temp Variable
K		Temp Variable
L		Temp Variable
LC		
LFPLT	10075	Constant
LG	1536	USR Constant
LV		Player Level
M		
M\$		Monster name
MA\$		Used in stat display routine
MB		Monster attack bonus
MH		Monster hit points
MI		Item number used to determine item name
MI\$		Item name
ML		Monster Level
MNSTR	3000	Constant
MNSTRO	30000	Constant
MOS\$	GNOLL KOBOLD SKELETONHOBBIT ZOMBIE ORC FIGHTER MUMMY ELF GHOUL DWARF TROLL WRAITH OGRE MINOTAURGIANT SPECTER VAMPIRE DEMON DRAGON	Constant (Monster names)
MOND	3220	Constant
NEWP	2000	Constant
NEWPO	20000	Constant
NIN	9	Constant
NM\$		Players name
NX		New X (for teleport)
NY		New Y (for teleport)
NZ		New Z (for teleport)
ONE	1	Constant
P(3,3)		Visible dungeon section Bits 0-1: Upper Wall (3 = Wall/2 = Door) Bits 2-3: Left Wall (3 = Wall/2 = Door)
PA		
PAUSE	19000	Constant
Q		Temp variable
Q1		Temp loop variable
Q2		Temp loop variable
QI		Return value from USR routines. Actual value is not used

RHITS	20260	Constant
RSPLL	20250	Constant
RSTAT	20300	Constant
RT\$	<i>EOL</i>	Constant
S		Spell number used by spell name routing
S\$	STRINTWISCONDEXCHR	Names of stats
S()		S(0) = Strength S(1) = Intelligence S(2) = Wisdom S(3) = Constitution S(4) = Dexterity S(5) = Charisma
SC	39999	Constant
SEV	7	Constant
SF()		Spell effects SF(1) = Strength SF(2) = Detect traps SF(3) = Light SF(4) = Protection from evil SF(5) = Levitate SF(6) = Invisibility
SIX	6	Constant
SP	84	Constant (ROWCRS)
SP\$		Spell name
SPEC	6000	Constant
SPF\$	STRGDTRPLGHTPROTLEV TINVSFEARASTWTMSTRS EDDRNK	Spell effects
SS	-1	<i>This is assigned values but doesn't appear to be used.</i>
SU		Max spell units
SY		If SY=1 then redraw screen at start of turn
T		If T=1 there is a trap
TEN	10	Constant
TF	256	Constant
TG		Saved Gold
THREE	3	Constant
TR\$	REFUSESILVERGOLD GEMS JEWELS	Treasure names
TRSR	4000	Constant
TRSR0	40000	Constant
TWO	2	Constant
U		Used to determine time a spell will last.
UN		If UN=1 Monster is undead
UPPLT	10050	Constant
VS		<i>Read from the saved game but appears not to be used</i>
W		Temp variable used from drawing maze
W0	4694	Constant
WTCLR	17500	Constant
X		Temp X value used to draw maze

XO	1.6915	Constant (Maze generation)
Y		Temp Y variable used to draw maze
YO	1.4278	Constant (Maze generation)
Z		Temp Z variable used to draw maze
ZERO	0	Numeric Constant
ZO	1.2462	Constant (Maze generation)

Monsters	
1	GNOLL
2	KOBOLD
3	SKELETON
4	HOBBIT
5	ZOMBIE
6	ORC
7	FIGHTER
8	MUMMY
9	ELF
10	GHOUL
11	DWARF
12	TROLL
13	WRAITH
14	OGRE
15	MINOTAUR
16	GIANT
17	SPECTER
18	VAMPIRE
19	DEMON
20	DRAGON

Items	
1	SWORD
2	ARMOR
3	SHIELD
4	ELVEN CLOAK
5	ELVEN BOOTS
6	RING OF REGENERATION
7	RING OF PROTECTION
8	SCROLL OF RESCUE
9	POTION OF HEALING
10	POTION OF STRENGTH
11	SWORD
12	ARMOR
13	SHIELD
14	ELVN CLK
15	ELVN BTS
16	RING REG
17	RING PROT
18	SCRL RESC
19	POT HEAL
20	POT STRG

Subroutines	
10010	Generate map
15000	Draw maze
16000 (GTCHR)	Read a character from the keyboard
16200	Get multi character input from player
16500	Position cursor to display a message
16600	Position cursor at 8,11
17000 (CLWND)	Clear text window
17500 (WTCLR)	Wait then clear text window
18000	Check for change of player level
19000 (PAUSE)	Pause
19500	Short pause
19700	Get monster name
19800	Initialize combination to open box
20000 (NEWPO)	Give player a random amount of damage
20100	Gain/lose random experience points
20260 (RHITS)	
20300 (RSTAT)	Display players stats
20600	Clear prompt area
20700	Determine if monster is undead
20800	Gets numeric input from the player
28100	Generate random Inn description
28200	Return item name for item number in MI
29000	Clear map area
30000 (MNSTR0)	Push a monster onto the monster stack
30025	Display monster stack
30100	Pull a monster off the monster stack
30200	Clear monster stack
RSPLL	
UPPLT	
LFPLT	

Main Program

```
/* Open character set file  
10 OPEN #1,4,0,"D:TELEN.SET"
```

```
/* ICCOM = Read Binary  
POKE 850,7
```

```
/* Buffer length = $400  
POKE 856,0:POKE 857,4
```

```
/* Buffer address = $9800  
POKE 852,0:POKE 853,152
```

```
/* Execute IOCB  
FOUR=USR(ADR("h□□LU"))
```

```
PLA          /* pull argument count  
LDX #$16    /* set IOCB number  
JMP $E456   /* call CIOV
```

```
CLOSE #1
```

```
/* Point to new character set  
11 POKE 756,152
```

```
/* Initialize variables  
900 FOUR=4:FIVE=5  
OPEN #1,FOUR,0,"D:TELINI.DAT"
```

```
910 INPUT  
#1,ONE,TWO,THREE,ZERO,C128,C20,UPPLT,LFPLT,CLWND,WTCLR,PAUSE,MOND,NEWP,MNS  
TR,TRSR,TRSR0,SPEC,ARRW  
920 INPUT  
#ONE,GTCHR,RSTAT,RSPLL,RHITS,MNSTR0,NEWP0,SS,TF,SC,LG,SP,FNUP,FNLF,FNS
```

```
/* Turn off cursor  
1000 POKE 752,ONE
```

```
/* Initialize constants  
TEN=TWO*FIVE:SIX=TWO*THREE:SEV=SIX+ONE:EIG=SEV+ONE:NIN=EIG+ONE
```

```
/* Initialize strings  
1015 DIM  
S$(18),CM$(13),MO$(160),MI$(30),MA$(NIN),SP$(C20),IN1$(C20),IN2$(SIX),IN3$(NIN),C$(TEN)  
1020 DIM  
NMS$(C20),DS$(C20),CR$(23),SPF$(44),M$(EIG),FO$(FOUR),TRS$(30),FNT$(FIVE*FIVE),RT$(ONE)
```

```
/* Initialize arrays and variables  
1100 DIM P(THREE,THREE),S(FIVE),SF(TEN+ONE),I(TEN),B(FOUR),EX(100),B$(24)  
1103 DIM FM(C20),FL(C20),FH(C20):XO=1.6915:YO=1.4278:ZO=1.2462:W0=4694
```

```
/* Initialize string  
1120 INPUT #ONE,SS:INPUT #ONE,FO$:INPUT #ONE,TRSS:INPUT #ONE,CM$:INPUT  
#ONE,B$:INPUT #ONE,SPF$:INPUT #ONE,FNT$
```

/* Move cursor 23 spaces right

1125 CR\$="23 Right Arrow"

/* EOL character

:RT\$=CHR\$(155):

/* Displays "Welcome to Telengard Would you like to: [S]tart a new character or"

FOR Q=ONE TO NIN:INPUT #ONE,MO\$:PRINT MO\$:NEXT Q

/* Initialize monster list

1135 MO\$="GNOLL KOBOLD SKELETONHOBBIT ZOMBIE ORC FIGHTER MUMMY ELF
GHOUL DWARF TROLL WRAITH "

1145 MO\$(105)="OGRE MINOTAURGIANT SPECTER VAMPIRE DEMON DRAGON "

/* Close initialization file

1190 CLOSE #ONE:

/* Open keyboard channel

OPEN #ONE,FOUR,ZERO,"K:"

/* Print rest of startup message

1214 PRINT " Read in an old one?";

/* Wait for a key to be pressed

1215 GOSUB GTCHR:IF C\$="&" THEN 1215

/* If player didn't press R goto 1400

1216 IF C\$<>"R" THEN PRINT "START":GOSUB PAUSE:GOTO 1400

/* Read in old game

/* Get the players name

1220 PRINT "Read":PRINT "Your name?";:GOSUB 16200:NM\$=D\$:PRINT

/* Create file name to load player from

1222 MI\$="D":MI\$(THREE)=NM\$:IF LEN(MI\$)>TEN THEN MI\$=MI\$(ONE,TEN)

1225 MI\$(LEN(MI\$)+ONE)=".PLR"

/* Open player save file

TRAP 1235:OPEN #TWO,FOUR,ZERO,MI\$:TRAP TRSR0:GOTO 1245

/* Error opening character file

1235 PRINT "%Can't read char"

/* Restart game

1240 CLOSE #TWO:GOSUB PAUSE:CLR :RUN

/* Read saved game

1245 INPUT #TWO,NM\$:PRINT NM\$;" found"

1250 INPUT #TWO,VS

1255 FOR I=ZERO TO FIVE:INPUT #TWO,Q:S(I)=Q:NEXT I

1260 INPUT #TWO,LV:INPUT #TWO,GD:INPUT #TWO,TG:INPUT #TWO,EX:INPUT #TWO,CH

1265 INPUT #TWO,HP:INPUT #TWO,CX:INPUT #TWO,CY:INPUT #TWO,CZ:INPUT #TWO,SU

1270 INPUT #TWO,CS:FOR I=ONE TO TEN:INPUT #TWO,Q:I(I)=Q:INPUT #TWO,Q:SF(I)=Q:NEXT

I:INPUT #TWO,Q:SF(11)=Q

```
1275 FOR I=ONE TO C20:INPUT #TWO,Q:FM(I)=Q:INPUT #TWO,Q:FL(I)=Q:INPUT
#TWO,Q:FH(I)=Q:NEXT I
1280 GOSUB PAUSE:FOR I=ONE TO FOUR:INPUT #TWO,Q:B(I)=Q:NEXT I
1282 FOR I=ZERO TO 100:INPUT #TWO,Q:EX(I)=Q:NEXT I
1285 IF CZ=ZERO THEN CZ=ONE
1290 IF CZ<ZERO THEN GOTO 1235
1295 PRINT NM$;" read":CLOSE #TWO:IF MI$(THREE,FOUR)="SV" THEN 1298
```

/* Delete save file

```
1296 XIO 33,#TWO,ZERO,ZERO,MI$
1298 CLOSE #TWO
```

```
1300 GOSUB PAUSE:PRINT "■":GOSUB RSTAT:GOSUB 30025:SY=ONE:GOTO NEWP
```

/* New character

```
1400 PRINT "■<RET> to use stats"
```

/* Generate the six stats from 3 to 18 and print the stat name and value

```
1500 FOR I=ZERO TO FIVE:Q=ZERO:FOR Q1=ONE TO
THREE:Q=Q+INT(RND(ONE)*SIX+ONE):NEXT Q1:S(I)=Q
1510 PRINT S$(I*THREE+ONE,I*THREE+THREE);" ";S(I);" ":NEXT I
```

/* If player doesn't press enter, regenerate stats

```
1515 GOSUB GTCHR:IF C$<>RT$ THEN 1400
```

/* Set hit points to constitution

```
1520 HP=S(THREE):
```

/* Set current hit points to max hit points

```
CH=HP:
```

/* Set gold and saved gold to zero

```
GD=ZERO:TG=GD:
```

/* Set Dungeon level to 1

```
CZ=ONE:
```

/* Set player level to 1

```
LV=CZ:
```

/* Clear inventory

```
FOR I=ONE TO TEN:I(I)=TG:SF(I)=GD:NEXT I:SF(11)=ZERO
```

/* Initialize box combination

```
1600 GOSUB 19800:
```

/* Set starting position in dungeon

```
CX=TWO:CY=70:
```

/* Initialize experience, spell units and current spell units

```
EX=ZERO:SU=ONE:CS=ONE:
```

/* Get players name

```
PRINT "}Your name noble sir? ";
```

```
1602 GOSUB 16200:IF D$="" THEN D$="DEMO":PRINT D$;
```

```
1604 NM$=D$:PRINT
```

