GRAPHICS SUMMARY

COLOR codes

```
0 - White        4 - Magenta
1 - Green        5 - Blue
2 - Yellow       6 - Blue-green
3 - Red          7 - Black
```

Draw arguments

```
Output Arguments --
   D - Down.                           H     U     E
   E - 45 degree angle.                 .    .    .
   F - 135 degree angle.                  .  .  .
   G - 225 degree angle.                    ...
   H - 315 degree angle.              L . . . . . . R
   L - Left.                                ...
   R - Right.                             .  .  .
   U - Up.                              .    .    .
   M - Move to specified point.        G     D     F
Output Modifier Arguments --
   B - Blank (Don't draw line, update DRAW position).
   N - No update (Draw line, don't update graphics position).
   Z - Zero (Erase line rather than draw it).
Mode Arguments --
   A - Angle (0-3, default = 0).
   C - Color (0-7, default = COLOR).
   S - Scale (1-255, default = 4).
Miscellaneous Arguments --
   X - Execute string as DRAW argument.
```

MODE codes

```
0 - 128 X 48 (low resolution black & white).
1 - 480 X 192 (high resolution black & white).
2 - 127 X 192 (low resolution clor).
3 - 480 X 192 (high resolution color).
```

QUICKEY DEFINITIONS

```
AUTO    - A    KILL"   - K    READ        - Y
CHR$(   - 4    LEFT$(  - 1    RESET(      - Q
CLEAR   - Z    LIST    - L    RETURN      - H
CLOSE   - J    LOAD"   - B    RIGHT$(     - 3
CMD"    - C    MEM     - M    RUN <ENTER> - R
DATA    - D    MID$(   - 2    SAVE"       - S
DIM     - U    MKD$    - 8    SET(        - W
ELSE    - E    MKI$    - 9    STR$(       - 6
FOR     - F    MKS$    - 0    STRING$(    - 7
GOSUB   - G    NEXT    - N    THEN        - T
GOTO    - X    OPEN"   - O    VARPTR(     - V
INKEY$  - 5    PEEK(   - P    blank:blank - :
INPUT   - I    POKE    - @
```

LNWBASIC COMMAND SUMMARY

HIMEM address   Sets lats byte usable by BASIC.
"address is hex-constant, int-expression, lsb-msb
expression, or pos-expression
HIMEM &HFFFF   HIMEM X   HIMEM0,254   HIMEM +65000

LCASE   Switches lower case enable on / off.

LINE X1, Y1, X2, Y2, {RE}SET {,shape}   Sets or resets
line, box, or filled box. "shape" is "B" (box), "BF"
(filled box), or not used (line).
LINE 0,0,127,47,SET,BF   LINE0,0,479,192,RESET,B

LOADKEY filespec   Loads disk file of defined keys.
LOADKEY "APL/KEY"   LOADKEY"ALTSET2/KYS"   LOADKEY A$

LOC. {search str}   Locates "search str" in BASIC
program text. "search str" is a string constant optionally
delimited by double quotes.
LOC."LOCATE" LOC.PRINT LOC. LOC.GOSUB 1000

MODE mode code   Sets graphics mode. "mode code" is
int-expression (0-3).
MODE 3   MODE X   MODE 0

LNWBASIC COMMAND SUMMARY

BLINK   Switches blinking cursor on / off.

CALL address -- Executes machine language program.
"address" is hex-constant, int-expression, lsb,msb
expression,or pos-expression.
CALL &HE000   CALL X   CALL 25,251   CALL+52021

CIRCLE X-center, Y-center, X-radius, {Y-radius}
{,start-angle} {,end-angle} {,rotation-angle}   Draws a
CIRCLE 100,50,50   CIRCLE 50,50,20,10,120,310,45

COLOR color code   Sets color for mode 2 graphics.
"color code" is int-expression (0-7).
COLOR 0   COLOR RND(8)-1

CONV value   Displays value in different
representations. "value" is hex-constant, int-expression
lsb,msb expression, pos-expression, "A", or "AA".
CONV &H400   CONV X*Y+1   CONV 200,234   CONV "ms"

DEFKEY old char, {new char}, definition   Modifies
definition of defined key.
DEFKEY "0",,"ZERO"   DEFKEY "a","k",,"KILL",+CHR$(34)

DISKEY   Displays defined keys on screen.

