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SOFTWARE CATALOG



Computer Terminal  
Corporation

October, 1972

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Published every two months for Datapoint 2200 users providing the latest in programs and supporting manuals.



CATALOG ORGANIZATION GUIDE

The rules governing the numbering system in this catalog are as follows:

1. Every program has a unique symbolic name of up to six characters. The first character must be a letter and the following must be either letters or digits.

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## CATALOG ORGANIZATION GUIDE

The rules involving the numbering system in this catalog are as follows:

1. Every program has a unique symbolic name of up to six characters. The first character must be a letter and the following must be either letters or digits.
  2. Every program has a version number (before the decimal point) and a revision number (after the decimal point). These numbers start at 1.1 with the initial release of a program. The revision number is incremented every time any change is made to a program and then released. The version number is incremented, and the revision number reset to 1, whenever the program is released with a change in its function. Note that when the version number is changed, a new program number (explained in the following rule) is assigned. CTOS tapes also have a revision number associated with cataloged items. Any time a revision is made to an item in the catalog, the catalog revision number is incremented. If the version number of any of the items within the catalog is changed, a new CTOS system with a new program number will be created. The reasoning behind these version/revision rules is that usually any version, but only the latest revision, of a program will be available. Thus, a unique program number must be assigned to each version of a program or system.
  3. All versions of all programs have a unique program number. This number is prefixed by a letter indicating the type of information contained on the tape. The letter meanings are as follows:
    - P - a program which is normally run by itself
    - C - CTOS system
    - S - a subroutine
    - O - code which is meant to overlay some specific program
    - L - load and go tape (starts with boot block) other than CTOS
    - M - the SCRIBE formatted text for a manual
- NOTE: All program numbers are uniquely independent of the prefix letter. This number should be included when ordering programs to identify the one desired. If Source is available, then a source/object tape will be supplied if specified with the order. If Listing is available, then a listing will be supplied with the order.
4. CTOS entries have their catalogs listed. A small letter in parenthesis after the cataloged item will indicate that it is not a normal object file. Two letters may appear: (s) indicates that the item is a source file and (a) indicates that the item is specified in the auto-load mode of the CTOS.
  5. An \* indicates that the following program uses the new tape format.
  6. An ! indicates that the following item has been changed or added since the last publication of the catalog. This may appear before CTOS cataloged items as well as program symbols.
  7. There are two types of programs - Type I and Type II. Type I Software is maintained by Computer Terminal Corporation in current versions. The source code is often not available in print or on tape. Errors should be reported and new versions will reflect corrections. Type II Software is strictly a dissemination service by Computer Terminal Corporation of programs of interest. Since Type II Software is distributed as a source/object tape, its validity cannot be supported by Computer Terminal Corporation.



## DATAPOINT 2200 SOFTWARE - A SYSTEM GUIDE

All Datapoint 2200 Assembler Language programs, except certain diagnostics, operate under the Cassette Tape Operating System Loader. Many require the entire CTOS to be resident in memory. Specific requirements are indicated with each program description in this catalog.

Programs written in any of the Databus family of language systems require, in addition, the resident Interpreter appropriate for the program.

The instruction sets for specific Databus languages vary and require the appropriate Databus Compiler/Interpreter to be used.

In addition to the Databus systems, there are pre-programmed communications packages described on the following page in chart form.

Databus Communications Converters provide simple means for the user to transmit and receive data from a Datapoint 2200 to a larger computer by telecommunications. The Communications Converter is a Databus program which does not need to be programmed by the user - simply called in subroutine form.

In addition to the Databus Communications Converters, Terminal Emulators are available. They are designed primarily for the interactive user who desires multiple use capability and does not necessarily require an exact simulation. A user with a variety of time-sharing requirements using for instance, 2741, Teletype, and 2780 terminals would find the emulators valuable. The disciplines follow the Emulated Terminal on the Communications line. In most cases, the Datapoint 2200 emulation provides extra capability not found in the original terminal's operational disciplines, and therefore, may vary slightly.

Most software packages in this catalog offer the source file as well as the assembled or compiled object file. These programs may be modified through the editor and re-assembled or re-compiled by the user. System requirements for program generation (or modification) are as follows:

### ASSEMBLY LANGUAGE PROGRAM GENERATION

The Datapoint 2200 Assembler provides rapid assembly of machine language with a full compliment of pseudo-ops, directives and diagnostics. The assembler is called by name from the operating system (type: RUN ASM) and automatically assembles the source file generated by the assembler editor.

Printout is available for any Datapoint-supported Printer and results in a numbered page printout of the full listing including an alphabetical dictionary listing.

The assembly language editor, assembler, and debugging system are available cataloged on the current Assembly Language System Generation Tape.

### DATABUS PROGRAM GENERATION

Each Databus version (except Databus 6) is provided with an appropriate compiler and editor cataloged on a CTOS tape.

The two-tape symbolic editor provides fast, flexible source generation of the Databus Problem Program. It is automatically callable by name from the operating system (type: RUN DBEDIT), and generates a formatted source tape ready for the Databus compiler.

The Databus compiler provides a one-pass compilation of the source file and produces an object file in interpreter core-image ready to run under the Databus version selected.

Printout is available on any Datapoint-supported printer.



