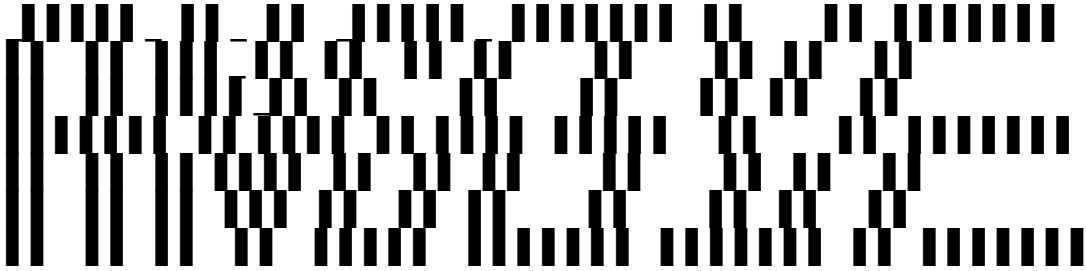


ANGELIB for BC7/PDS



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DISCLAIMER OF WARRANTY

I use the routines in *ANGELIB* almost every day as I write software and I am regularly adding, enhancing, or fixing. My software will never be "done," and I hope that it gets better and better. In any case, I can't guarantee that it's perfect; in fact, I'll guarantee that it's not. By using this software and documentation ("*ANGELIB*") you must accept this disclaimer of warranty:

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2. You may keep as many backup copies of *ANGELIB* as you wish. The Registered Edition is limited to simultaneous use on the number of computers indicated by your registration level. The Unregistered Edition may be used on any number of computers. You may share *ANGELIB* with others in complete and unmodified form. REGISTERED USERS may NOT distribute the files ending in OBJ.

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TECHNICAL SUPPORT (HOW TO REACH ME)

If my wording is unclear or can't find some topic in here, give me a holler and help me fix it or add it to the manual. A letter or BBS message is preferred (and less expensive for you). Phone calls are fine between 9am and 5pm Eastern Time as long as you are a registered user or intend to become one. I thank you for your help in making this library better.

Check out the Registration section below for ways to get a free registered copy of *ANGELIB*. Sysops please read SYSOP.DOC for special deals. Shareware vendors please see VENDOR.DOC for distribution information.

I can be reached via the mail or BBS. The bulletin boards below should always have current versions of all my software and I will get any messages left there for me.

Mail Angel Babudro, "Organic Computer Wizardry", 28 Mulberry Street, Clinton, NY 13323-1506, (315) 853-1070 Mon-Fri 9am-5pm Eastern Time

BBS Angelo Babudro (to avoid gender confusion)
West Coast Researcher's BBS, So Cal (805) 949-8151 USR HST DS
East Coast Nite Air BBS, Central NY (315) 339-8831 USR HST 14.4

INTRODUCTION

ANGEL.QLB is a "high level" BC7 library for developing business applications, especially data base uses. These are the routines I use in developing my apps (with some help from three other shareware libraries, most notably John Strong's EZ-Windows which is terrific).

I put in the things that are simple but a pain to code every time, like a "percent completed" bar graph in a window, and things that are more complicated, such as a scrollable information window with mouse support. *ANGELIB* is written in BASIC. Even though it's not the "tightest" code of its kind I think you will find it very easy to use.

Some of my routines trade flexibility for ease of use, like the percentage graph which is always the same colour and at the same spot on the screen. This keeps things simple and provides built-in consistency. Just in case my ideas for

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standards aren't the same as yours :) I have decided to offer the licensing of my source code.

Well, what more can I say? I hope my library helps you to write a bit better and faster. If so maybe I'll see your registration in my mail someday.

NOTES ABOUT THIS RELEASE

Every release fixes bugs found in previous releases and/or adds a few new features. Here are some notes about each release:

1.9 Full LIB file is now included. I was severely chastised by the dBASIC Toolkit BBS' sysop for distributing "crippled" software. Sorry I never saw it that way before, and I find that I am in agreement. Now you can compile to EXE form, but if you want to distribute and/or sell your software please register the library.