/* Pad name to 7 characters

1605 IF LEN(NM\$)<SEV THEN NM\$(LEN(NM\$)+ONE)=" ":GOTO 1605

/* Start of play

1610 PRINT "You descend into the";RT\$;"depths of TELEGARD";RT\$;"Beware ..."

1630 GOSUB PAUSE:GOSUB PAUSE:PRINT "☠":L=ONE:GOSUB RSTAT:GOSUB 30200:GOSUB

15000:SY=ONE:GOTO MNSTR

/* Start of each turn

/* Decrement spell effects

2000 FOR I=ONE TO 11:SF(I)=SF(I)-ONE:NEXT I:

L=CZ:GOSUB CLWND:IF SY=ONE THEN GOSUB 15000

2010 SY=ONE:

/* Handle ring of regeneration

IF (I(SIX)=ZERO) OR (CH=HP) THEN GOTO MNSTR

2015 CH=CH+I(SIX):IF (CH>HP) THEN CH=HP

2020 GOSUB RHITS

/* Handle Encounter

/* MNSTR:

/* 30% of the time there is a monster unless Time Stop is in effect

3000 IF RND(ONE)>THREE/TEN OR SF(NIN)>ZERO THEN GOTO TRSR

/* No monster 80% of the time if Invisible

3001 IF SF(SIX)>ZERO AND RND(ONE)>ONE/FIVE THEN GOTO TRSR

/* Show monster on screen

3005 POKE SC+332,THREE:

/* Get monster type

M=INT(RND(ONE)*C20+ONE): IF SF(SEV)>ZERO AND M<FIVE THEN 3005

3006 IF INT(RND(ONE)*C20+ONE)<=I(FOUR) THEN 20900

/* Calculate monster level

3007 ? "y";ML=INT((RND(ONE) (THREE/TWO))*(CZ*TWO+TWO)+ONE):

/* Determine if undead

GOSUB 20700

/* If Astral Walk is in place and monster is under, 20% of the time select a new monster type

3008 IF SF(FOUR+FOUR)>ZERO AND UN=ONE AND RND(ONE)>FOUR/FIVE THEN 3005

/* Display monster name

3010 GOSUB 16500:GOSUB 19700:PRINT "YOU ENCOUNTER A LVL ";ML;" ";M\$

/* Handle time stop

3011 IF SF(NIN)>ZERO AND M<16 AND M<>11 THEN GOSUB WTCLR:GOTO TRSR

/* Display monster level

```
3012 I=PEEK(SP):POKE SP,18:PRINT
3013 PRINT CR$;"LVL ";ML;" ";M$
3015 POKE SP,I-ONE:PRINT :
```

/* Monster hit points

```
MH=INT((RND(ONE) (ONE/TWO))*ML*M+ONE):L=ML
```

/* 5% of the time the monster will take one of three random actions

```
3017 IF RND(ONE)>.05 THEN ON RND(ONE)*THREE+ONEGOTO3030,3045,3072
```

/* If the monster isn't a fighter then it won't heal you

```
3020 IF M<>NIN THEN 3040
```

/* Second change at healing based on your charisma

```
3025 IF RND(ONE)>.04*S(FIVE) THEN 3040
```

/* Monster heals you

```
3030 PRINT "The ";M$;" likes your body":PRINT "He heals you to full strength":CH=HP
3037 GOSUB RSTAT:GOSUB PAUSE:GOSUB 20600:POKE SC+332,ZERO:GOTO TRSR
```

/* If monster is a hobbit it attempts to steal based on your charisma

```
3040 IF M<>FOUR OR RND(ONE)<S(FIVE)/C20 THEN 3070
```

/* Monster steals something

```
3045 PRINT "The ";M$;" makes a quick move":GOSUB PAUSE
```

/* Check if anything to steal

```
3050 FOR I=ONE TO TEN:IF I(I)>ZERO THEN 3054
3052 NEXT I:PRINT "You have nothing he wants to steal!":GOTO 3037
```

/* Randomly pick an item to steal

```
3054 I=INT(RND(ONE)*TEN+ONE):IF I(I)<ONE THEN 3054
```

/* Get item name

```
3055 MI=I:GOSUB 28200
```

/* Item is stolen

```
3056 PRINT "He steals ";:IF I<EIG THEN PRINT "your ";MI$:I(I)=ZERO:GOTO 3037
3060 PRINT "a ";MI$:I(I)=I(I)-ONE:GOTO 3037
```

/* If monster is a dragon determine if he will give you something based on your charisma

```
3070 IF M<>C20 OR RND(ONE)*30>S(FIVE) THEN 3090
```

/* Randomly pick one of the first 7 items and check if it's level is greater then the monsters

```
3072 I=INT(RND(ONE)*SEV+ONE):IF I(I)>=ML THEN 3090
```

/* Increase the level of the item

```
3074 C=ML-I(I):C=INT(RND(ONE)*C+ONE):I(I)=I(I)+C
3076 PRINT "The ";M$;" likes you!":GOSUB WTCLR
3077 MI=I:GOSUB 28200
3078 PRINT "He gives you a ";MI$;" +";I(I):GOSUB RSTAT:GOSUB WTCLR
3080 GOSUB 20600:GOTO TRSR
```

/* If you dexterity is high enough you might get an instant kill

```
3090 IF RND(ONE)>ONE/TWO+S(FOUR)*.02 THEN 3300
```

/* Ask player what to do

3100 PRINT "Fight, Cast, or Evade:";GOSUB GTCHR
3102 IF C\$="&" THEN PRINT "WAIT"

/* Be sure the player input a valid command

3105 FOR I=ONE TO FOUR:IF FO\$(I,I)=C\$ THEN 3115
3110 NEXT I:PRINT :PRINT "The ";M\$;" is not amused":GOSUB WTCLR:GOTO 3100

/* Jump to appropriate command handler

3115 ON I GOTO3200,3400,3700,3300

/* -----

/* Fight

/* -----

/* (RND(0-20) + Level + Armor level + strenght)/2 + (4 if using strenght potion) >= 10 then hit

3200 I=INT(RND(ONE)*C20)+LV+I(ONE)+S(ZERO)/TWO:PRINT "Fight"
3202 IF SF(ONE)>ZERO THEN I=I+FOUR
3204 IF I<TEN THEN PRINT "You missed...":GOTO 3300

/* RND(0-8) + (RND * Level * 2 + Sword + Sword Level + 1) + (5 if using strength potion) = damage

3205 I=INT(RND(ONE)*EIG+RND(ONE)*LV*TWO+I(ONE)+ONE):IF SF(ONE)>ZERO THEN
I=I+FIVE
3207 PRINT "You do ";I;" points damage"

/* Return monster hit points and see if still alive

3210 MH=MH-I:IF MH>ZERO THEN 3300

/* Monster is dead

3220 PRINT "It died...";
3223 POKE SC+332,ZERO:

/* Calculate experience

E=ML*M*TEN:EX=EX+E:GOSUB PAUSE
3225 GOSUB 20600:PRINT "You gain ";E;" experience points":GOSUB RSTAT:GOSUB 18000
3230 GOSUB WTCLR:GOTO 3900

/* Initialize monster bonuses

3300 DB=ONE:PA=ZERO:DR=ZERO:MB=ZERO:GOTO 3330

/* RND(0-20) + Monster Level – player armor level – player shield level + monster bonus

3305 I=INT(RND(ONE)*C20)+ML-I(TWO)-I(THREE)+MB

/* If SPECTER, VAMPIRE, or DEMON and protection from evil spell you get a bonus of -6 to hit

3306 IF M>16 AND M<C20 AND SF(FOUR)>ZERO THEN I=I-FOUR-TWO

/* Check for hit

3310 IF I<TEN THEN PRINT "It missed...";:GOSUB WTCLR:GOTO 3100

/* Damage = (RND(0-8) + RND() * Monster level * 2 + 0) * Monster Bonus

3315 I=INT((RND(ONE)*EIG+RND(ONE)*ML*TWO+ONE)*DB):PRINT "It does ";I;" points damage";

/* Reduce player hit points and check for death

3320 CH=CH-I:GOSUB RHITS:IF CH<ONE THEN 9000
3321 GOSUB PAUSE:

/* Check for special effects

IF RND(ONE)>DR OR SF(FOUR)>ZERO THEN 3326

/* Drain level

3322 GOSUB CLWND:PRINT "It drains a level!!!":EX=INT(EX/TWO)

3323 IF LV=ONE THEN EX=-ONE

3324 GOSUB 18000:GOSUB WTCLR:GOTO 3100

/* Paralyzed, monster gets another attack

3326 IF RND(ONE)>PA THEN GOSUB CLWND:GOTO 3100

3327 GOSUB CLWND:PRINT "You're paralyzed!!!";GOSUB WTCLR:GOTO 3300

/* Wraith drains level 1/10 of the time

3330 IF M=13 THEN DR=ONE/TEN:GOTO 3305

/* Specter drains level 1/5 of the time

3335 IF M=17 THEN DR=TWO/TEN:GOTO 3305

/* Vampire drains level and paralyze 3/10 of the time

3340 IF M=18 THEN DR=THREE/TEN:PA=DR:GOTO 3305

/* Ghoul paralyzes 1/2 of the time

3345 IF M=TEN THEN PA=ONE/TWO:GOTO 3305

/* Demon attack

3350 IF M<>19 THEN 3365

3352 GOSUB WTCLR

3355 IF RND(ONE)>THREE/FIVE THEN PRINT "It uses it's

SWORD!!!":MB=FOUR:DB=THREE:GOTO 3305

3360 PRINT "It uses it's WHIP!!!":MB=TWO:DB=TWO:GOTO 3305

/* Dragon attack

3365 IF M<>C20 THEN 3305

3370 IF RND(ONE)>THREE/TEN THEN MB=FIVE:DB=TWO:GOTO 3305

3375 PRINT "The DRAGON breaths FIRE!!!";GOSUB WTCLR

3378 I=INT(RND(ONE)*C20*ML+ONE):IF RND(ONE)<S(THREE)/C20 THEN 3382

3380 PRINT "You partially dodge it":I=INT((I+ONE)/TWO)

3382 PRINT "You burn for ";I;" points damage":GOTO 3320

/* Cast

3400 D=ONE:GOTO 21000

/******

/* Evade

/******

3700 Q=INT(RND(ONE)*18+ONE):PRINT "EVADE"

/* Determine success based on dexterity and Elven Boots item

3705 IF Q<S(FOUR)+I(FIVE) THEN 3710

/* Evade failed

3707 PRINT "You're rooted to the spot":GOSUB WTCLR:GOSUB 16500:GOTO 3300

/* Randomly pick an evade direction

3710 GOTO 3720+TEN*INT(RND(ONE)*FOUR)

/* Try to evade north

3720 C=ONE:IF USR(FNUP,LC)<THREE THEN 3795

/* Try to evade south

3730 C=TWO:IF USR(FNUP,P(TWO,ONE))<THREE THEN 3795

/* Try to evade west

3740 C=THREE:IF USR(FNLFL,LC)<THREE THEN 3795

/* Try to evade east

3750 C=FOUR:IF USR(FNLFL,P(ONE,TWO))<THREE THEN 3795

/* Try to evade north again

3760 C=ONE:IF USR(FNUP,LC)<THREE THEN 3795

/* Try to evade south again

3770 C=TWO:IF USR(FNUP,P(TWO,ONE))<THREE THEN 3795

/* Try to evade west again

3780 C=THREE:IF USR(FNLFL,LC)<THREE THEN 3795

/* Couldn't evade

3790 GOTO 3707

/* Move in evade direction

3795 GOSUB 20600:GOSUB CLWND:GOTO 8120

/* When a monster has been killed it will have treasure 50% of the time

3900 IF RND(ONE)>ONE/TWO THEN 4002

/* -----

/* Treasure

/* -----

TRSR:

/* 1/5 of the time there is treasure

4000 IF RND(ONE)>ONE/FIVE THEN GOTO SPEC

/* 15% of the time there is a trap

4002 T=ZERO:IF RND(ONE)>0.85 THEN T=ONE

4005 POKE SC+332,FOUR:GOSUB 16500:C=ZERO:

/* Skip to treasure test 30% of the time

IF RND(ONE)>SEV/TEN THEN 4100

/* -----

/* Handle normal treasure

/* -----

/* Display treasure name

4007 PRINT "You see some ";I=INT(RND(ONE)*FIVE)

4010 Q=FIVE+ONE:PRINT TRS\$(I*Q+ONE,I*Q+Q):PRINT "<RET> to pick up:";

/* You detect a trap if detect trap spell is in effect or 10% of the time otherwise
4011 IF T=ONE THEN IF SF(TWO)>ZERO AND RND(ONE)>ONE/TEN THEN PRINT :PRINT "You detect TRAPS!";

/* Get user input and check if return was pressed
4012 GOSUB GTCHR:IF C\$=RT\$ THEN 4020

