

An Epson Type I will print JJK
 An Epson Type II will print JK
 Graftrax 80 will hang up and print nothing; it will beep if the error beeper is enabled.
 Graftrax Plus (Type III) will print J, roll the paper up about a third of an inch, and print K below the J.

The Epson MX-80 is a tractor feed printer. It will handle only tractor feed stock, from 4 to 9.5 inches in width. The MX-80F/T will handle both tractor feed and friction feed stock. The original firmware supplied with these two printers was Type I. A retrofit kit called Graftrax 80 was introduced in 1980 to add bit image graphics and other printing features.

The MX-100 was introduced to add wide carriage capability to the Epson line. It is an F/T unit, accepting printing stock up to 15 inches in width. The firmware supplied with the first MX-100's was called Type II.

The Graftrax 80 firmware upgrade kit was so popular that newer firmware Graftrax Plus, was designed to upgrade the entire MX series and become standard from 1982. This was capable of a wide range of print features and is the most common type today.

I have tried this test on my AMUST 80DT and it correctly identified it as a Graftrax Plus compatible.

Other members may find it useful when selecting printer drivers for word processing.

EE

CONVERT MODEL 2 (Not Level II)
PROGRAMS TO RUN ON A MODEL 4

Jim Wraggs Bits & Bytes JUNE 1989 - Page 13

There have been a number of BASIC programs written for the elderly Model 2, 12, 16 computers than can be converted to run on the Model 4 without too much difficulty.

Essentially, the BASIC dialect and screen layout used by the Model 2 is the same as the Model 4. There are however some differences in the ASCII control codes. Once you have these sorted out, the rest of the conversion is simple, provided you have some basic programming knowledge.

Listed below are the main ASCII control codes that differ for both machines:

<u>MODEL 2</u>	<u>MODEL 4</u>	<u>FUNCTION</u>
01	14	Turn cursor on
02	15	Turn cursor off
14	ROUTE	Dual routing on
15	ROUTE	Dual routing off
20	--	Home cursor in scroll area
23	30	Erase to end of line
24	31	Erase to end of screen
25 or 249	16	Turn reverse video on
26 or 250	17	Turn reverse video off
27	CLS	Clear screen and home cursor
28 or 252	24	Move cursor back
29 or 253	25	Move cursor forward
30	CLS	Set 80 character mode & clear screen
31	23	Set 40 character mode & clear screen
254	27	Move cursor up
255	26	Move cursor down

The function keys return the following values:

1	129	F1
2	130	F2
3	131	F3

(NOTE: all values are quoted in decimal.)

Finally, as the Model 2 has only limited graphics capabilities, any references to ASCII codes above 129 should have 128 subtracted from them to obtain their Model 4 equivalent.

I would like to thank Olaf Tiemann from Tandy in the Valley for his assistance in providing me with the ASCII control code information without which I would still be trying to convert a Model 2 program to run on the Model 4.

EE

HOW TO GET A NON-TANDY HARD DRIVE TO WORK ON A 3/4/4P!

Mark Dignam Bits & Bytes JUNE 1989 - Page 14

Mick (my HouseMate and Co-Sysop of the Perth Omen!) has a TRS80 Model 4P (with the internal drives replaced with 2 National 80 Track Drives modified for switchable 40/80 track operation!). It is a very nice system, but after seeing the Perth Omen system working on the hard drives -- he WANTED a hard drive to work with CP/M

on his system. This is the story about it!

Do you know how hard it is to get hold of a TRS80 compatible Hard Drive controller card? So we put ads in the paper, the FidoNet and anywhere else we could think of for a TRS80 controller card. Do you think we could find one? And when we did find one, the silly woman advertising it didn't want to sell it to us, but that's another story in itself!

So we tried the local stores around Perth. What a mistake! Walk into almost ANY computer store and ask for a hard drive controller card that will suit a TRS-80 -- and the attendant looks at you with a blank face and says "Huh?, is that XT or AT compatible?". So as you walk out of the shop, muttering under your breath about the dropkicks that work behind the counters these days, you start to look at the other alternatives. You grab the Western Digital Data book - and find out that some cards are close in respect to the commands and register addresses that the Tandy controller board uses.

By the way -- the original card (usually found in the 5 Meg primary Hard Drive) is a BIG card designed by Tandy using the 8X300 CPU chip. The later ones (in the 15 Meg etc) used a special board by WD called the WD1000-TB1 which was a modified WD1000-05 card with the TRS-80 Model III/4 I/O port decoding already on it.

After closely looking at the book - Mick and I figured out that the 1000 series controller cards SHOULD do the job. (SHOULD being the BIG word!) Lo and Behold -- a mate of ours told us the MicroBee Hard Drive controller (WD1000-05) might be suitable. So it was back to the data book! We looked in the book -- and found this was a NICE card -- unlike the Tandy cards this one not only handles three Hard Drives -- but ALSO four floppy drives! And all this in a card 5 x 3 inches (150mm by 75mm for those in metric!) Well, needless to say, we found one! All it needed was a bit of port decoding to map the card into port and not only do you get a DIRectory listing for Drive 0 but any other drives in the system. Try entering a command such as DIR :0 - and all you will see is the DIRectory listing for Drive 0, nothing else, no more of the extra line, "Drive :1 [No disk]" or whatever. I like to set my printer into the Condensed mode and print out a listing and slip this listing into the disk envelope. I don't want the unrequested for message on the label as well. To print out further lists in Drive 0, (as an example), just use the <CTRL+R> keys. The same remarks also apply to CAT. I like to use the command CAT :1 (P), to print out lists of backup files, as they take up less space on the paper inserts.

ELECTRIC PENCIL & CITIZEN 120D

The following Basic program allows me to get on my Citizen 120D Printer Proportional Spacing with correct Left/Right Justification using a text file prepared by my Electric Pencil which I use on my Model I. The user can alter the print width by changing the 60 in line 40. (Experiment to find what number gives the width you want.) If you have another make of printer which will also do Proportional Spacing with correct Left/Right Justification, then the program should still work but you will have to change the printer codes to the ones needed by your printer.

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10 CLEAR 666:DEFSTR A,H:H-CHR$(27):CLS:PRINT"ITALICS Y/N?".
20 LPRINT H;"x1";H;"a";CHR$(3): 'Corres qual mode + L/R justify
30 LPRINT H;"p1";: 'Proportional
40 LPRINT H;"Q";CHR$(60):: 'Page width.
60 H1=INKEY$:IF H1="Y" OR H1="y"THEN LPRINT H;"4"ELSE
   IF H1="N" OR H1="n"THEN LPRINT H;"5"ELSE 60
70 INPUT"Name of File to be printed";H1:H1-H1+"/PCL":OPEN"1",H1
75 LINE INPUT#1,A:IF A="&"THEN 100 ELSE
   IF RIGHT$(A,1)-"*"THEN INPUT"DATE";A1:
   A=LEFT$(A,LEN(A)-1):IF A=" "THEN A=A1 ELSE
   LPRINT A;" ";A1;" ";GOTO 90
80 LPRINT A::IF LEN(A)<55 OR RIGHT$(A,1)-"."THEN LPRINT:
   'Paragraph end
90 IF EOF(1)THEN 100 ELSE 75
100 INPUT"PENCIL Y/N";AF:IF AF="Y"OR AF="y"
   THEN CMD"S-PENCIL":'Return to Electric Pencil(Y) or Basic(N)

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M.D.L.Wun

The results look VERY good - Ed.

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