1.8m All printer & font routines have been updated to allow use on networks using DOS SHARE.

1.8k Routines updated: ErrScn, FileBackup, SelFont, SelFonts

Documentation corrected for HelpIndex

1.8j I slaps myself inna face & says, "What was I thinking?" as I notice that StrFmt's parameters are in reverse order compared to every other similar function in the known universe. Oops. Mask & source strings have been swapped.

Fixed: ChoosePtr% (problem if over 16 printers), Inform% (highlight problem)

Parameters modified: HelpIndex

Routines dropped: BackupMethod%, ChooseCountry% - These simple menus are easy to create with John Strong's EZ-Windows, so I took them out to save space.

Documentation corrected: I forgot to update the documentation for some routines. Now you can actually use InputDate, FileBackup%, FileRestore%, FileRestores%, FmtFDD%

1.8i New routines: BarMenu%

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1.8h New routines:

ChooseFiles\$ allows multiple file names to be chosen (whereas ChooseFile\$ allows only one).

FileRestores% allows single or multiple files to be selected from a back-up copy.

GetFileNames\$ allows more than one input file to be selected.

OutDevs\$ is identical to OutDev\$ but is for use with these other new routines (which all use a common routine from John Strong's EZ-Windows library).

GetFileDesc\$ retrieves a file's long name from the DESCRIPT.* file

Renamed ToFDD% to FileBackup% and FromFDD% to FileRestore% - I think these names are easier to remember.

REGISTRATION

Although I hope that you are so happy with *ANGELIB* that registering will be reward enough in itself, but I think it's more fun & exciting to get something new. *ANGELIB* is the library I use for developing all of my applications, so it is constantly updated. Your registered version will be an up-to-the-minute copy. Other benefits of registration that come to **my** mind include:

1. You'll get OBJ files so you can create your own custom libraries. I use the EZ-Windows and PBClone libraries for some routines (why re-invent the wheel?), so you will need to get them if you want to create custom libraries. Buying all three libraries will cost around \$70 which is far less than most commercial packages.
2. Within days you will get a library that would probably take so long to develop yourself that by the time you've done it you won't need it anymore
3. You can order a printed & bound manual for \$8
4. Technical support is possible! You can contact a **real programmer** who is 98% knowledgeable about the library (nobody's prefect) via mail, phone, or BBS
5. You'll have helped one of the little guys – someone who isn't a huge corporation. (Thank you...)

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If you prefer to use a credit card, you can order *ANGELIB* from Public (software) Library with your MC, Visa, AmEx, or Discover card by calling 800-242-4PsL (from overseas: 713-524-6394) or by FAX to 713-524-6398 or by CompuServe to 71355,470. THESE NUMBERS ARE FOR ORDERING ONLY. I CANNOT be reached at those numbers. To contact me for information about dealer pricing, volume discounts, site licensing, the status of shipment of the product, the latest version number, or for technical information, call 315-852-6942 or write me at 28 Mulberry Street, Clinton, NY USA 13323-1506. Shareware is "try before you buy" so please understand that product returns are not allowed.

When ordering from PsL ask for product #10799 and please note that PsL will add \$3 for shipping & handling to U.S. as well as Canadian orders.

Pricing

Registration with Disk — A single copy costs \$25. You will receive the latest version of *ANGELIB* in LIB (so it can be merged with other libraries) and OBJ (to make custom libraries) formats. You will also receive notification of major updates. At this time, updates for registered users are \$5 or send me a disk and return postage (I'll re-use your envelope). See below for printed manuals.

Multiple Copies — Each copy may be used on a single computer at a time. To ease the financial burden and thank you for being honest, you may apply the following discounts when ordering more than one copy:

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Up to 4 computers	\$30.00 per site
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Up to 20 computers	\$125.00 per site
Any number of computers	\$400.00 per site

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Manuals — I will print the latest version of the manual you are reading right now (using Ventura Publisher and a laser printer) and bind it. I am offering this as a service to those who want a printed, bound manual with their software. Most of the cost involved here is for materials and extra shipping costs. Remember that ASCII and WP documentation files are always on disk and if you provide your printer model on the registration form I will send you a file ready to print on your printer.