/* Player doesn't pick up treasure
4015 PRINT "Leave it":GOSUB WTCLR:GOTO SPEC

/* Player picks up treasure, check if there is no trap
4020 PRINT "Snarf it":IF T=ZERO THEN 4040

/* Handle trap damage
4025 Q=INT(RND(ONE)*THREE*L+ONE):GOSUB CLWND
4030 PRINT "It's TRAPPED!":PRINT "You suffer ";Q;" points damage"
4035 CH=CH-Q:GOSUB RHITS:IF CH<ONE THEN GOSUB PAUSE:GOTO 9000

/* Get gold from treasure
4040 J=INT(RND(ONE)*I*L*C20*TEN+ONE):PRINT "It's worth ";J;" gold"
4045 GD=GD+J:IF I=ZERO AND RND(ONE)>FOUR/FIVE THEN GOSUB RSTAT:GOSUB CLWND:GOTO 4200
4050 GOSUB RSTAT:GOTO 4900

/* Skip to items 50% of the time
4100 IF RND(ONE)>ONE/TWO THEN 4200

/* Handle treasure chest
4105 PRINT "You have found a Treasure Chest!!"
4110 PRINT "<RET> to open it:";

/* You detect a trap if detect trap spell is in effect or 10% of the time otherwise
4115 IF T=ONE THEN IF SF(TWO)>ZERO AND RND(ONE)>ONE/TEN THEN PRINT :PRINT "You detect TRAPS!";

/* Get player input and check for Return key
4120 GOSUB GTCHR:IF C\$<>RT\$ THEN PRINT "Ignore it":GOSUB WTCLR:GOTO SPEC

/* Open chest
4125 PRINT "Open it":IF T=ZERO THEN 4140

/* Handle chest trap
4130 GOSUB WTCLR:PRINT "Chest EXPLODES!!":I=INT(RND(ONE)*TEN*CZ+ONE):CH=CH-I
4135 PRINT "You suffer ";I;" points damage":GOSUB RHITS:IF CH<ONE THEN 9000

/* Calculate amount of gold in chest
4140 GOSUB WTCLR:I=INT(RND(ONE)*1000*L TWO+ONE)

/* 10% of the time there is nothing inside
4145 IF RND(ONE)>NIN/TEN THEN PRINT "Inside, there is only cobwebs...":GOTO 4900

/* Get gold
4150 PRINT "Inside is ";I;" gold pieces!":GD=GD+I:GOSUB RSTAT:IF RND(ONE)>ONE/TWO THEN 4900
4155 C=ONE:GOSUB WTCLR

/* Found an item

4200 I=INT(RND(ONE)*TEN+ONE):PRINT "You see a ";;MI=I:GOSUB 28200

/* Calculate item level

4205 J=INT(RND(ONE) (ONE/TWO)*(L+ONE)+ONE):IF I>SEV THEN PRINT MI\$:GOTO 4215

4210 PRINT MI\$;" ";J

/* Prompt player to pick it up

4215 PRINT "<RET> to pick it up:";;GOSUB GTCHR:IF C\$=RT\$ THEN 4225

4220 PRINT "Leave it":GOTO 4240

/* Check if it is cursed

4225 IF I*T<>ONE THEN 4235

/* Handle curse damage

4230 PRINT :PRINT "It is CURSED!!":I=INT(RND(ONE)*I*FIVE+ONE)

4232 PRINT "You suffer ";I;" damage points";:CH=CH-I:GOSUB RSTAT:IF CH<ONE THEN 9000

4234 GOTO 4900

/* Add item to inventory

4235 PRINT "It's yours!":I(I)=I(I)+ONE:IF I<EIG THEN I(I)=J

4237 GOSUB RSTAT

4240 IF C=ONE AND RND(ONE)>ONE/TWO THEN GOSUB WTCLR:GOTO 4200

4900 POKE SC+332,ZERO:GOSUB WTCLR

/* 50% of the time evaded monsters will get closer

4910 IF RND(ONE)>ONE/TWO THEN GOSUB MNSTR0:IF M<>ZERO THEN 3010

/* -----

/* Special stuff

/* -----

/* Special items

/* 1 = Inn

/* 2 = Pit

/* 3 = Teleporter

/* 4 = Stairway

/* 5 = Alter

/* 6 = Fountain

/* 7 = Cube

/* 8 = Throne

/* 9 = Box

/* Get items one level up

6000 X=CX:Y=CY:Z=CZ-ONE:GOSUB 10010:J=USR(FNS,HI):

/* Get item on current level

I=USR(FNS,LC)

/* If on level one, nothing one level up */

6005 IF CZ=ONE THEN J=ZERO

/* Be sure special item is less than 9 */

6010 Q=FOUR+FIVE:IF I>Q THEN I=I-Q:GOTO 6010

6012 IF J>Q THEN J=J-Q:GOTO 6012


```
6200 GOSUB 16600:PRINT "
```

```
":GOSUB 16500:PRINT "You feel heavy for a moment"  
6210 GOSUB PAUSE:CZ=CZ-ONE:GOTO NEWP
```

```
/*  
*****
```

```
/* Pit
```

```
*****
```

```
/* On 50th level, can't go any deeper
```

```
6300 IF CZ=50 THEN 6200
```

```
6302 GOSUB 16600:PRINT "□□□":GOSUB 16500:PRINT "You see a pit"
```

```
/* Check for levitate spell
```

```
6303 IF SF(FIVE)>ZERO THEN PRINT "You are hovering above a pit":GOTO 6310
```

```
/* RND(0-20) > Dexterity + Elven boot level
```

```
6305 IF INT(RND(ONE)*C20)>S(FOUR)+I(FIVE) THEN 6330
```

```
/* Ask if player wants to descend
```

```
6310 PRINT "Do you want to descend?";:GOSUB GTCHR:IF C$="Y" THEN 6320
```

```
6315 PRINT "No":GOSUB WTCLR:GOTO ARRW
```

```
6320 PRINT "Yes":GOTO 6335
```

```
/* Fell in pit. Handle damage and move down one level
```

```
6330 PRINT "You fall in!":L=THREE:GOSUB NEWP0:GOSUB PAUSE
```

```
6335 CZ=CZ+ONE:GOTO NEWP
```

```
/*  
*****
```

```
/* Teleporter
```

```
*****
```

```
/* Display message and clear monster stack
```

```
6400 GOSUB 16600:PRINT " * ":GOSUB 16500
```

```
6403 PRINT "ZZAP!! You've been teleported...":GOSUB 30200
```

```
/* Calculate new position
```

```
6405 IF USR(LG,ONE,CX+CY,ONE)=ZERO THEN CZ=CZ-ONE:IF
```

```
USR(LG,ONE,CX+CY,TWO)=TWO THEN CZ=CZ+TWO
```

```
6410 CX=CX+CZ*EIG+CY*13:CY=CY+CZ*SIX+CX*17
```

```
6415 Q=C20*TEN:IF CX>Q THEN CX=CX-Q:GOTO 6415
```

```
6420 IF CY>Q THEN CY=CY-Q:GOTO 6420
```

```
6425 IF CZ=ZERO THEN CZ=ONE
```

```
6430 IF CZ>FIVE*TEN THEN CZ=FIVE*TEN
```

```
6435 IF RND(ONE)>FOUR/FIVE THEN 6405
```

```
6440 GOTO NEWP
```

```
/*  
*****
```

```
/* Stairway
```

```
*****
```

```
/* Check for up stairway
```

```
6500 GOSUB 16600:IF J=FOUR THEN PRINT "[";
```

```
/* Check for down stairway
```

```
6505 IF I=FOUR THEN PRINT "]";
```

```
6510 GOSUB CLWND:PRINT "You have found a circular stairway"
```

/* There is an Inn above

6512 IF J=FOUR AND CZ=ONE THEN PRINT "You see LIGHT above"

/* Prompt the player

6515 PRINT "Do you want to ";:IF J=FOUR THEN PRINT "go Up, ";

6525 IF I=FOUR THEN PRINT "go Down, ";

6530 PRINT :PRINT "or Stay on the same level?";:GOSUB GTCHR

6532 IF C\$="&" THEN C\$="S"

/* Check if you can go in the select direction

6535 IF (I<>FOUR AND C\$="D") OR (J<>FOUR AND C\$="U") THEN 6550

/* Go up

6540 IF C\$="U" THEN PRINT "Up";:CZ=CZ-ONE:IF CZ>ZERO THEN GOTO NEWP

/* Go to Inn

6542 IF CZ<=ZERO THEN 6103

/* Go down

6545 IF C\$="D" THEN PRINT "Down";:CZ=CZ+ONE:GOTO NEWP

/* Stay

6547 IF C\$="S" THEN PRINT "Stay";:GOSUB CLWND:GOTO ARRW

6550 PRINT "???";:GOTO 6510

/* Alter

/* Display message

6600 GOSUB 16600:PRINT "□□□":GOSUB CLWND:PRINT "You have found a Holy Altar"

6605 PRINT "Press <RET> to worship";:GOSUB GTCHR:IF C\$=RT\$ THEN 6630

/* Don't workshop. 30% of the time create an undead monster

6610 IF RND(ONE)>SEV/TEN THEN GOTO ARRW

6615 PRINT :PRINT "Dirty Pagan TRASH!";:GOSUB 16600:PRINT "# "

6620 M=INT(RND(ONE)*C20+ONE):GOSUB 20700:IF UN=ZERO THEN 6620

6625 GOSUB WTCLR:GOTO 3007

/* Worship

6630 PRINT :PRINT "Press <RET> to donate money";:GOSUB GTCHR

6632 IF C\$<>RT\$ THEN 6610

/* Get amount of gold to donate

6634 PRINT :PRINT "How much gold?";:GOSUB 20800:GOSUB CLWND

6636 IF C>GD THEN PRINT "You don't have that much!";:GOTO 6615

/* If not enough gold, create a monster

6640 IF C<FIVE*TEN*CZ THEN PRINT "□";:GOTO 6615

/* Deduct gold, see if workshipping gives a bonus

6645 GD=GD-C:GOSUB RSTAT:IF RND(ONE)<C/(GD+C) THEN 6660

6655 PRINT "Thank you for your donation":GOSUB WTCLR:GOTO ARRW

/* Randomly increase a spell effect

```
6660 I=INT(RND(ONE)*SEV+ONE):IF SF(I)<ZERO THEN SF(I)=ZERO
6665 SF(I)=SF(I)+INT(RND(ONE)*TEN*TEN*C/(GD+C)+ONE)
6680 PRINT "You have been heard":GOSUB WTCLR:GOTO ARRW
```

```
/******
```

```
/* Fountain
```

```
/******
```

```
/* Display message
```

```
6700 GOSUB 16600:PRINT " ":GOSUB CLWND:PRINT "You have found a fountain"
```

```
/* Determine color of water
```

```
6701 C=INT(RND(ONE)*FIVE+ONE)
```

```
6702 PRINT "with running ";FNT$(C*FIVE-FOUR,C*FIVE);" water"
```

```
/* Prompt to drink
```

```
6705 PRINT "<RET> to drink some:":GOSUB GTCHR:IF C$=RT$ THEN 6715
```

```
/* Clear screen and continue game
```

```
6710 GOSUB CLWND:GOTO ARRW
```

```
/* 3/5 of the time something skip to special types of fountain
```

```
6715 GOSUB CLWND:IF RND(ONE)>THREE/FIVE THEN 6750
```

```
/* Skip healing effect
```

```
6717 IF RND(ONE)>ONE-C*THREE/C20 THEN 6730
```

```
/* Healing fountain. Add (3 * dungeon level) + 1 to hit points
```

```
6720 PRINT "You feel better":GOSUB PAUSE:I=INT(RND(ONE)*THREE*CZ+ONE)
```

```
6725 PRINT "You heal ";I;" hit points":CH=CH+I:IF CH>HP THEN CH=HP
```

```
6727 GOSUB RHITS:GOSUB WTCLR:GOTO ARRW
```

```
/* Skip poison fountain
```

```
6730 IF RND(ONE)>THREE*C/C20 THEN 6745
```

```
/* Poison Fountain. Subtract (3 * dungeon level) + 1 from hit points. Check if dead
```

```
6735 PRINT "It's POISON!!!":I=INT(RND(ONE)*THREE*CZ+ONE):PRINT "You lose ";I;" hit points"
```

```
6740 CH=CH-I:GOSUB RHITS:IF CH<ONE THEN 9000
```

```
6742 GOSUB WTCLR:GOTO ARRW
```

```
/* Got experience points
```

```
6745 GOSUB 20100:GOSUB RSTAT:GOSUB WTCLR:GOTO ARRW
```

```
/* Feel refreshed by no other effect
```

```
6750 MI$="You feel refreshed!":IF RND(ONE)>TWO/FIVE THEN PRINT MI$:GOSUB
```

```
WTCLR:GOTO ARRW
```

```
/* Check for drunk fountain
```

```
6752 IF RND(ONE)>ONE/TWO THEN 6780
```

```
/* Check for lose items fountain
```

```
6755 IF RND(ONE)>ONE/TWO THEN 6770
```

```
/* Magic fountain, increase number of spells
```

```
6760 PRINT "Magic power SURGES through your body":CS=CS+INT(RND(ONE)*FOUR*CZ+ONE)
```

```
6765 PRINT "You now have ";CS;" spells":GOSUB RSPLL:GOSUB WTCLR:GOTO ARRW
```

