```
Banked CP/M 3.0 System
B>DIR
B: CPM3     SYS : CCP      SYS : DATE    COM : MAC     COM : RMAC    COM
B: DEVICE   COM : DIR      COM : DIRLBL  RSX : DUMP    COM : ED      COM
B: ERASE    COM : GET      COM : INITDIR COM : LIB     COM : LINK    COM
B: PATCH    COM : PIP      COM : PUT     COM : RENAME  COM : SAVE    COM
B: SET      COM : HELP     COM : HELP    HLP : HEXCOM  COM : SETDEF  COM
B: SHOW     COM : SID      COM : HIST    UTL : TRACE   UTL : SUBMIT  COM
B: TYPE     COM : XREF     COM : Z80     LIB : D       COM : VIDIO   ASM
B: VIDIO    PRN : VIDIO    HEX : VIDIO   SYM : VIDIO   COM : FORMAT  BAK
B>VIDIO

B>
```

```
Banked CP/M 3.0 Bios Version DRB          12/15/82  00:16:11
```

UTS 30

✦SPERRY

We have added a new dimension to the SPERRY UTS 40 and UTS 30 intelligent terminals: personal computing.

This new capability comes from the addition of CP/M Plus* (Control Program/Microprocessor), the industry standard operating system for microprocessors.

With the CP/M Plus software, you can run hundreds of programs already written and offered for sale on your UTS 40 and UTS 30 terminals. These software packages include: extensive business, financial, and professional applications, program compilers and interpreters, and many utilities, including editors, sorts, database managers and information systems.

You can also write programs in the language best suited to your needs, then compile and execute them on your UTS 40 or UTS 30. Among the languages you can use with CP/M Plus are BASIC, COBOL and Pascal.

Sperry is offering CP/M Plus as a fully supported software package. Updates and enhancements will be provided in a sequence of formal releases.

The CP/M Plus software package we are offering includes an 8080 and Z80 macro assembler, a file conversion utility, a character set create and load facility, a configurator, a debug facility, a diskette prep utility, a keyboard generator and load utility.

CP/M Plus software brings another capability to the multifunctional UTS 40 and UTS 30. To begin with, you can use the UTS 40 or UTS 30 as an intelligent interactive terminal for communicating with a host computer. By adding diskette storage, you can upgrade the terminal for text processing and ultimately personal computing.

Once CP/M Plus software is installed, you can switch from interactive communications to CP/M mode by simply loading a diskette and performing a few keystrokes.

For example, you can have financial data sent from a host computer to the UTS 40 or UTS 30 and stored on the terminal's diskette. Switching to CP/M Plus mode, you can reformat the data using the file conversion utility, call up an application program, such as cash flow analysis, and perform the analysis off-line at your convenience. Results of the analysis can be reformatted and sent back to the host.

Minimum hardware requirements for CP/M Plus software include a UTS 40 or UTS 30 single station with appropriate hardware features and a diskette subsystem with one disk drive installed (two drives are recommended). Both 5¼-inch and 8-inch floppy diskettes are supported on the UTS 40, while the UTS 30 uses the SPERRY 8439 5¼-inch disk unit. A selection of printers is available for both single stations.

Commercially available application packages operating under CP/M Plus can be obtained from independent software vendors or distributors. These packages are supported by the respective vendors according to the agreement of sale. Sperry will supply a list of vendors that provide programs compatible with CP/M Plus software.

In addition, Sperry offers several utilities, languages and productivity tools and CP/M GRAPHICS™ as fully supported software products, all running under control of CP/M Plus.

Utilities

Two CP/M Plus communications utilities offered by Sperry allow the UTS 40 or UTS 30 single station to communicate with other processing systems. The TTY COMMUNICATIONS UTILITY allows asynchronous TTY communications links to be established, while the UNISCOPE COMMUNICATIONS UTILITY provides synchronous UNISCOPE links with other processing systems. Both utilities provide communications to be established while using CP/M Plus, without reverting back to the terminal's standard operating system.

Another utility, the PROGRAM CONVERSION UTILITY, allows the user to write programs while in the CP/M mode to be executed on the standard operating system of the UTS 40 or UTS 30. In order to convert programs, they must be initially written using non-interpretive versions of compilers and assemblers.

Language and Productivity Tools

A variety of standard languages and productivity tools are offered to aid the applications program writer, such as:

Languages

CBASIC®—the most widely used BASIC dialect for implementing application software.

CBASIC Compiler, CB-80™—a full native code implementation of CBASIC for 8-bit systems, offering enhanced performance and versatility.

CIS COBOL™—a GSA certified COBOL widely used in business applications.

LEVEL II COBOL™—GSA certified at the "High Intermediate" level when used with the Animator utility, and conforms to the 1974 ANSI standards for COBOL.

Pascal/MT + ™—designed for the professional, PASCAL/MT + is a block-structured compiler language, ideal for scientific, commercial and industrial applications.

PL/I-80™—is a block structured, procedure-oriented commercial compiler developed for ease in program formulation and debugging.

Productivity Tools

MAC™—a macro assembler adding full expression analysis to the standard CP/M assembler and SID™ Symbolic Instruction Debugger are provided as part of CP/M Plus.

ZSID™—Symbolic Instruction Debugger designed to aid assembly level program checkout.

BT-80™—a record retrieval system for PL/I-80 applications.

Display Manager™—a full screen editor and library of subroutines to support screen operation.

Access Manager™—provides complete compatibility between data files and index files among supported languages.

CP/M Graphics™

The CP/M Graphics package, supported by Sperry, consists of the following modules, subroutines and utilities:

GSX-80™*—the graphic system extension to the CP/M family of operating systems providing graphic output through standard O/S calls.

GSS-Kernel™—the subroutine library containing 2D graphics primitives for programmers and system builders.

GSS-Plot™—this subroutine library contains high-level functions that ease writing programs producing typical business, engineering and scientific graph and plot outputs.

GSS-4010™—converts the UTS 40 and UTS 30 into a PLOT-10™ compatible terminal.

GSC-Graph™—an interactive graphing and ploting package that produces presentation quality charts through an easy-to-use menu design.

GSS-Draw™—an interactive, menu driven package that helps users create and edit presentation quality charts and diagrams.

Sperry recognizes the increasing importance of personal computing in satisfying your total information processing needs. As such, we are pleased to offer you this extensive suite of software. The addition of CP/M Plus to your SPERRY UTS 30 or UTS 40 terminal system will add to its exceptional value, as you take advantage of the software products supported by CP/M Plus.

A Sperry sales representative can help you select the configuration and software products best suited to your needs.

*Note: Graphics is not supported on the UTS 40.

✦SPERRY

We understand how important it is to listen.