- One copy \$8.00
- Two or more copies \$6.00 per copy

Source Code License – You may license the use of the source code for *ANGELIB* for just \$30. Thereafter, updates will be available for \$5 plus shipping. Please note that I call routines from EZ-Windows (by John Strong) and PBClone (by Tom Hanlin) in my library (why re-invent their wheels?), so you will need to register one or both of these to use some OBjs in creating custom libraries. I recommend both of them highly and will gladly share unregistered versions of these with you - just ask.

Complimentary Registered Editions - I would like to give you a complimentary registration if you will give me a bit of marketing assistance:

1. Write a review of my software and post it on a bulletin board, send me a copy of it showing the BBS's header and the name and phone number of the BBS. Just give me your honest praise and criticism in a decent review. Your review will be most helpful to me if it mentions your best & worst-liked features and any ideas you have for improvement. This will help me decide the future of *ANGELIB* and for that help I will send you a complimentary registered disk.
2. It helps me to know which BBSs carry my software and the more the better, of course! If you will upload a package to at least five public ("open") BBSs, send me their names and phone numbers and I'll send you a complimentary registered disk. I would appreciate you uploading to time-share systems, private ("closed") BBSs, or part-time BBS, but please do not use these to apply for a complimentary registered edition. BTW: I use an HST 14.4 modem so it would be best if you provided me with BBSs which also use HSTs so I can hook-up at high speed.
3. If you are a consultant or other type of computer professional and your recommendation leads to one or more of your clients purchasing one of my packages, just send me a note with your client's registration or have them

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	<u>BBS Name</u>	<u>Phone Number/Modem Type</u>	<u>Sysop Name</u>
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

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28 Mulberry Street ● Clinton, NY 13323-1506
(315) 853-6942 Mon-Fri 9am-5pm Eastern Time
(home phone; remember we're 3 hours later than Pacific coast)

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SYSTEM REQUIREMENTS

All you need is PC/MS-DOS 3.3 or later, PDS/BC 7.1, and a computer. You will need 200k to 500k of disk space for the files, depending on which ones you decide to keep around.

FILES WHICH MAKE UP ANGELIB

The unregistered edition is made up of the following files:

ANGEL.LIB	The linker library to make EXE files (see MAKEQLB.TXT for info on making a QLB file)
ANGEL.BI	The include file, function & subroutine definitions
COLOURS.BI	Colour codes definitions, use is optional
FKEYS.BI	Function key definitions, use is optional
ANGEL.TXT	The ASCII text file of this document
ANGEL.WP	The WordPerfect file of this document (so you can format it for your printer)
QSORT.BAS	Source code to this public domain routine
FKEY.LST	Sample file for use with FKEYS routine
READ.ME	A file containing late-breaking news... May or may not be part of the package you get
ORDER.FRM	Order form for all of my software
SYSOP.DOC	Sysop information
VENDOR.DOC	Disk vendors & Sysops: pricing, detailed description, and distribution information
COMPARE.EXE	A byte-by-byte file compare utility. Displays in hex, decimal, and ASCII. Type COMPARE for help.
DUMP.EXE	Hex/octal/decimal file viewer. Type DUMP for help.

The registered edition also includes:

FAROBJ.EXE	Object modules for creating custom libraries (self-extracting archive)
MLIB.BAT	Sample batch file for creating custom libraries from OBJ modules. I use it all the time to re-compile libraries during software development. Allows OBJs to be anywhere you like rather than all in one directory
MLIB.LSP	Sample specification file for MLIB.BAT
ANGEL.INF	Object module information file for use with Tom Hanlin's LIBWIZ utility - this makes it MUCH easier to create your own custom libraries if you've never done it before.

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USING ANGELIB

Basically, just put the files wherever you want them and use the INCLUDE meta-command to place the .BI definition files in your programme (e.g., '**\$INCLUDE: 'Angel.bi'**' and '**\$INCLUDE: 'PtrRec.def'**'). Using the \$INCLUDE file lets you call subroutines without the CALL key word.