/* Handle lose item fountain. Remove all items

```
6770 PRINT "You have been dispossessed!!":FOR I=ONE TO TEN:I(I)=ZERO:NEXT I:GOSUB PAUSE
6775 GOSUB WTCLR:PRINT " }":GOSUB RSTAT:GOSUB 15000:GOSUB 30025:GOTO ARRW
```

/* Handle drunk fountain

```
6780 PRINT MI$:GOSUB WTCLR:PRINT "Actually you're DRUNK!!"
6785 Q=TEN+ONE:IF SF(Q)<ZERO THEN SF(Q)=ZERO
6786 SF(Q)=SF(Q)+INT(RND(ONE)*16+ONE):GOSUB 15000:GOSUB CLWND:GOTO ARRW
```

```
/******
```

/* Cube

```
/******
```

/* Display message

```
6800 GOSUB 16600:PRINT "□□ ":GOSUB CLWND:PRINT "You see a large gray misty cube"
6805 PRINT "<RET> to walk in:":GOSUB GTCHR:IF C$<>RT$ THEN GOTO ARRW
```

/* 80% of the time you can pick the level to go to

```
6810 IF RND(ONE)>ONE/FIVE THEN 6815
```

/* Goto random level

```
6812 CZ=INT(RND(ONE)*FIVE*TEN+ONE):GOTO 6820
```

/* Get level number to goto

```
6815 PRINT :PRINT "A number from 1 to 50:":GOSUB 20800:PRINT :IF C$="&" THEN 6812
6817 IF C<ONE OR C>FIVE*TEN THEN GOTO 6810
6818 CZ=C
6820 GOSUB 29000:POKE SP,TWO:POKE SP+ONE,ONE:PRINT "You float":PRINT " in
space....":GOTO NEWP
```

```
/******
```

/* Throne

```
/******
```

/*Show message

```
6900 GOSUB 16600:PRINT "□□ ":GOSUB CLWND:PRINT "You see a jewel encrusted throne"
6905 PRINT "Do you want to Pry some jewels,"
6910 PRINT "Sit down, Read the runes,":PRINT " or Ignore it: ";
6915 GOSUB GTCHR:IF C$="I" OR C$="&" THEN PRINT "Ignore":GOSUB WTCLR:GOTO ARRW
```

/* Pry jewels

```
6920 IF C$<>"P" THEN 6950
```

/* 30% of the time a monster appears

```
6925 PRINT "Pry":GOSUB WTCLR:IF RND(ONE)>SEV/TEN THEN 7030
```

/* 60% of the time nothing happens

```
6930 IF RND(ONE)>TWO/FIVE THEN 7025
```

/* Got the jewel, increase gold

```
6935 PRINT "They pop into your greedy hands!!":I=INT(RND(ONE)*TEN*TEN*TEN*CZ+ONE)
6940 PRINT "They are worth ";I;" gold":GD=GD+I:GOSUB RSTAT:GOSUB WTCLR:GOTO ARRW
```

/* Sit

```
6950 IF C$<>"S" THEN 6985
```


/* 30% of the time a monster appears

6955 PRINT "Sit";:GOSUB WTCLR:IF RND(ONE)>SEV/TEN THEN 7030

/* 40% of the time nothing happens

6960 IF RND(ONE)>THREE/FIVE THEN 7025

/* 60% of the time you are teleported

6965 IF RND(ONE)>TWO/FIVE THEN 6403

/* 50% of the time you loose 1/2 experiece

6970 PRINT "A loud ýGONGý sounds!";:GOSUB WTCLR:IF RND(ONE)<ONE/TWO THEN 6975

6973 EX=INT(EX/TWO):IF LV=ONE THEN EX=-ONE

6974 GOSUB 18000:GOTO ARRW

/* If your level is less then or equal to the dungeon level, then you get an experience bonus

6975 IF LV>CZ THEN PRINT "Nothing happens...";:GOTO 7010

6980 EX=INT(1000*TWO^LV+ONE/TWO):GOSUB 18000:GOTO ARRW

/* Read

6985 IF C\$<>"R" THEN 7015

6990 PRINT "Read";:GOSUB WTCLR

/* 30% of the time create a monster

6992 IF RND(ONE)>SEV/TEN THEN 7030

/* Determine success based on player's intelligence

6995 IF RND(ONE)<S(ONE)/C20 THEN 7005

/* Failed to read

7000 PRINT "You don't understand them...";:GOTO 7010

/* Read

7005 PRINT :PRINT "A mysterious magic grips you..":GOSUB 20200

7010 GOSUB WTCLR:GOTO ARRW

7015 PRINT "???";:GOSUB WTCLR:GOTO 6900

7025 PRINT "Nothing happens...";:GOTO 7010

7030 M=INT(RND(ONE)*C20+ONE):GOSUB 19700

7032 PRINT :PRINT "The ";M\$;" KING returns!!":GOSUB WTCLR:GOSUB 16600:GOSUB 20700

7035 PRINT "# ":ML=INT(RND(ONE)*CZ*FIVE)+FIVE:GOTO 3010

/* Box

/* Show box

7100 GOSUB 16600:PRINT " □ ":GOSUB CLWND

/* Prompt user to press button

7105 PRINT "You see a small box with four colored"

7110 PRINT "lights. Đush buttons or Égnore.";:GOSUB GTCHR

/* User chooses not to push button

7115 IF C\$<>"P" THEN PRINT "Ignore":GOSUB WTCLR:GOTO ARRW

/* Prompt use for which button to press

```
7120 PRINT "Push":GOSUB WTCLR:CB=ONE
7125 PRINT "Push Öed, Çreen, Ûellow, Âlue":PRINT "or Ótop:";
```

/* Get input and check if user decides not to push

```
7130 GOSUB GTCHR:IF C$="S" OR C$="&" THEN PRINT "Stop";:GOSUB WTCLR:GOTO ARRW
```

/* Find which button was pressed, put name in M\$

```
7135 Q=FOUR+TWO:FOR C=ONE TO FOUR:IF C$=B$(C*Q-FIVE,C*Q-FIVE) THEN M$=B$(C*Q-
FIVE,C*Q):GOTO 7145
7140 NEXT C:
```

/* Player didn't enter a valid button

```
PRINT "???:";GOSUB WTCLR:GOTO 7170
```

/* Print name of button that was pressed

```
7145 GOSUB 19705:PRINT M$:
```

/* Jump if wrong combination

```
IF B(CB)<>C THEN 7170
```

/* Next button in combination

```
7150 CB=CB+ONE:IF CB<FIVE THEN GOSUB WTCLR:GOTO 7125
```

/* Opened box

```
7155 PRINT "It opens!!!! ";:GOSUB WTCLR:PRINT "Inside you find jewels worth"
```

/* Calculate gold in box

```
7160 GOSUB 19800:I=INT(RND(ONE)*20000*CZ^TWO+ONE):PRINT I;" in
gold!":GD=GD+I:GOSUB RSTAT
7165 GOSUB CLWND:GOTO ARRW
```

/* Calculate and display damage done by box

```
7170 I=INT(RND(ONE)*TWO*CZ+ONE):PRINT "An electric bolt shoots through you!!"
7175 GOSUB WTCLR:PRINT "You suffer ";I;" points damage":CH=CH-I:GOSUB RHITS
```

/* Check for death

```
7180 IF CH<ONE THEN 9000
7185 GOSUB WTCLR:GOTO ARRW
```

ARRW:

```
8000 M=ZERO:GOSUB CLWND
```

/* Get input from player

```
8005 PRINT "->":GOSUB GTCHR:IF C$="&" THEN C$="S"
```

/* See if it's a valid command

```
8100 FOR C=ONE TO 13:IF CM$(C,C)=C$ THEN 8118
8110 NEXT C
8115 PRINT "--NO";:FOR I=ONE TO 60:NEXT I:GOTO ARRW
```

```
8118 IF SF(11)>ZERO AND C<SIX THEN PRINT "You're confused -
>":C=INT(RND(ONE)*FIVE+ONE)
```

/* Jump to command

```
8120 ON C GOTO 8150,8200,8250,8300,8350,8800,8700,8900,8970,8600,8910,8925,8945
```

/* W = North

8150 Q=USR(FNUP,LC):IF Q>TWO AND SF(EIG)<ONE OR CY=ONE THEN 8115
8155 PRINT "NORTH";:CY=CY-ONE:GOSUB 30100:GOTO NEWP

/* X = South

8200 Q=USR(FNUP,P(TWO,ONE)):IF Q>TWO AND SF(EIG)<ONE OR CY=C20*TEN THEN 8115
8205 PRINT "SOUTH";:CY=CY+ONE:GOSUB 30100:GOTO NEWP

/* A = West

8250 Q=USR(FNLF,LC):IF Q>TWO AND SF(EIG)<ONE OR CX=ONE THEN 8115
8255 PRINT "WEST";:CX=CX-ONE:GOSUB 30100:GOTO NEWP

/* D = East

8300 Q=USR(FNLF,P(ONE,TWO)):IF Q>TWO AND SF(EIG)<ONE OR CX=C20*TEN THEN 8115
8305 PRINT "EAST";:CX=CX+ONE:GOSUB 30100:GOTO NEWP

/* S = Stay

8350 PRINT "STAY":FOR Q=332 TO 334:POKE SC+Q,ZERO:NEXT Q:

/* If you stay evaded monsters get closer

GOSUB MNSTR0:IF M<>ZERO THEN 3010
8355 SY=ZERO:GOTO NEWP

/* Save game

8600 PRINT "Store ";NM\$;" , ";:IF NM\$<>"DEMO" THEN 8610
8605 PRINT :PRINT "%Can not store DEMO character!":GOTO 8670
8610 MI\$="D":MI\$(THREE)=NM\$
8615 IF MI\$(LEN(MI\$))=" " AND LEN(MI\$)>ZERO THEN MI\$=MI\$(ONE,LEN(MI\$)-ONE):GOTO
8615
8616 MI\$(LEN(MI\$)+ONE)=" .PLR":TRAP 8620:OPEN #TWO,EIG,ZERO,MI\$:TRAP TRSR0:GOTO
8630
8620 PRINT :PRINT "%Error opening player file":CLOSE #TWO:GOSUB PAUSE:GOTO 8670
8630 PRINT #TWO;NM\$:PRINT #TWO;4.18:FOR I=ZERO TO FIVE:PRINT #TWO;S(I):NEXT I
8640 PRINT #TWO;LV:PRINT #TWO;GD:PRINT #TWO;TG:PRINT #TWO;EX:PRINT #TWO;CH
8645 PRINT #TWO;HP:PRINT #TWO;CX:PRINT #TWO;CY:PRINT #TWO;CZ:PRINT #TWO;SU
8650 PRINT #TWO;CS:FOR I=ONE TO TEN:PRINT #TWO;I(I):PRINT #TWO;SF(I):NEXT I
8655 PRINT #TWO;SF(11):FOR I=ONE TO C20:PRINT #TWO;FM(I):PRINT #TWO;FL(I)
8660 PRINT #TWO;FH(I):NEXT I:FOR I=ONE TO FOUR:PRINT #TWO;B(I):NEXT I
8663 FOR I=ZERO TO TEN*TEN:PRINT #TWO;EX(I):NEXT I
8665 CLOSE #TWO:PRINT NM\$;" stored":CLR :RUN
8670 GOSUB WTCLR:IF CZ=ZERO THEN 6125)
8675 GOTO ARRW

/* Q = Quit

8700 PRINT "QUIT":PRINT "Are you sure?":GOSUB GTCHR
8702 IF C\$<>"Y" THEN PRINT "NO":GOSUB WTCLR:GOTO ARRW
8710 PRINT "YES":PRINT "GOOD BYE CRUEL WORLD!!!":GOSUB PAUSE:GOTO 9000

