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Extended Disk Directory To Printer

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Abstract

DSKDIRXP.BAS is presented; a BASIC Language program to output an Extended Disk Directory to the Printer.

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This paper and its associated code are available online at:

<http://www.bds-soft.com/cocoPapers.php> .

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Introduction

Have you ever been frustrated by a long Disk Directory that scrolled off the screen before you could read it all. There are several solutions available for this problem. Perhaps the prettiest is the simple:

POKE 111,254:DIR

Which quickly sends the directory from Drive 0 straight to the printer.

This is indeed simple and quick. But I wanted more. I wanted:

1. To be able to send the directory from any one of the four drives to the printer.
2. To have a “full” directory listing, including for each file: a list of all the disk granules used in order, the number of sectors used in the last granule, and the number of bytes used in the last sector.
3. To have the program also report the number of “Free” granules remaining on the disk.
4. To have the fun of writing it myself.

The result is **DSKDIRXP.BAS**, the Extended Disk Directory To Printer program presented herein. It is written entirely in BASIC, and it’s very (VERY) slow compared to the above **POKE** mechanism, but I don’t care if it’s slow, as long as it does all the extra stuff I wanted.

In works of even this relative simplicity, typos and other errors are likely to sneak in. Please let me know about any you discover so I can note and correct them.

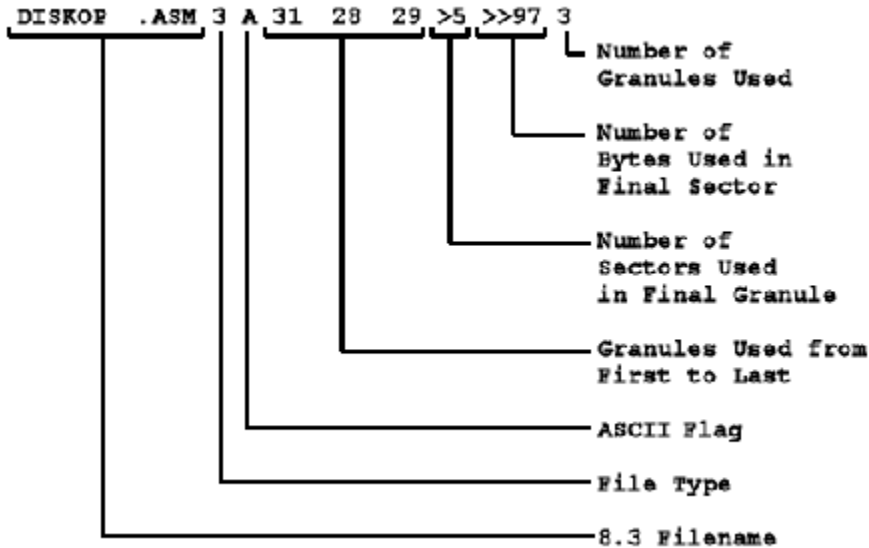
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DSKDIRXP.BAS

Extended Disk Directory To Printer

Each line of the directory printout (except the last) looks like this:



Note that the “>” and “>>” symbols in the listing have no purpose other than to differentiate between granules, sectors, and bytes. Specifically, “>” does NOT herein indicate “Greater Than”.

The final line just looks like:

FREE = 16

And (Tandy 114) reminds us that the File Types are:

- 0 = BASIC program
- 1 = BASIC data file
- 2 = Machine-language program
- 3 = Text editor source file

and the ASCII Flag is:

- A => &HFF = the file is in ASCII format
- B => 0 = the file is in binary format