Creating a QLB (Quick Library)

If you want to use ANGEL.LIB routines in the QBX interactive environment you need to make a file called ANGEL.QLB first. To do this just use the command:

```
link /qu angel.lib,angel.qlb,nul,qbxqlb;
```

If you get "Bad command or file name" you will need to supply the drive and path containing the file LINK.EXE.

When you start QBX just use "QBX /L d:\path\ANGEL" (replacing d:\path with your drive and pathname) – this will load the quick library into memory so you can run the routines. Please note that it's a large library; if you have extended memory QBX will load some of the library "high." If you run out of memory with a large programme I can only console you with the fact that most of my software is too large to run in the QBX environment and the Microsoft help-line wasn't even able to help me.

Rather than write a probably-lame demonstration programme to show off *ANGELIB*'s functions, I would like to suggest that you check out my shareware from whence this library sprang: What Mailing List? (WML), What Vehicle History? (WVH), What Job Summary? (WJS), What Floppy Format? (WFF), and What Tape Back-up (WTB).

Registered Edition users have individual OBJ files which can be combined into custom libraries, even adding OBJs from other libraries (such as EZ-Windows) or your own routines. I find it easiest to make a file, using an ASCII editor, which contains all of the names of the OBJs I want in the library (see MLIB.LSP for a sample). This file contains one routine per line, preceded by a "+" and ending with a "&" (which is what LIB requires since this file is passed directly to LIB.EXE). This makes it easy to recompile the library if you changed some code or want to add or delete routines.

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Another alternative for making your own libraries is to use Tom Hanlin's LIBWIZ utility. This makes things very easy since LIBWIZ is smart enough to figure out if a routine requires others (for example, the INFORM%() function requires several other routines) and will include those other routines automatically. The drawback to LIBWIZ is that it has no "save" feature so you have to select each module every time (which can get a bit tedious if you have 50 modules or so). If you've never tried LIBWIZ you ought to at least check it out. The most current version I know of is LIBWIZ13. To use it just enter **LIBWIZ ANGEL mylibname** (where "mylibname" is your library's name).

REFERENCE

ANGELIB is made up of functions and subroutines. Functions return a value to a variable – e.g., a% = CalcAttr(White, Blue) puts a value in a% – whereas subroutines do not – e.g., BackupMsg just prints a message on the screen.

The general syntax of a function call is *var = Function(param1,param2,etc)*. For a subroutine, the "formal" syntax is "[CALL] subname(param1, param2, etc.)" although "CALL" is not needed when you include ANGEL.BI in your code.

Subroutines do not yield any "result," but they often modify one or more variables which are passed to them. DBFHeader is a good example of this.

The routines below each show their name at the left margin and a sample calling sequence aligned with the right margin, under which is the english explanation of the routine's purpose followed by the definition of variables.

BackupMsg

BackupMsg

BarMenu% %,ms%)

opt% = BarMenu%(r%,c%,norm%,rev%,opts\$(,),seed%,getit

CalcAttr%

attr% = CalcAttr% (Fore%, Back%)

ChooseFD\$

fdd\$ = ChooseFD\$

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ChooseFile\$	File\$ = ChooseFile\$(FSpec\$,Exclude\$,ExtInfo%,ms%)
ChooseFileS\$	F\$ = ChooseFileS\$(Inc\$,Exc\$,Info%,many%,ms%)
ChoosePort%	PtrPort% = ChoosePort%(default%, ms%)
ChoosePtr%	Ok% = ChoosePtr%(pType\$, path\$, PtrNo%, PtrPort%, ms%)
ContCan%	i% = ContCan%
DateFmt\$	FormattedDate\$ = DateFmt\$(d%, m%, y%, intl%)
DateVal%	dv% = DateVal%(TheDate\$)
DBFHeader	DBFHeader file\$, Fld\$(), reclen%, recs&, NoFlds%
DBFPickFld%	fld% = DBFPickFld%(iRow%, iCol%, field\$())
DBFShowFields	DBFShowFields row%, col%, show%, field\$(), hilite%
Delay	Delay Sec!
DrawFDD	DrawFDD Light%, iRow%, iCol%
DrawHDD	DrawHDD Light%, iRow%, iCol%, Msg\$
DrvSpace	DrvSpace (Drive\$, Total&, Free&, EC%)