/* Help

8800 GOSUB 29000:POKE SP,ZERO:POKE SP+ONE,ZERO:PRINT "Commands are":PRINT
8805 PRINT "× Move NORTH":PRINT "Á Move WEST"
8810 PRINT "Ø Move SOUTH":PRINT "À Move EAST"
8815 PRINT "Ó Stay here"
8820 PRINT "Ã Cast a spell":PRINT "Ð Re-plot screen"
8825 PRINT "È Help screen (this)"
8830 PRINT "ˆÓ Store character":PRINT "ˆÒ Read Scroll Rescue"

```

8835 PRINT "^È Drink Healing pot.":PRINT "^Ð Drink Strength pot."
8837 PRINT "(^S means control-S)"
8840 PRINT :PRINT "  Movement cluster:"
8845 PRINT "    × North"
8850 PRINT "  West Á Ä East"
8855 PRINT "    South Ø"
8896 GOSUB CLWND:PRINT "Hit any key to continue...";:GOSUB GTCHR:GOSUB WTCLR
8898 GOSUB 15000:GOTO ARRW

```

/* Replot

```

8900 PRINT "Re-plot":GOSUB PAUSE:PRINT " }";:GOSUB RSTAT:GOSUB 15000
8905 GOSUB 30025:GOTO ARRW

```

/* Scroll of Rescue

```

8910 PRINT "Use Scroll of Rescue"
8915 Q=FOUR+FOUR:IF I(Q)<ONE THEN 8920
8917 I(Q)=I(Q)-ONE:GX=TWO:CY=70:CZ=ONE:PRINT "****ZAP!!****":GOSUB PAUSE:GOSUB
30200
8918 GD=ZERO:GOSUB RSTAT:GOTO NEWP
8920 PRINT "You don't have one!!"
8922 GOSUB WTCLR:GOTO ARRW

```

/* Drink healing potion

```

8925 Q=FOUR+FIVE:PRINT "Drink Healing Potion":IF I(Q)<ONE THEN 8920
8935 I(Q)=I(Q)-ONE:GOSUB RSTAT:CH=CH+INT(RND(ONE)*C20+ONE):IF CH>HP THEN CH=HP
8940 PRINT "You feel BETTER!":GOSUB RHITS:GOTO 8922

```

/* Drink strength potion

```

8945 PRINT "Drink Potion of Strength":IF I(TEN)<ONE THEN 8920
8950 IF SF(ONE)<ZERO THEN SF(ONE)=ZERO
8955 SF(ONE)=SF(ONE)+INT(RND(ONE)*C20+TEN+ONE):PRINT "Strength flows through your
body"
8960 I(TEN)=I(TEN)-ONE:GOSUB RSTAT:GOTO 8922

```

/* Cast

```

8970 D=ZERO:GOTO 21000

```

/* Player has died

```

9000 GOSUB CLWND:PRINT "You DIED!!":GOSUB WTCLR:IF SF(TEN)>ZERO THEN 27205
9002 PRINT " } □□□□ Another ";:IF LV<FOUR THEN PRINT "not so ";
9005 PRINT "mighty adventurer":PRINT "bites the dust□□□□"
9010 PRINT "Do you want to try again?";
9012 GOSUB GTCHR:IF C$="N" THEN 9020
9013 IF C$="&" THEN 9012
9015 PRINT "YES":CLOSE #ONE:CLR :RUN
9020 PRINT "NO":PRINT "□□So long.....":GOTO 32767

```

```

/*****

```

/* Generate map

```

/*****

```

```

10010 Q=X*XO+Y*YO+Z*ZO+X*YO+Y*ZO+Z*XO:

```

/* HI = Q & 0xFF

```

HI=USR(LG,ONE,Q,TF-ONE):

```

Q=X*Y*ZO+Y*Z*XO+Z*X*YO

/* IF Q & 0x03 <> 0 then goto 10030

10020 IF USR(LG,ONE,Q,THREE)<>ZERO THEN 10030

/* Q = Q << 2

10022 Q=Q/FOUR:

/* Q = Q & 0x0F

Q=USR(LG,ONE,Q,15):

/* If Q > 9 then Q = Q - 9

IF Q>NIN THEN Q=Q-NIN

/* HI = HI + (Q >>8)

10024 HI=HI+Q*TF

/* If at left or right edge of maze turn on left wall

10030 IF X=ONE OR X=201 THEN HI=USR(LG,TWO,HI,12)

/* if at top of bottom of maze turn on top wall

10035 IF Y=ONE OR Y=201 THEN HI=USR(LG,TWO,HI,THREE)

10040 HI=INT(HI):RETURN

/* Plot upper wall

UPPLT:

10050 IF W<TWO THEN RETURN

/* Plot wall

10055 FOR Q=ZERO TO SIX:POKE SC+LC+Q,C128:NEXT Q:IF W>TWO THEN RETURN

/* Plot door

10060 FOR Q=TWO TO FOUR:POKE SC+LC+Q,82:NEXT Q:RETURN

10070 LC=496:W=USR(FNUP,P(TWO,TWO)):GOSUB 10050

/* Plot left wall

LFPLT:

10075 IF W<TWO THEN RETURN

/* Plot wall

10080 FOR Q=ZERO TO SIX:POKE SC+LC+Q*40,C128:NEXT Q:IF W>TWO THEN RETURN

/* Plot door

10085 FOR Q=TWO TO FOUR:POKE SC+LC+Q*40,124:NEXT Q:RETURN

14020 LC=FOUR:W=USR(FNLF,P(ZERO,ZERO)):GOSUB 10075

/* Redraw maze

15000 Z=CZ:

FOR Q2=ZERO TO THREE:

 Y=CY+Q2-ONE:

 FOR Q1=ZERO TO THREE:

 X=CX+Q1-ONE:

GOSUB 10010

15005 P(Q2,Q1)=HI:

NEXT Q1:

NEXT Q2:

GOSUB 29000:GOSUB 16500:PRINT "↑↑"

/* Display any spells in effect

15007 SS=-ONE:FOR I=ONE TO 11:IF SF(I)<ONE THEN 15011

15009 IF PEEK(SP+ONE)>19 THEN PRINT :PRINT "↑↑";

15010 PRINT SPF\$(I*FOUR-THREE,I*FOUR);":":

15011 NEXT I:GOSUB 16500:

/* Plot section 0,0 upper wall

IF USR(FNUP,P(ONE,ONE))>ONE THEN 15015

15012 IF USR(FNLF,P(ZERO,ONE))>ONE THEN 15015

15013 LC=FOUR:W=USR(FNUP,P(ZERO,ZERO)):GOSUB UPPLT

/* Plot section 0,0 left wall

15015 IF USR(FNUP,P(ONE,ZERO))>ONE THEN 15025

15016 IF USR(FNLF,P(ONE,ONE))>ONE THEN 15025

15020 LC=FOUR:W=USR(FNLF,P(ZERO,ZERO)):GOSUB LFPLT

/*Plot section 0,1 upper and left wall and section 0,2 left wall

15025 IF USR(FNUP,P(ONE,ONE))>ONE THEN 15040

15030 LC=TEN:W=USR(FNUP,P(ZERO,ONE)):GOSUB

UPPLT:W=USR(FNLF,P(ZERO,ONE)):GOSUB LFPLT

15035 LC=16:W=USR(FNLF,P(ZERO,TWO)):GOSUB LFPLT

/*Plot section 0,2 upper wall

15040 IF USR(FNUP,P(ONE,ONE))>ONE THEN 15045

15041 IF USR(FNLF,P(ZERO,TWO))>ONE THEN 15045

15042 LC=16:W=USR(FNUP,P(ZERO,TWO)):GOSUB UPPLT

/* Plot section 0,3 left wall

15045 IF USR(FNLF,P(ONE,TWO))>ONE THEN 15055

15046 IF USR(FNUP,P(ONE,TWO))>ONE THEN 15055

15050 LC=22:W=USR(FNLF,P(ZERO,THREE)):GOSUB LFPLT

/* Plot section 1,2 upper wall, section 1,3 left wall, section 2,2 upper wall

15055 IF USR(FNLF,P(ONE,TWO))>ONE THEN 15080

15060 LC=TF:W=USR(FNUP,P(ONE,TWO)):GOSUB

UPPLT:LC=262:W=USR(FNLF,P(ONE,THREE)):GOSUB LFPLT

15070 LC=496:W=USR(FNUP,P(TWO,TWO)):GOSUB UPPLT

/* Plot section 3,2 upper wall

15080 IF USR(FNUP,P(TWO,ONE))>ONE THEN 15085

15081 IF USR(FNLF,P(TWO,TWO))>ONE THEN 15085

15082 LC=736:W=USR(FNUP,P(THREE,TWO)):GOSUB UPPLT

/* Plot section 2,3 left wall

15085 IF USR(FNLF,P(ONE,TWO))>ONE THEN 15100

15086 IF USR(FNUP,P(TWO,TWO))>ONE THEN 15100

15090 LC=502:W=USR(FNLF,P(TWO,THREE)):GOSUB LFPLT

/* Plot section 2,2 left wall, 3,1 upper wall, and 2,1 left wall

```
15100 IF USR(FNUP,P(TWO,ONE))>ONE THEN 15120
15105 LC=496:W=USR(FNLF,P(TWO,TWO)):GOSUB LFPLT
15110 LC=730:W=USR(FNUP,P(THREE,ONE)):GOSUB
UPPLT:LC=490:W=USR(FNLF,P(TWO,ONE)):GOSUB LFPLT
```

/* Plot section 3,0 upperwall

```
15120 IF USR(FNUP,P(TWO,ONE))>ONE THEN 15125
15121 IF USR(FNLF,P(TWO,ONE))>ONE THEN 15125
15122 LC=724:W=USR(FNUP,P(THREE,ZERO)):GOSUB UPPLT
```

/* Plot section 2,0 left wall

```
15125 IF USR(FNLF,P(ONE,ONE))>ONE THEN 15140
15126 IF USR(FNUP,P(TWO,ZERO))>ONE THEN 15140
15130 LC=484:W=USR(FNLF,P(TWO,ZERO)):GOSUB LFPLT
```

/* Plot section 2,0 upper wall, section 1,0 left wall, and 1,0 upper wall

```
15140 IF USR(FNLF,P(ONE,ONE))>ONE THEN 15155
15145 LC=484:W=USR(FNUP,P(TWO,ZERO)):GOSUB UPPLT
15150 LC=244:W=USR(FNLF,P(ONE,ZERO)):GOSUB LFPLT:W=USR(FNUP,P(ONE,ZERO)):GOSUB
UPPLT
```

/* Plot section 1,1 upper and left walls

```
15155 LC=250:W=USR(FNLF,P(ONE,ONE)):GOSUB LFPLT:W=USR(FNUP,P(ONE,ONE)):GOSUB
UPPLT
```

/* Plot section 1,2 left and section 2,1 upper wall

```
15160 LC=TF:W=USR(FNLF,P(ONE,TWO)):GOSUB
LFPLT:LC=490:W=USR(FNUP,P(TWO,ONE)):GOSUB UPPLT
```

/* Draw player

```
15200 POKE SC+373,5:LC=P(ONE,ONE):
```

/* No light spell in effect

```
IF SF(THREE)<=ZERO THEN SETCOLOR TWO,ZERO,ZERO:RETURN
```

/* If Light spell in effect then show items in surrounding rooms

```
15300 SETCOLOR TWO,ZERO,FOUR:
```

/* NW room

/* No item do next room

```
IF USR(FNS,P(ZERO,ZERO))=ZERO THEN 15320
```

/* Check for obstructed view

```
15305 IF USR(FNUP,P(ONE,ZERO))<TWO THEN IF USR(FNLF,P(ONE,ONE))<TWO THEN 15315
15310 IF USR(FNUP,P(ONE,ONE))>ONE THEN 15320
15311 IF USR(FNLF,P(ZERO,ONE))>ONE THEN 15320
15315 POKE 40126,C128
```

/* N room

```
15320 IF USR(FNS,P(ZERO,ONE))<>ZERO THEN IF USR(FNUP,P(ONE,ONE))<TWO THEN POKE
40132,C128
```

/* NE room

```
15340 IF USR(FNS,P(ZERO,TWO))=ZERO THEN 15360
```

```
15345 IF USR(FNUP,P(ONE,ONE))<TWO THEN IF USR(FNLFP,P(ZERO,TWO))<TWO THEN 15355
15350 IF USR(FNUP,P(ONE,TWO))>ONE THEN 15360
15351 IF USR(FNLFP,P(ONE,TWO))>ONE THEN 15360
15355 POKE 40138,C128
```

/* E room

```
15360 IF USR(FNS,P(ONE,TWO))<>ZERO THEN IF USR(FNLFP,P(ONE,TWO))<TWO THEN POKE
40378,C128
```

/* SE room

```
15380 IF USR(FNS,P(TWO,TWO))=ZERO THEN 15400
15385 IF USR(FNUP,P(TWO,TWO))<TWO THEN IF USR(FNLFP,P(ONE,TWO))<TWO THEN 15395
15390 IF USR(FNUP,P(TWO,ONE))>ONE THEN 15400
15391 IF USR(FNLFP,P(TWO,TWO))>ONE THEN 15400
15395 POKE 40618,C128
```