The BASIC Language Program:

```
1000 '*****
1010 '*
1020 '* DSKDIRXP.BAS
1030 '* MDJ 2021/10/17
1040 '*
1050 '* EXTENDED
1060 '* DISK DIRECTORY
1070 '* TO PRINTER
1080 '*
1090 '*****
1110 '
1200 '*****
1210 '*
1220 '* INITIAL SETUP
1230 '*
1240 '*****
1250 '
1260 PCLEAR 1
1270 CLEAR 8192
1280 '
1300 '*****
1310 '*
1320 '* SPLASH SCREEN
1330 '*
1340 '* A$ = USER RESPONSE
1350 '*
1360 '*****
1370 '
1380 CLS
1390 PRINT@ 106, "DSKDIRXP.BAS"
1400 PRINT@ 140, "EXTENDED"
1410 PRINT@ 165, "DISK DIRECTORY PRINTER"
1420 PRINT@ 262, "BY M. DAVID JOHNSON"
1430 PRINT@ 299, "2021/10/17"
1440 PRINT@ 386, "(PRESS ANY KEY TO CONTINUE)"
1450 A$=INKEY$
1460 IF A$="" GOTO 1450
1470 '
1500 '*****
1510 '*
1520 '* SELECT DISK DRIVE
1530 '*
1540 '* DN = DISK DRIVE #
1550 '*
```

```

1560 '*****
1570 '
1580 CLS
1590 PRINT@ 66, "PLEASE CHOOSE:"
1600 PRINT@ 130, "(0) DISK DRIVE 0"
1610 PRINT@ 162, "(1) DISK DRIVE 1"
1620 PRINT@ 194, "(2) DISK DRIVE 2"
1630 PRINT@ 226, "(3) DISK DRIVE 3"
1640 A$=INKEY$
1650 IF A$="" GOTO 1640
1660 IF A$="0" GOTO 1720
1670 IF A$="1" GOTO 1740
1680 IF A$="2" GOTO 1760
1690 IF A$="3" GOTO 1780
1700 PRINT@ 386, "(PLEASE PRESS 0, 1, 2, OR 3)"
1710 GOTO 1640
1720 DN=0
1730 GOTO 1790
1740 DN=1
1750 GOTO 1790
1760 DN=2
1770 GOTO 1790
1780 DN=3
1790 PRINT@ 290, "DISK DRIVE#";DN
1800 PRINT@ 322, "HAS BEEN SELECTED"
1810 PRINT@ 386, "(PRESS ANY KEY TO CONTINUE)"
1820 A$=INKEY$
1830 IF A$="" GOTO 1820
1840 '
1850 CLS
1860 PRINT@ 66, "PROCESSING"
1870 PRINT@ 130, "(PLEASE WAIT)"
1880 PRINT@ 194, "*";
1890 '
1900 '*****
1910 '*
1920 '* READ THE FILE
1930 '* ALLOCATION TABLE
1940 '*
1950 '* TN = TRACK NUMBER
1960 '* SN = SECTOR NUMBER
1970 '* B$ = FIRST DISK BUFFER
1980 '* C$ = SECOND DISK BUFFER
1990 '* FA = FAT ARRAY
2000 '* T$ = TEMPORARY STRING
2010 '*
2020 '*****

```

```

2030 '
2040 DIM FA(68), B$(12), C$(12)
2050 '
2060 'GET THE FAT
2070 TN=17
2080 SN=2
2090 PRINT "**";
2100 DSKI$ DN, TN, SN, B$(SN), C$(SN)
2110 '
2120 'FORM THE FAT ARRAY
2130 FOR I=0 TO 67
2140 T$=MID$(B$(SN),I+1,1)
2150 FA(I)=ASC(T$)
2160 '
2170 'PROGRESS COUNTING
2180 IF I=10 THEN PRINT "**";
2190 IF I=20 THEN PRINT "**";
2200 IF I=30 THEN PRINT "**";
2210 IF I=40 THEN PRINT "**";
2220 IF I=50 THEN PRINT "**";
2230 IF I=60 THEN PRINT "**";
2240 NEXT I
2250 PRINT "**";
2260 '
2300 '*****
2310 '*
2320 '* READ THE
2330 '* DISK DIRECTORY
2340 '*
2350 '*****
2360 '
2370 'STEP THROUGH THE
2380 'PERTINENT SECTORS
2390 FOR SN=3 TO 11
2400 DSKI$ DN, TN, SN, B$(SN), C$(SN)
2410 '
2420 'PROGRESS COUNTING
2430 PRINT "**";
2440 NEXT SN
2450 PRINT "**";
2460 '
2500 '*****
2510 '*
2520 '* BREAK THE DISK
2530 '* BUFFERS INTO
2540 '* RAW DIRECTORY
2550 '* BUFFERS

```



```

2560 '*
2570 '* R$ = RAW BUFFER
2580 '* T1 = TEMP VARIABLE
2590 '*
2600 '*****
2610 '
2620 DIM R$(72)
2630 '
2640 'STEP THROUGH THE
2650 'PERTINENT SECTORS
2660 T1 = -1
2670 FOR SN = 3 TO 11
2680 T1=T1+1
2690 R$(T1)=MID$(B$(SN), 1, 32)
2700 T1=T1+1
2710 R$(T1)=MID$(B$(SN), 33, 32)
2720 T1=T1+1
2730 R$(T1)=MID$(B$(SN), 65, 32)
2740 T1=T1+1
2750 R$(T1)=MID$(B$(SN), 97, 32)
2760 T1=T1+1
2770 R$(T1)=MID$(C$(SN), 1, 32)
2780 T1=T1+1
2790 R$(T1)=MID$(C$(SN), 33, 32)
2800 T1=T1+1
2810 R$(T1)=MID$(C$(SN), 65, 32)
2820 T1=T1+1
2830 R$(T1)=MID$(C$(SN), 97, 32)
2840 '
2850 'PROGRESS COUNTING
2860 PRINT "*";
2870 NEXT SN
2880 PRINT@ 226, "*";
2890 '
2900 '*****
2910 '*
2920 '* FORM DIRECTORY
2930 '* LISTING ENTRIES
2940 '*
2950 '* F$ = FILENAME
2960 '* E$ = EXTENSION
2970 '* G$ = 8.3 FILENAME
2980 '* FT = FILE TYPE
2990 '* H$ = ASCII FLAG
3000 '* FG = FIRST GRANULE #
3010 '* SB = NUMBER OF BYTES
3020 '*          IN LAST SECTOR