DLOAD filespec   Loads object file from disk.
DLOAD "FILE/LNW"   DLOAD A$ DLOAD"TEST2"

DO...UNTIL(condition)   Forms program loop executed
until "condition" is true (-1).
DO : ... : UNTIL (A=B)   DO : ... : UNTIL(A$<>"")

DRAW string   Draws line(s) on screen.
DRAW "B,M100,50,R10,D10"   DRAW"XHM$,A3,S2,C5,XFIG$"

DRUN filespec   Exits LNWBASIC and executes disk objec
program.
DRUN "BASIC/CMD"   DRUN FN$ DRUN"CHESS/CMD"

EXIT   Exits LNWBASIC and returns to DOS.

FLS {char}   Fills text screen with char.   "char" is
int-expression (0-255) or "A".
FLS   FLS ":"   FLS" "   FLS X   FLS C*9+64

GSUB line   Transfers program colntrol to specified
subroutine.
GSUB 40000   GSUB X*10   GSUB #"DELAY"

GTO line   Transfers program control to specified lir
GTO 9999   GTO #"QUIT"   GTO X=1000

LNWBASIC COMMAND SUMMARY

REST line   restores DATA pointer to specified line.
REST10   RST X   REST#"NAMES"   REST#"ADDRESSES"

RS232   Initializes RS-232C interface.

RSIN {,R}   Turns on {off} input from RS-232C to
keyboard.

RSOUT {,R}   Turns on {off} output from RS-232C from
printer.

SAVEKEY filespec   Saves defined keys to disk file.
SAVEKEY "DEFKEY/KEY"   SAVEKEY"KEYS/KEY"   SAVEKEY F$

SOUND freq, dur, {wave}   Outputs tone of requested
frequency, duration, and wavefoem. Arguments are
int-expressions (0-255).
SOUND 200,100,25   SOUND FR,DU,18   SOUND FR,75

SPOOLOFF   Turns off spooling of printer output.

SPOOLON   Turns on spooling of printer output

NTROFF   Turns off new trace facility.

NTRON {line range,} {expr} {, expr} ... {,expr} Turns on new trace facility.
NTRON A$ NTRON (100:),X   NTRON(:500)   NTRON(5)

PCLS {value} Fills graphics screen with value. "value" is int-expression ()-7).
PCLS   PCLS0   PCLS 7   PCLS RND(8)-1   PCLS X

PLOAD filespec {,MERGE}   Loads disk file into graphics memory
PLOAD "BOX3D/GRF"   PLOAD"MNTN/GRA",MERGE

POFF   Turns off the video to printer echo.

PON   Turns on the video to printer echo.

PRESET X,Y   Resets specified point.
PRESET0,0   PRESET X,Y   PRESET 400,192

PSET X,Y   Sets specified point.
PSET X,Y   PSET 450,0   PSET 100,Y

PSAVE filespec   Saves graphics screen to disk file.
PSAVE"GRAPHICS1/GRF"   PSAVE FIL$+"/GRA"   PSAVE"PIC"

QUICKEY   Switches <control> key entries on / off.

REPEAT   Switches keyboard repeat & beep on / off.

to disk file.
SPOOLON"REPORT/SPL"   SPOOLON "SESSION1"

XSTR$(string)   Executes string as BASIC statement.
XSTR$(FN$)   XSTR$("PRINT A$,B$")   XSTR$("GSUB #"I

GLOSSARY OF TERMS

filespec   String consisting of filename (up to 8 characters), with optional extension, password, and driv number.

hex-constant   Integer constant expressed in hex notation, preceded by "&H".

int-expression   Expression whose value lies between -32768 and +32767. Non-integer values are rounded.

line   Numeric constant, variable, expression (0-65529), or #"labe;".

lsb,msb expression   Least significant byte (0-255), most significant byte (0-255) integer expression.

pos-expression   Expression preceded by "+" whose value lies between 0 and 65529. Non-integer values are rounded

string   String variable, expression, or constant (up t 255 characters).