/* S room

```
15400 IF USR(FNS,P(TWO,ONE))<>ZERO THEN IF USR(FNUP,P(TWO,ONE))<TWO THEN POKE
40612,C128
```

/* SW room

```
15420 IF USR(FNS,P(TWO,ZERO))=ZERO THEN 15440
15425 IF USR(FNUP,P(TWO,ZERO))<TWO THEN IF USR(FNLFP,P(ONE,ONE))<TWO THEN 15435
15430 IF USR(FNUP,P(TWO,ONE))>ONE THEN 15440
15431 IF USR(FNLFP,P(TWO,ONE))>ONE THEN 15440
15435 POKE 40606,C128
```

/* W room

```
15440 IF USR(FNS,P(ONE,ZERO))<>ZERO THEN IF USR(FNLFP,P(ONE,ONE))<TWO THEN POKE
40366,C128
```

```
15499 RETURN
```

```
/******
```

/* GTCHR: Read a character from the keyboard

```
/******
```

/* Loop for 50 counts or until key is pressed

```
16000 C$=STR$(Q): FOR Q=ONE TO 50: IF PEEK(764)=255 THEN 16010
```

/* Get the key that was pressed and put it in C\$

```
16005 GET #ONE,Q:C$=CHR$(Q):RETURN
```

/* Loop back and try again

```
16010 NEXT Q:IF NM$="DEMO " THEN GOTO GTCHR
```

/* Return & if no key was pressed

```
16015 C$="&":RETURN
```

```
/******
```

/* Get multi character input from player

```
/******
```

```
16200 D$=""
```

```
16205 GOSUB GTCHR:IF C$="&" THEN 16205
```

```
16210 IF C$=RT$ THEN RETURN
```

```
16215 IF C$<>CHR$(126) THEN 16235
```



```
16220 IF LEN(D$)=ZERO THEN 16205
16225 PRINT "← ←";IF LEN(D$)<TWO THEN 16200
16230 D$=D$(ONE,LEN(D$)-ONE):GOTO 16205
16235 IF LEN(D$)>=30 OR ((C$<"ZERO" OR C$>"9") AND (C$<"A" OR C$>"Z")) THEN 16205
16240 D$(LEN(D$)+ONE)=C$:PRINT C$;GOTO 16205
```

/* Position cursor to display a message

```
16500 POKE SP,C20:POKE SP+ONE,ZERO:PRINT "↑":RETURN
```

/* Position cursor at 8,11

```
16600 POKE SP,EIG:POKE SP+ONE,11:RETURN
```

/* Clear text window

```
17000 POKE SP,ZERO:PRINT :QI=USR(1777):GOSUB 16500:RETURN
```

/* Pause, then clear text window

```
17500 GOSUB PAUSE:GOTO CLWND
```

```
/******
```

/* Check for change of level

```
/******
```

/* Check if enough experience to go up a level

```
18000 Q=TEN*TEN*TEN:IF EX<Q*TWO^LV THEN 18040
18010 GOSUB CLWND:PRINT "You went up a
level!";LV=LV+ONE:J=INT(RND(ONE)*S(THREE)+ONE)
```

/* Increase hit points

```
18015 CH=CH+J:HP=HP+J:IF EX>Q*TWO LV THEN EX=INT(Q*(TWO LV)-ONE/TWO)
```

/* Increase spell points

```
18017 CS=CS+LV:SU=SU+LV
18020 GOSUB RSTAT:GOSUB WTCLR:PRINT "You gain ";J;" hit points":RETURN
```

/* Check for drop in level

```
18040 IF LV=ONE AND EX>=ZERO THEN RETURN
18050 IF EX>=Q*TWO^(LV-ONE) THEN RETURN
```

/* Decrease spell points

```
18055 CS=CS-LV:SU=SU-LV:IF CS<ZERO THEN CS=ZERO
18060 PRINT "You go down a level!";LV=LV-ONE:J=INT(RND(ONE)*S(THREE)+ONE)
```

/* Decrease hit points

```
18070 CH=CH-J:HP=HP-J:GOSUB RSTAT:GOSUB WTCLR:PRINT "You lose ";J;" hit points"
```

/* If hit points less than zero, then player is dead

```
18075 IF CH>ZERO AND LV>ZERO THEN RETURN
18080 GOSUB PAUSE:GOTO 9000
```

/* Pause

```
19000 FOR Q=ONE TO 45:NEXT Q:RETURN
```

/* Short pause

```
19500 FOR Q=ONE TO FOUR:NEXT Q:RETURN
```

/* Get monster name

19700 M\$=MO\$(M*EIG-SEV,M*EIG)

/* Strip trailing spaces

19705 IF M\$(LEN(M\$))=" " THEN M\$=M\$(ONE,LEN(M\$)-ONE):GOTO 19705

19710 RETURN

/* Initialize combination to open box

19800 FOR Q=ONE TO FOUR:B(Q)=INT(RND(ONE)*FOUR+ONE):NEXT Q:RETURN

/* Handle damage

20000 D=INT(RND(ONE)*L*SIX+ONE):PRINT "You suffer ";D;" hit points":CH=CH-D

20005 IF CH>ZERO THEN GOSUB RHITS:RETURN

20010 GOSUB RSTAT:GOSUB WTCLR:GOTO 9000

/* Gain/lose experience points

20100 I=INT(RND(ONE)*500*CZ+ONE):PRINT "You just ";

/* 50% of the time you should lose experience points. This line appears to have a bug, I=-I1 should be I=-I to deduct experience. The way it is you I will always be zero so you won't lose points.

20110 IF RND(ONE)>ONE/TWO THEN PRINT "lost ";;I=-I1:GOTO 20120

20115 PRINT "gained ";

20120 PRINT ABS(I);" experience points":EX=EX+I:GOSUB 18000:RETURN

20200 I=INT(RND(ONE)*6):IF RND(ONE)>ONE/TWO THEN 20220

20210 IF S(I)=18 THEN 20200

20215 PRINT "Your ";S\$(I*THREE+ONE,I*THREE+THREE);" goes up";:S(I)=S(I)+ONE:GOTO 20240

20220 IF S(I)=THREE THEN 20200

20225 PRINT "Your ";S\$(I*THREE+ONE,I*THREE+THREE);" goes down";:S(I)=S(I)-ONE

20240 PRINT " by 1":GOSUB RSTAT:GOSUB PAUSE:RETURN

20250 K=PEEK(SP):POKE SP,FIVE:POKE SP+ONE,ZERO:EN=TWO:GOTO 20322

20260 K=PEEK(SP):POKE SP,FOUR:POKE SP+ONE,ZERO:EN=THREE:GOTO 20320

/* Display stats

20300 EN=ONE:K=PEEK(SP):POKE SP,ZERO:POKE SP+ONE,ZERO

20301 PRINT CR\$;NM\$(ONE,SEV);" LVL ";LV;" "

20302 PRINT CR\$;"STR ";S(ZERO);" ";;POKE SP+ONE,31:PRINT "CON ";S(THREE);" "

20305 PRINT CR\$;"INT ";S(ONE);" ";;POKE SP+ONE,31:PRINT "DEX ";S(FOUR);" "

20310 PRINT CR\$;"WIS ";S(TWO);" ";;POKE SP+ONE,31:PRINT "CHR ";S(FIVE);" "

20320 PRINT CR\$;"HP ";CH;" ";HP;" "

20321 IF EN=THREE THEN 20396

20322 PRINT CR\$;"SU ";CS;" ";SU;" "

20323 IF EN=TWO THEN 20396

20325 PRINT CR\$;"EX ";EX;" "

20330 PRINT CR\$;"GD ";GD;" "

20335 RESTORE 28310:FOR I=ONE TO TEN:READ MA\$:IF I<FOUR THEN IF I(I)>=ZERO THEN

20345

20340 IF I(I)<ONE THEN 20380

20345 PRINT CR\$;" ";:IF I>SEV THEN 20365

20350 PRINT MA\$;:IF I(I)>ZERO THEN PRINT " +";I(I);" ";;GOTO 20355

20352 PRINT " ";

20355 PRINT :GOTO 20380

20365 PRINT I(I);" ";MA\$;" "

20380 NEXT I

```
20390 PRINT CR$;" ";
20396 IF K<THREE THEN K=THREE
20398 POKE SP,K-ONE:PRINT :RETURN
```

/* Clear prompt area and message window

```
20600 POKE SP,18:PRINT :PRINT CR$;" "
20605 GOSUB CLWND:POKE SC+332,ZERO:RETURN
```

/* Determine if monster is undead

```
20700 UN=ZERO:IF M=THREE OR M=FIVE OR M=EIG OR M=TEN OR M=13 OR M=17 OR M=18
THEN UN=ONE
20705 RETURN
```

/* Get a numeric value from the player

```
20800 D$=""
20805 GOSUB GTCHR:IF C$<>CHR$(126) THEN 20824
20810 IF D$="" THEN 20805
20815 PRINT "- ";:IF LEN(D$)=ONE THEN 20800
20820 D$=D$(ONE,LEN(D$)-ONE):GOTO 20805
20824 IF C$=RT$ AND D$="" THEN D$="0"
20825 IF C$=RT$ THEN C=VAL(D$):RETURN
20826 IF C$="&" THEN C=ZERO:RETURN
20827 IF LEN(D$)>NIN THEN 20805
20828 IF C$="-" AND D$="" THEN 20835
20830 IF C$<"0" OR C$>"9" THEN 20805
20835 PRINT C$;D$(LEN(D$)+ONE)=C$:GOTO 20805
```

```
20900 GOSUB 16500:PRINT "You have not been noticed..."
20905 PRINT "<RET> to approach:";:GOSUB GTCHR
20910 GOSUB CLWND:IF C$=CHR$(155) THEN 3007
20915 POKE SC+332,0:GOTO TRSR
```

/* Prompt for spell level

```
21000 PRINT "Cast":GOSUB CLWND:PRINT "Spell level:";:GOSUB GTCHR:PRINT
C$:MI$="0":MI$(TWO)=C$:C=VAL(MI$)
```

/* Check spell level

```
21002 IF C>ZERO AND C<=INT(LV/THREE)+ONE AND C<SEV THEN 21010
21004 IF C=ZERO THEN 21910
21005 PRINT "You don't have that level spells!":GOSUB PAUSE:GOTO 21910
```

/* Check if you have enough spell units

```
21010 IF C>CS THEN PRINT "You don't have enough spell units!":GOTO 21900
```

/* Prompt for spell

```
21020 PRINT "Spell( = to list):";:GOSUB GTCHR:IF C$=RT$ OR C$="&" THEN 21910
21025 IF C$<"1" OR C$>"6" THEN C$=""
21030 IF C$="" THEN 21040
```

```
21035 CS=CS-C:GOSUB RSPLL:POKE SP+ONE,18:GOTO 21050
```

/* Display spell list

```
21040 GOSUB CLWND:PRINT "□":S=ONE:GOSUB 28000:FOR I=ONE TO THREE:PRINT I;"
";SP$:READ SP$:NEXT I
```

```
21045 PRINT "□□□";FOR I=ONE TO THREE:PRINT CR$(ONE,C20);I+THREE;" ";SP$:READ
SP$:NEXT I
21046 PRINT "Press any key to continue...";GOSUB GTCHR:GOSUB CLWND
```

```
21047 IF C$<"1" OR C$>"6" THEN 21020
21048 GOTO 21035
```

```
21050 S=VAL(C$):GOSUB 28000:PRINT SP$:GOTO 21000+C*1000+S*100
```

```
21310 PRINT "□The ";M$;" doesn't hear...":GOTO 21900
```

/* Handle spells that damage a monster

```
21700 MH=MH-I:PRINT "It suffers ";I;" hit points":IF MH>ZERO THEN 21900
21705 GOTO MOND
21750 PRINT "Not in melee!!":GOSUB WTCLR:GOTO 3300
```

/* Cast a combat spell when not in combat

```
21800 PRINT "You just wasted a combat spell!"
21900 GOSUB WTCLR:IF D=ONE THEN 3300
21905 GOTO ARRW
```

```
21910 GOSUB CLWND:IF D=ONE THEN 3100
21915 GOTO ARRW
21920 GOSUB WTCLR:GOSUB 20600:GOTO TRSR
21930 PRINT "Undead are already dead!!":GOTO 21900
```

/* Magic Missile Spell

```
22100 GOSUB WTCLR:IF D=ZERO THEN 21800
22105 I=INT(RND(ONE)*8+FIVE):GOTO 21700
```

/* Sleep Spell

```
22200 GOSUB WTCLR:IF D=ZERO THEN 21800
```

/* Check for undead, they don't sleep

```
22202 IF UN=ONE THEN PRINT "Undead don't sleep!":GOTO 3300
```