```

```

3030 '* T2,T3 = TEMP VARS
3040 '*
3050 '*****
3060 '
3070 DIM F$(72), E$(72), G$(72)
3080 DIM FT(72), H$(72)
3090 DIM FG(72), SB(72)
3100 '
3110 'STEP THROUGH THE
3120 'RAW BUFFERS
3130 FOR T1=0 TO 71
3140 '
3150 'FILENAME
3160 F$(T1)=MID$(R$(T1), 1, 8)
3170 E$(T1)=MID$(R$(T1), 9, 3)
3180 G$(T1)=F$(T1)+"."+E$(T1)
3190 '
3200 'FILE TYPE
3210 T$=MID$(R$(T1), 12, 1)
3220 FT(T1)=ASC(T$)
3230 '
3240 'ASCII FLAG
3250 T$=MID$(R$(T1), 13, 1)
3260 T2=ASC(T$)
3270 H$(T1)="A"
3280 IF T2=0 THEN H$(T1)="B"
3290 '
3300 'FIRST GRANULE #
3310 T$=MID$(R$(T1), 14, 1)
3320 FG(T1)=ASC(T$)
3330 '
3340 '#BYTES IN LAST SECTOR
3350 T$=MID$(R$(T1), 15, 1)
3360 T2=ASC(T$)
3370 T$=MID$(R$(T1), 16, 1)
3380 T3=ASC(T$)
3390 SB(T1)=(T2*256)+T3
3400 '
3410 'PROGRESS COUNTING
3420 PRINT "*";
3430 IF T1=26 THEN PRINT@ 258, "*";
3440 IF T1=53 THEN PRINT@ 290, "*";
3450 NEXT T1
3460 PRINT " -- DONE"
3470 '
9100 '*****
9110 '*

```

```

9120 '* SEND REPORT
9130 '* TO PRINTER
9140 '*
9150 '*****
9160 '
9170 PRINT@ 66, "          "
9180 PRINT@ 130, "          "
9190 PRINT@ 98, "READY THE PRINTER"
9200 PRINT@ 386, "(PRESS ANY KEY TO CONTINUE)"
9210 A$=INKEY$
9220 IF A$="" GOTO 9210
9230 '
9240 'STEP THROUGH THE
9250 'DIRECTORY ENTRIES
9260 FOR T1=0 TO 71
9270 '
9280 'CHECK FILENAME
9290 'FIRST CHARACTER
9300 'VALIDITY
9310 T2=ASC(G$(T1))
9320 IF T2=0 GOTO 9770
9330 IF T2=255 GOTO 9780
9340 '
9350 'PRINT FILENAME.EXT
9360 PRINT#-2, G$(T1);
9370 '
9380 'PRINT FILE TYPE
9390 PRINT#-2, FT(T1);
9400 '
9410 'PRINT THE GRANULES
9420 'USED FROM FIRST TO
9430 'LAST IN ORDER
9440 PRINT#-2, H$(T1);
9450 T3=1 'GRANULE COUNT
9460 T2=FG(T1)
9470 PRINT#-2, T2;
9480 T2=FA(T2)
9490 IF T2>67 GOTO 9570
9500 T3=T3+1
9510 PRINT#-2, T2;
9520 GOTO 9480
9530 '
9540 'PRINT THE NUMBER
9550 'OF SECTORS USED IN
9560 'THE LAST GRANULE
9570 PRINT#-2, ">";
9580 T2=T2-&HC0

```

```

9590 T$=STR$(T2)
9600 L=LEN(T$)
9610 T$=RIGHT$(T$, L-1)
9620 PRINT#-2, T$;
9630 '
9640 'PRINT THE NUMBER
9650 'OF BYTES USED IN
9660 'THE LAST SECTOR
9670 PRINT#-2, " >>";
9680 T2=SB(T1)
9690 T$=STR$(T2)
9700 L=LEN(T$)
9710 T$=RIGHT$(T$, L-1)
9720 PRINT#-2, T$;
9730 '
9740 'PRINT THE NUMBER
9750 'OF GRANULES USED
9760 PRINT#-2, T3
9770 NEXT T1
9780 PRINT#-2, " "
9790 '
9800 'PRINT THE NUMBER
9810 'OF FREE GRANULES
9820 'ON THE DISK
9830 PRINT#-2, "FREE = ";FREE(DN)
9840 PRINT#-2, " "
9850 '
9890 '*****
9900 '*
9910 '* CLOSE AND EXIT
9920 '*
9930 '*****
9940 '
9950 CLS
9960 PRINT@ 130, "DIRECTORY PRINTOUT COMPLETE"
9970 PRINT@ 388, "(PRESS ANY KEY TO EXIT)"
9980 A$=INKEY$
9990 IF A$="" GOTO 9980
32767 END

```

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M.D.J. 2018/06/08

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Works Cited

Tandy. *Color Computer Disk System Owner's Manual*. Fort Worth, TX: Tandy, 1987. Print.

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