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ElapsedTime	ElapsedTime STime\$, ETime\$, Hour%, Minutes%, Secs%
ErrScn	ErrScn ErrCode%, Module\$
ErrSolve\$	ErrSolve\$ Number%
ErrText\$	ErrText\$ Number%
FileBackup%	ec% = FileBackup%(FileMask\$, Method%)
FileRestore%	ec% = FileRestore%(FileMask\$, Method%)
FileRestores%	ec% = FileRestores%(FileMask\$, Method%)
FKeys	FKeys Keys\$
FmtFDD%	ec% = FmtFDD%
FontDL	FontDL FontFile\$, Pts%, Port%, FontNo%
GetDate	GetDate d%, m%, y%, Intl%, Row%, Col%
GetFileDesc\$	desc\$ = GetFileDesc\$(file\$)
GetFileName\$	afile\$ = GetFileName\$(InOut%, ttl\$, msg\$, dflt\$, ms%)
GetFileNames\$	files\$ = GetFileNames\$(InOut%, ttl\$, msg\$, dflt\$, ms%)
GetFontInfo	GetFontInfo File\$, FontName\$, PtSize%

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GetNum\$ %)	n\$ = GetNum\$(iRow%, iCol%, NumMask\$, OrigNo\$, ExitCode%)
GetValidPath	GetValidPath Drv\$, path\$, Msg\$, ms%
GoodbyeScreen	GoodbyeScreen Pkg\$, Reg%, FirstUse\$, TimesUsed%
HelpIndex	HelpIndex Topic\$, FileSpec\$
Inform% Msg\$)	ok% = Inform%(iRow%, iCol%, iWid%, iType%, ms%, snd%, Msg\$)
InformFill	InformFill Row%, Col%, BegLine%, WinSize%, MLines\$()
InputDate	InputDate Mo%, Dy%, Yr%, DtStr\$, Row%, Col%, ExitCode%
IsColour%	x% = IsColour%
IsPath%	stat% = IsPath%(Pathname\$)
Max%	Highest% = Max%(A%, B%)
MaxL&	Highest& = MaxL&(A&, B&)
MaxS!	Highest! = MaxS!(A!, B!)
Min%	Lowest% = Min%(A%, B%)

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MinL&	Lowest& = MinL&(A&, B&)
MinS!	Lowest! = MinS!(A!, B!)
MonthDays%	NoDays% = MonthDays%(M%, Y%)
OutDev\$	PDev\$ = OutDev\$(Port%, ms%)
OutDevs\$	PDev\$ = OutDevs\$(Port%, ms%)
ParseFSpec	ParseFSpec TheName\$, Drv\$, Pathname\$, TheName2\$
PctDone	PctDone Percent%, title\$
PrintRptMsg	PrintRptMsg Msg\$
PtrReady%	ok% = PtrReady%(Port%)
QSort %	QSort Wrk%(), Arr1\$(), Arr2\$(), NoDims%, Noltems%, SortField
Repl\$	cmd\$ = Repl\$(St\$, Target\$, Item\$)
SayOk	SayOk Row%, Col%, ms%
SearchPath\$	a\$ = SearchPath\$(FileName\$)

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SelectFont% ok% = SelectFont%(m\$,path\$,PtrNo%,Pts%,Ext\$,SFdir\$,ms%)

SelectFonts% ok% = SelectFonts%(m\$,path\$,PtrNo%,Pts%,Ext\$,SFdir\$,ms%)

SelectFontSize% Pts% = SelectFontSize%(Font\$, IsPts%, ms%)

SelectSoftFont\$ Font\$ = SelectSoftFont\$(Path\$, Ext\$, ms%)

SelectSoftFonts\$ Font\$ = SelectSoftFonts\$(Path\$, Ext\$, ms%)

StrFmt\$ ph\$ = StrFmt\$(Mask\$, St\$, reverse%)

StripSymbols\$ new\$ = StripSymbols\$(Old\$)

Trim\$ b\$ = Trim\$(a\$)

ZipFmt\$ a\$ = ZipFmt\$(TheZip\$, Intl%)

zTrim\$ b\$ = zTrim\$(a\$)

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USING PRINTER FUNCTIONS

In order to use the printer functions, you will need to include the data structures definition file `PtrRec.DEF` in your source code. Place the line **'\$INCLUDE: 'PtrRec.DEF'** near the beginning of your code.