/* If D20 < Intelligence then monster doesn't sleep

```
22205 IF INT(RND(ONE)*C20+ONE)>S(ONE) THEN PRINT "The ";M$;" isn't sleepy!":GOTO 3300
```

/* Monster is asleep.

```
22210 PRINT "The ";M$;" is sleeping":PRINT "Press <RET> to kill:":GOSUB GTCHR
22215 IF C$<>RT$ THEN GOSUB CLWND:GOTO 3710
```

/* 4/5th of the time the monster is killed, 1/5th it wakes up

```
22220 IF RND(ONE)>ONE/FIVE THEN GOTO MOND
22250 PRINT "It woke up!!":GOSUB PAUSE:GOTO 3300
```

/* Cure light wounds spell, Gain 1-9 Hit Points

```
22300 I=INT(RND(ONE)*EIG+ONE):PRINT "You feel better":CH=CH+I
22305 IF CH>HP THEN CH=HP
22310 GOSUB RHITS:GOTO 21900
```

/* Light spell. Increase light level to 5 - 15

```
22400 T=THREE:U=TEN+ONE:SETCOLOR TWO,ZERO,FOUR
```

/* Set length of spell effect, used by many spell routines

```
22402 IF SF(T)<ZERO THEN SF(T)=ZERO
22405 SF(T)=SF(T)+INT(RND(ONE)*U+FIVE):GOTO 21900
```

/* Turn Undead spell

```
22500 GOSUB WTCLR:IF D=ZERO THEN 21800
```

/* Check if Monster is undead

```
22505 IF ONE=UN THEN 22515
22510 PRINT "The ";M$;" is insulted":PRINT "at being called undead":GOTO 21900
```

/* Determine success/failure based on Intelligence

```
22515 IF RND(ONE)<S(TWO)/C20+LV/C20-ML/C20 THEN 22525
22520 PRINT "The ";M$;" listens with deaf ears":GOTO 21900
22525 ML=INT((ML/TWO)+ONE/TWO):PRINT "It runs in fear!!":GOTO 3223
```

/* Protection from evil spell

```
22600 T=FOUR:U=TEN+ONE:GOTO 22402
```

/* Web spell

```
23100 GOSUB WTCLR:IF D=ZERO THEN 21800
23105 IF INT(RND(ONE) TWO*C20+ML)>S(ONE) THEN PRINT "The ";M$;" dodges aside!":GOTO
3300
23110 PRINT "The ";M$;" is webbed!":PRINT "Press <RET> to kill."::GOSUB GTCHR
23115 IF C$<>RT$ THEN GOSUB CLWND:GOTO 3710
23120 IF RND(ONE)-ML/C20>ONE/TWO THEN GOTO MOND
23125 PRINT "It broke free!!":GOSUB PAUSE:GOTO 3300
```

/* Levitate spell

```
23200 T=FIVE:U=C20+ONE:GOTO 22402
```

/* Cause light wounds spell

```
23300 GOSUB WTCLR:IF D=ZERO THEN 21800
23305 I=INT(RND(ONE)*12+THREE):GOTO 21700
```

/* Detect traps spell

```
23400 T=TWO:U=C20+ONE:GOTO 22402
```

/* Charm spell

```
23500 GOSUB CLWND:IF D=ZERO THEN 21800
```

/* Can't charm undead

```
23502 IF UN=ONE THEN PRINT "The undead ignore your wiles!":GOTO 3300
23505 IF INT((RND(ONE) TWO)*C20+ONE)>S(FIVE) THEN PRINT "The ";M$;" resists you!":GOTO
3300
23510 PRINT "The ";M$;" is charmed":PRINT "Press <RET> to kill."::GOSUB GTCHR
23515 GOTO 23115
```

/* Strength

```
23600 T=ONE:U=C20+ONE:GOTO 22402
```

/* Lightning bolt spell

```
24100 GOSUB CLWND:SETCOLOR TWO,SIX,TEN:PRINT "ZZZZAAAPPP!!!":SETCOLOR
TWO,ZERO,ZERO:IF D=ZERO THEN 21800
```

/* Determine damage

24105 GOSUB PAUSE:I=INT(RND(ONE)*SIX*LV+15):GOTO 21700

/* Cure serious wounds spell.

/* Re-gain 1-25 hit points

24200 I=INT(RND(ONE)*24+ONE):PRINT "You feel better":CH=CH+I

24205 IF CH>HP THEN CH=HP

24210 GOSUB RHITS:GOTO 21900

/* Continual light

24300 T=THREE:U=C20+TEN+ONE:SETCOLOR TWO,ZERO,FOUR:GOTO 22402

/* Invisibility spell

24400 T=SIX:U=C20+ONE:SETCOLOR TWO,ZERO,TWO:GOTO 22402

/* Hold monster spell

24500 GOSUB WTCLR:IF D=ZERO THEN 21800

/* Check monster level against Intelligence to see if spell succeeds

24505 IF INT(RND(ONE)*C20+ML)>S(ONE) THEN PRINT "The ";M\$;" ignores you!":GOTO 3300

/* Prompt for kill

24510 PRINT "The ";M\$;" is held!":PRINT "Press <RET> to kill:":GOSUB GTCHR

24515 IF C\$<>RT\$ THEN GOSUB CLWND:GOTO 3710

/* Calculate chance of kill succeeding

24520 IF RND(ONE)>ML*6.0E-3 THEN GOTO MOND

/* Kill did not succeed

24525 PRINT "It broke free!":GOSUB PAUSE:GOTO 3300

/* Phantasmal Force spell

24600 GOSUB WTCLR:IF D=ZERO THEN 21800

24605 IF INT(RND(ONE)*22+ML)<S(ONE) THEN 24615

24610 PRINT "The ";M\$;" doesn't believe!":GOTO 3300

24615 PRINT "It believes!....Arrgh...":GOTO MOND

/* Pass wall Spell

25100 GOSUB WTCLR:IF D=ONE THEN 21750

/* Prompt for direction

25105 PRINT "Direction>":GOSUB GTCHR

25110 FOR I=ONE TO FOUR:IF CM\$(I,I)=C\$ THEN 25120

25115 NEXT I:PRINT "???:":GOSUB CLWND:GOTO 25105

/* Check if player is at the edge of the maze

25120 IF (I=ONE AND CY>ONE) OR (I=TWO AND CY<200) OR (I=THREE AND C>ONE) OR
(I=FOUR AND CX<200) THEN 25125

25122 PRINT "Only stone there....":GOTO 21900

/* Move to new location

25125 GOSUB 30200:PRINT "****DÏÏÆ****":GOTO 8105+50*I

/* Fireball spell

25200 GOSUB CLWND:SETCOLOR TWO,TWO,TWO:PRINT "WHOOOOOSH!!":SETCOLOR
TWO,ZERO,ZERO:IF D=ZERO THEN 21800

25205 PRINT "The ";M\$;" is burning!":I=INT(RND(ONE)*12*LV+15):GOSUB PAUSE:GOTO 21700

/* Cause serious wounds spell

25300 GOSUB WTCLR:IF D=ZERO THEN 21800
25305 I=INT(RND(ONE)*32+TEN):GOTO 21700

/* Flesh to stone spell

25400 GOSUB WTCLR:IF D=ZERO THEN 21800
25405 IF RND(ONE)>THREE/FIVE THEN PRINT "The ";M\$;" isn't affected":GOTO 3300
25410 PRINT "One stone statue....":GOTO MOND

/* Fear spell

25500 T=SEV:U=C20+TEN:GOTO 22402

/* Finger of death spell

25600 GOSUB WTCLR:PRINT "ÄÉÅ;iiii":IF D=ZERO THEN 21800
25603 IF UN=ONE THEN 21930
25605 GOSUB PAUSE:IF RND(ONE)>0.3+ML*0.04-LV*0.03 THEN GOTO MOND
25610 PRINT "The ";M\$;" laughs!":GOSUB WTCLR:GOTO 3300

/* Teleport spell

26100 GOSUB WTCLR:IF D=ONE THEN 21750
26105 PRINT "+North/South:":GOSUB 20800:NY=C:PRINT :PRINT "+East/West:":GOSUB 20800
26110 NX=C:PRINT :PRINT "+Up/Down:":GOSUB 20800:NZ=C:I=SQR(NX TWO+NY
TWO+(NZ*FIVE) TWO)-ONE/TEN
26115 PRINT :IF I>LV*FIVE THEN PRINT "Too far...try again":GOSUB WTCLR:GOTO 26105
26120 NX=CX+NX:NY=CY-NY:NZ=CZ-NZ
26125 IF NX>ZERO AND NX<201 AND NY>ZERO AND NY<201 AND NZ<51 THEN 26135
26130 PRINT "Only stone there....The spell fails..":GOTO 21900
26135 IF NZ<ONE THEN PRINT "Only thin air...The spell fails":GOTO 21900
26140 CX=NX:CY=NY:CZ=NZ:PRINT "****POOF!***":GOSUB 30200:GOTO NEWP

/* Astral walk spell

26200 T=EIG:U=T*TWO:GOTO 22402

/* Power word kill spell

26300 GOSUB WTCLR:IF D=ZERO THEN 21800
26305 PRINT "QWERTY!!!!":GOSUB PAUSE:IF UN=ZERO AND RND(ONE)<EIG/TEN THEN
GOTO MOND
26307 IF UN=ONE THEN 21930
26310 PRINT "□The ";M\$;" doesn't hear...":GOTO 21900

/* Ice storm spell

26400 GOSUB WTCLR:IF D=ZERO THEN 21800
26405 PRINT "BRRRR!!!!":I=60:GOTO 21700

/* Wall of fire spell

26500 GOSUB WTCLR:SETCOLOR TWO,TWO,TWO:PRINT "WWHHOOOOOSSHHH!!!"
26505 PRINT "A wall of fire appears about you":GOSUB PAUSE:GOSUB WTCLR:SETCOLOR
TWO,ZERO,ZERO:IF D=ZERO THEN 21800
26510 IF RND(ONE)>TWO/FIVE THEN PRINT "The ";M\$;" is gone":POKE SC+332,ZERO:GOTO
21920
26515 PRINT "The ";M\$;" walks through!!!":I=INT(RND(ONE)*TEN+TEN):GOTO 21700

/* Plague spell

26600 GOSUB WTCLR:IF D=ZERO THEN 21800
26605 IF UN=ONE THEN 21930

```
26610 PRINT "Black DEATH for the ";M$:GOSUB WTCLR:IF RND(ONE)>S(TWO)/C20 THEN
PRINT "It is immune!":GOTO 21900
26620 IF RND(ONE)*TWO<S(THREE)*0.03+ONE THEN GOTO MOND
26625 PRINT "The spell backfires!!":GOSUB WTCLR:GOTO 9000
```

/* Time stop spell

```
27100 GOSUB WTCLR:PRINT "Time is frozen, monsters cannot"
27105 PRINT "attack you":IF SF(NIN)<ZERO THEN SF(NIN)=ZERO
27110 SF(NIN)=SF(NIN)+INT(RND(ONE)*C20+FOUR):IF D=ONE THEN GOTO TRSR
27115 GOTO 21900
```

/* Raise dead spell

```
27200 T=TEN:U=T*FOUR:GOTO 22402
27205 ? "Raise DEAD":GOSUB WTCLR:S(THREE)=S(THREE)-ONE:SF(TEN)=ZERO:IF
RND(ONE)>S(THREE)*0.06 THEN 27220
27210 PRINT "It works!!":CH=HP:GOSUB RSTAT:GOTO 21900
27220 PRINT "It doesn't work!":GOTO 9000
```

/* Holy symbol spell

```
27300 GOSUB WTCLR:IF D=ZERO THEN 21800
27305 PRINT "□----":MI$=".O*□□□"
":FOR I=ONE TO EIG:PRINT MI$(I);"-":GOSUB 19500:NEXT I:PRINT
27307 GOSUB PAUSE:IF RND(ONE)<NIN/TEN THEN GOTO MOND
27310 PRINT "The ";M$;" doesn't see...":GOTO 21900
```

/* Word of recall spell

```
27400 GOSUB WTCLR:IF D=ONE THEN 21750
27405 FOR I=ZERO TO TEN:I(I)=ZERO:NEXT I:GD=ZERO:PRINT " }":GOSUB RSTAT:GOSUB
30200
27410 CX=TWO:CY=70:CZ=ONE:PRINT "****ÚÁĐ!!!****":GOSUB PAUSE
```

/* Restoration spell

```
27500 GOSUB WTCLR:PRINT "You feel BETTER!":CH=HP:GOSUB RHITS:GOTO 21900
```

/* Prismatic wall spell

```
27600 GOSUB WTCLR:PRINT "A scintillating shifting wall appears":J=ZERO:IF D=ZERO THEN
21800
27605 FOR I=60 TO 79:POKE SC+373,I:NEXT I:J=J+1:IF J<FOUR THEN 27605
27607 POKE SC+332,ZERO:POKE SC+373,56
27615 PRINT "The ";M$;" is gone":GOTO 21920
```