Next, you will need to dimension the variables to hold the records. I often do this at the routine level rather than declaring global (common) variables, but either way will work fine unless your programme is strapped for memory one way or the other. At the routine level just `DIMension`; to make the variables global use `DIM SHARED`. The record types are:

- LaserPtrRec – Control codes which are not font-specific
- LaserFontRec – Font-specific control codes
- DMPtrRec – Dot matrix codes which are not font-specific
- DMFontRec – Font-specific dot matrix control codes

The records are all the same length so that the single file, `PRINTER.DAT`, can contain all four record types. Laser printer records start with a greater-than (>) sign (for example, ">Panasonic KX-P4450"). Dot matrix printer records start with a dot (for example, ".NEC P5300"). Both record types (dot matrix and laser) begin with a Model field, so you can use a LaserPtrRec variable to read a dot matrix record, then, if the Model begins with a period, re-read the record as a DMPtrRec variable. To illustrate:

```
DIM Lz as LaserPtrRec
DIM DM as DMPtrRec
PtrFile% = FREEFILE
OPEN "Printer.DAT" FOR RANDOM ACCESS READ AS PtrFile% LEN = LEN(Lz)
GET #PtrFile%, PtrRec%, Lz
IF LEFT$(Lz.Model, 1) = "." THEN
    GET #PtrFile%, PtrRec%, DM
END IF
```

You need to use this information whenever printing a report in your application. Use the `ChoosePtr%` function to get and save the user's choice for a printer and use `SelectFont%` to get the user's font choice(s). This information can be saved in a configuration file. Then, before printing, use the above routine to get the printer control codes (such as reset, bold, underline, etc.) followed by a routine like the example below to get the font control codes (such as select) and information such as its size and spacing.

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```
PRINT #PrintFile%, zTrim$(LF.Pitch);           'Pitch select cmd
PRINT #PrintFile%, zTrim$(LF.Slant);           'Upright/italic
PRINT #PrintFile%, zTrim$(LF.Weight);         'Light/Med/Bold
PRINT #PrintFile%, zTrim$(LF.Number);         'PCL font number
IF RIGHT$(zTrim$(LF.Pitch), 1) = "h" THEN     'Mono-spaced?
    Fcpi% = VAL(LF.Pitch)                     'Store cpi
    FPts% = 120 \ temp1%                      'Cvt cpi to rough pts if
nec
    ELSE
        FPts% = VAL(LF.Pitch)                 'Store points
        Fcpi% = 120 \ TPts%                   'Cvt pts to rough cpi if
nec
    END IF
    END IF
    END SELECT
CLOSE #PtrFile%
```

Now you have the printer ready to go and you have the variables Fcpi% and FPts% to work with in calculating TAB locations, line length, etc.

You will notice that I use zTrim\$() rather than just printing a variable. This is because BASIC pads TYPE fields with nulls – CHR\$(0)'s. The zTrim\$() function removes CHR\$(0)'s but leaves trailing spaces (which may be part of the command string).

There are some things that you must know, such as that the PCL pitch ends in "h" if it is mono-spaced (cpi) and "v" if it is proportionally-spaced (points). Also, in setting a TAB string in the above example I used the Epson-standard which terminates the setting of TABs with a CHR\$(0). This is the best solution I have come up with, and every printer I've seen in the past five years uses Epson codes anyhow, so I figure this technique will work 90% of the time or better.

You can make your own PRINTER.DAT file or modify the one supplied just by using the PtrRec.DEF file. Someday soon I will make a programme for modifying the PRINTER.DAT file, but for now it will have to be done manually. I would really appreciate it if you would share with me any new printers you install by sending me your modified PRINTER.DAT file.