/* Get spell name, spell number in S

```
28000 RESTORE 28005+FIVE*C:FOR IQ=ONE TO S:READ SP$:NEXT IQ:RETURN
```

/* Level 1 spells

```
28010 DATA MAGIC MISSILE,SLEEP,CURE LIGHT WOUNDS,LIGHT,TURN
UNDEAD,PROT/EVIL
```

/* Level 2 spells

```
28015 DATA WEB,LEVITATE,CAUSE LIGHT WNDS,DETECT TRAPS,CHARM,STRENGTH
```

/* Level 3 spells

```
28020 DATA LIGHTNING BOLT,CURE SERIOUS WNDS,CONTINUAL
LIGHT,INVISIBILITY,HOLD MONSTER,PHANTSML FORCES
```

/* Level 4 spells

28025 DATA PASS WALL,FIREBALL,CAUSE SERIOUS WND,FLESH TO STONE,FEAR,FINGER OF DEATH

/* Level 5 spells

28030 DATA TELEPORT,ASTRAL WALK,POWER WORD KILL,ICE STORM,WALL OF FIRE,PLAGUE

/* Level 6 spells

28035 DATA TIME STOP,RAISE DEAD,HOLY SYMBOL,WORD OF RECALL,RESTORATION,PRISMATIC WALL

/* Generate random Inn description

28100 IN1=INT(IN1-INT(IN1/TEN)*TEN+ONE/TWO):IN2=INT(IN2-INT(IN2/TEN)*TEN+ONE/TWO)

28102 IN3=INT(IN3-INT(IN3/TEN)*TEN+ONE/TWO)

28105 RESTORE 28120:FOR IQ=ONE TO IN1:READ IN1\$:NEXT IQ

28110 RESTORE 28140:FOR IQ=ONE TO IN2:READ IN2\$:NEXT IQ

28115 RESTORE 28160:FOR IQ=ONE TO IN3:READ IN3\$:NEXT IQ:RETURN

/* Inn description data

28120 DATA SALTY,BOLD,LOUD,OLD,GOODLY,WORTHY,LOFTY,FINE,ROCKY,AGED

28140 DATA ROAD,EYE,TOOTH,DRAGON,MUG,DEMON,WHARF,BRIDGE,MEADE,ALE

28160 DATA

TAVERN,ALEHOUSE,CELLAR,CLUB,INN,HOUSE,INN,LODGE,MEADHALL,RESTHOUSE

/* Return item name for item number in MI

28200 RESTORE 28210:FOR IQ=ONE TO MI:READ MI\$:NEXT IQ:RETURN

28210 DATA SWORD,ARMOR,SHIELD,ELVEN CLOAK,ELVEN BOOTS,RING OF REGENERATION

28215 DATA RING OF PROTECTION,SCROLL OF RESCUE,POTION OF HEALING,POTION OF STRENGTH

28310 DATA SWORD,ARMOR,SHIELD,ELVN CLK,ELVN BTS,RING REG,RING PROT,SCRL RESC,POT HEAL,POT STRG

/* Clear map area

29000 QI=USR(1740):RETURN

/* Pull a monster off the monster stack

30000 M=ZERO:IF FM(ONE)=ZERO THEN 30020

30010 M=FM(ONE):ML=FL(ONE):MH=FH(ONE):GOSUB 20700

30020 FOR I=ONE TO 19:FM(I)=FM(I+ONE):FL(I)=FL(I+ONE):FH(I)=FH(I+ONE):NEXT I

30022 FM(C20)=ZERO:FL(C20)=ZERO:FH(C20)=ZERO:IF M<>ZERO THEN POKE SC+332,THREE

/* Display monster stack

30025 POKE SP,ZERO:POKE SP+ONE,22:FOR Q=ONE TO C20:IF FM(Q)<>ZERO THEN ?

" □ □ -";:NEXT Q:RETURN

30030 PRINT " □ -";:NEXT Q:RETURN

/* Push a monster onto the monster stack

30100 FOR Q=19 TO ONE STEP (- ONE):FM(Q+ONE)=FM(Q):FL(Q+ONE)=FL(Q):FH(Q+ONE)=FH(Q):NEXT Q

30105 IF M=ZERO THEN FM(ONE)=ZERO:FL(ONE)=ZERO:FH(ONE)=ZERO:GOTO 30025

30110 FM(ONE)=M:FL(ONE)=ML:FH(ONE)=MH:GOTO 30025

/* Clear monster stack.

30200 FOR Q=ONE TO C20:FM(Q)=ZERO:FL(Q)=ZERO:FH(Q)=ZERO:NEXT Q:GOTO 30025

32767 END

Assembly Functions

Note: These are loaded into memory by the startup program

Purpose: Performs logical functions

Parameters:

Function, Param1, Param2

Function = 1

Return Param1 & Param2 & 0xFF

Function = 2

Return (Param1 XOR 0xFF) & (Param2 XOR 0xFF) & 0xFF

LG:

```
0600: 68          PLA          /* Pull number of parameters
0601: d0 2a     BNE $062d    /* Branch if it's not zero
0603: 20 23 06 JSR $0623    /* Pull the rest of the params off the stack
0606: a9 00     LDA #$00     /* Return 0x0001
0608: 85 d4     STA $d4
060a: a9 01     LDA #$01
060c: 85 d5     STA $d5
060e: 60          RTS

060f: 20 23 06 JSR $0623    /* Pull the rest of the params off the stack
0612: a9 02     LDA #$02     /* Return 0x0202
0614: 85 d4     STA $d4
0616: 85 d5     STA $d5
0618: 60          RTS

0619: 20 23 06 JSR $0623    /* Pull the rest of the params off the stack
061c: a9 01     LDA #$01     /* Return 0x0101
061e: 85 d4     STA $d4
0620: 85 d5     STA $d5
0622: 60          RTS

/* Pull the rest of the parameters off the stack
0623: 8a          TXA
0624: f0 06     BEQ $062c
0626: 68          PLA
0627: 68          PLA
0628: ca          DEX
0629: 4c 23 06 JMP $0623
062c: 60          RTS

062d: aa          TAX          /* X = number of parameters
062e: 68          PLA          /* Pull high byte
062f: 68          PLA          /* Pull low byte
0630: ca          DEX          /* next parameters
0631: f0 e6     BEQ $0619    /* Finished all parameters
0633: a8          TAY          /* Y = low byte
0634: d0 0f     BNE $0645    /* Branch if low byte <> 0
0636: e0 01     CPX #$01     /* Branch if not on parameter 1
0638: d0 d5     BNE $060f    /*
```

```

063a: 68      PLA          /* Get parameters
063b: 68      PLA          /*
063c: 49 ff    EOR #$ff      /* Invert it
063e: 85 d4    STA $d4       /* return it
0640: a9 00    LDA #$00
0642: 85 d5    STA $d5
0644: 60      RTS

/* AND the 2 parameters together and return
0645: c0 01    CPY #$01      /* First parameter = 1
0647: d0 1e    BNE $0667     /* branch if not
0649: e0 02    CPX #$02      /* branch if less then 2 parameters left
064b: 30 c2    BMI $060f     /*
064d: a9 ff    LDA #$ff
064f: 8d ff 06 STA $06ff
0652: 68      PLA          /* High byte of parameters
0653: 68      PLA          /* Low byte of parameters
0654: 2d ff 06 AND $06ff /* AND with other parameters
0657: 8d ff 06 STA $06ff
065a: ca      DEX          /* next parameter
065b: d0 f5    BNE $0652     /*
065d: ad ff 06 LDA $06ff /* Return value
0660: 85 d4    STA $d4       /*
0662: a9 00    LDA #$00
0664: 85 d5    STA $d5       /*
0666: 60      RTS          /*

/* AND the Inverse of the 2 parameters together and return
0667: c0 02    CPY #$02      /* First parameter = 2
0669: d0 22    BNE $068d     /* branch if not
066b: e0 02    CPX #$02      /* branch is less then 2 parameters left
066d: 30 a0    BMI $060f     /*
066f: a9 ff    LDA #$ff
0671: 8d ff 06 STA $06ff
0674: 68      PLA          /* High byte param 2
0675: 68      PLA          /* Low byte param 2
0676: 49 ff    EOR #$ff      /* Invert it
0678: 2d ff 06 AND $06ff /* AND with other parameter
067b: 8d ff 06 STA $06ff
067e: ca      DEX          /* next parameter
067f: d0 f3    BNE $0674     /*
0681: ad ff 06 LDA $06ff /* Invert the result
0684: 49 ff    EOR #$ff      /*
0686: 85 d4    STA $d4       /* Return value
0688: a9 00    LDA #$00
068a: 85 d5    STA $d5       /*
068c: 60      RTS          /*

068d: 4c 03 06 JMP $0603

```

Purpose: Returns upper 8 bits of value in 1st parameter

```

FNS:
0690: 68      PLA

```

```

0691: aa      TAX
0692: e0 01   CPX #$01
0694: f0 03   BEQ $0699
0696: 4c 0f 06 JMP $060f
0699: 68      PLA
069a: 85 d4   STA $d4
069c: a9 00   LDA #$00
069e: 85 d5   STA $d5
06a0: 68      PLA
06a1: 60      RTS

```

Purpose: Returns bits 0-1 of value in 1st parameter

```

FNUP:
06a2: 68      PLA          /* Number of parameters
06a3: aa      TAX
06a4: e0 01   CPX #$01     /* Branch if 1 parameter
06a6: f0 03   BEQ $06ab    /*
06a8: 4c 0f 06 JMP $060f
06ab: 68      PLA          /* Read parameter
06ac: 68      PLA          /*
06ad: 29 03   AND #$03     /* And low byte with #$03
06af: 85 d4   STA $d4     /* Store in return register
06b1: a9 00   LDA #$00
06b3: 85 d5   STA $d5
06b5: 60      RTS

```

Purpose: Returns bits 2-3 of value in 1st parameter

```

FNLF:
06b6: 68      PLA          /* Number of parameters
06b7: aa      TAX
06b8: e0 01   CPX #$01     /* Branch if 1 parameter
06ba: f0 03   BEQ $06bf
06bc: 4c 0f 06 JMP $060f
06bf: 68      PLA          /* Read parameters
06c0: 68      PLA          /*
06c1: 4a      LSR          /* Shift right twice
06c2: 4a      LSR
06c3: 29 03   AND #$03
06c5: 85 d4   STA $d4
06c7: a9 00   LDA #$00
06c9: 85 d5   STA $d5
06cb: 60      RTS

```

Purpose: Clear map area of screen

```

1740:
06cc: 68      PLA          /* Pull parameter count (always 0)
06cd: a9 3f   LDA #$3f
06cf: 85 d4   STA $d4
06d1: a9 9c   LDA #$9c
06d3: 85 d5   STA $d5
06d5: a2 14   LDX #$14

```

```
06d7: a0 16    LDY #$16
06d9: a9 00    LDA #$00
06db: 91 d4    STA ($d4),Y
06dd: 88      DEY
06de: d0 fb    BNE $06db
06e0: a5 d4    LDA $d4
06e2: 18      CLC
06e3: 69 28    ADC #$28
06e5: 85 d4    STA $d4
06e7: a5 d5    LDA $d5
06e9: 69 00    ADC #$00
06eb: 85 d5    STA $d5
06ed: ca      DEX
06ee: d0 e7    BNE $06d7
06f0: 60      RTS
```

```
06f1: a0 a0    LDY #$a0
06f3: 68      PLA
06f4: a9 00    LDA #$00
06f6: 99 5f 9f STA $9f5f,Y
06f9: 88      DEY
06fa: d0 fa    BNE $06f6
06fc: 60      RTS
```

Alternate version

There are two versions of the main program on the disk image that's commonly available. It's unknown whether both versions existed on the original disk. The version in this document is called DSKTEL.BAS, the other version is called DSKTELEN.BAS. DSKTEL.BAS appears to be the newer version.

This that where changed between DSKTLEN.BASE and DSKTEL.BAS:

- A redefined character set is used to display certain objects like the Pit, Alter, Teleporter, etc.
- More use of constant variables instead of constant values to reduce memory usage.
- Different screen colors used for certain magic effects
- Line 3000 – Added effect of time stop spell on monster encounters
- Line 3007 – Change in display of monster
- Line 3030 – Correct “likes you body” to “likes your body”
- Line 4130 – Changed “Chest EXPLODES!!!!” to “Chest EXPLODES!!”
- Line 8605 – Changed “Can not store DEMO character” to “Can not store DEMOnstration character”
- Line 20010 – Removed “Your life has been TERMINATED” message.
- Line 28010 – Fixed spelling of Magic Missile