DATABUS SYSTEM CHART

<u>CAPABILITY</u>	<u>DATABUS 1</u>	<u>DATABUS 2</u>	<u>DATABUS 3</u>	<u>DATABUS 4</u>	<u>DATABUS 6</u>	<u>DATABUS 7</u>
Minimum Memory Requirements	8K	8K	8K	4K	2K	8K
Compiler	Yes	Yes	Yes	Yes	No	Yes
Control Card	No	No	No	No	Yes	No
Keyboard Support	Yes	Yes	Yes	Yes	Yes	Yes
C.R.T. Support	Yes	Yes	Yes	Yes	Yes	Yes
Cassette Deck Support	Yes	Yes	Yes	Yes	Yes	Yes
Printer Support	Yes	Yes	Yes	Yes	No	Yes
9-track Tape Support	No	No	Yes	No	No	No
Communications Channel	No	No	Yes	No	Yes	No
Numeric Strings	Yes	Yes	No	No	No	Yes
Character Strings	Yes	Yes	Yes	Yes	Yes	Yes
Numeric String Operators	Yes	Yes	No	No	No	Yes
Character String Operators	No	Yes	Yes	Yes	No	Yes
Integer Operators	No	No	Yes	Yes	No	No
Numeric String Array	Yes	Yes	No	No	No	Yes
Character String Array	No	Yes	Yes	No	No	Yes
Indexed Branch	Yes	Yes	Yes	No	No	Yes
I/O Event/Error Traps	Yes	Yes	Yes	Yes	No	Yes
Program Chaining	Yes	Yes	Yes	Yes	KBD Call	Yes
Disc Support	No	No	No	No	No	Yes



## OPERATING SYSTEMS

### CTOS 3.2 (C00100) - (Empty Catalog)

TYPE: 1  
 DATE: October 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

Cassette Operating System permits the user to catalog source or object files and to manipulate (i.e. delete, replace, insert, run, output) the cataloged files. In addition, commands to list tapes to the CRT and to patch object files are available.

CTOS 3.2 corrects a problem with numeric files.

### CTOS 1.2 (C00001) - Computer Terminal Operating System (Empty Catalog)

TYPE: 1  
 DATE: June 28, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

The CTOS is a conversational mode program for the Datapoint 2200 enabling the user to catalog, load, debug, and run user programs. It provides utilities such as keyboard input, CRT display and tape file handling routines which are important to the user of the 2200.

### CTOS 3.1 (C00069) - 9 Track Tape Operating System (MTOS) cat (Rev 4):

TYPE:	1	
DATE:	July 31, 1972	MKBOOT 1.1
LISTING:	MTOS, TDUMP and TDRIVE only	TBOOT 1.1 MKMTOS !2.1 MTOS !2.2
SOURCE:	Not Available	MCAT 1.1 TDUMP 1.2
SUPPORT:	CTOS and 8K Machine, Version I or II	TDRIVE 1.2 (s)

MTOS SYSGEN contains the programs necessary to generate an operating system (MTOS) on a 9-track mag tape, create a boot tape to load the operating system from the 9-track tape, a utility program for dumping 9-track tapes to the screen (TDUMP) and the source code for the driver subroutines for the 9-track tape (TDRIVE).

Version 2.1 MTOS could not create a load and go tape because the cassette loader code was not included. No changes to MTOS 2.1 listing or code have been made to create MTOS 2.2. However, the code for the cassette loader, located at 012250, has been attached to the MTOS object file.

### CTOS 3.1 (C10000) - DOS Generation System

TYPE: 1  
 DATE: October 2, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Version 2 machine

The Disk Operating System is a conversational program enabling the user to create, debug, and execute programs utilizing the 2200/Disk peripheral. Facilities are also provided for transferring data between the cassette tapes and the disk. Utility routines included enable the user to program the keyboard, CRT, cassettes, and disk with ease. For more information pertaining to the use of the DOS, see the DOS OPERATOR'S GUIDE and DOS SYSTEM MANUAL. This CTOS contains all of the programs and files necessary for the generation of a DOS on a disk cartridge.

### DOS 1.1 (P10001) - Disk Operating System

TYPE: 1  
 DATE: October 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Version 2 machine

This is the set of listings for the routines that make up the Disk Operating System (approximately 120 pages). It includes the DOS generation program, the loader, the disk file handling routines, the debug, keyin, and display routines, the cassette handling routines, and the command interpreter.



ASSEMBLY LANGUAGE GENERATION  
OPERATING SYSTEMS

DOSCMDS 1.1 (P10002) - DOS Command Programs

TYPE: 1  
DATE: October 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Version 2 Machine

This is the set of listings for the CAT, KILL, NAME, CHANGE, AUTO, MANUAL, OUT, SIN, SOUT, LGO, APP, and SAPP commands. This is the basic set of commands included in the DOS generation system (less the editor and assembler).

DOSGEDIT 1.1 (P10003) - DOS General Purpose Editor

TYPE: 1  
DATE: October 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Version 2 machine

This is the GEDIT which runs under the Disk Operating System. It is otherwise identical to the GEDIT available on cassettes. (The DOS OPERATOR'S GUIDE contains operating instructions pertaining to GEDIT under the DOS).

DOSASM4 1.1 (P10004) - DOS Assembler 4

TYPE: 1  
DATE: October 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Version 2 machine

This is the ASM 4 which runs under the Disk Operating System. It is otherwise identical to the ASM 4 available on cassettes. (The DOS OPERATOR'S GUIDE contains operating instructions pertaining to ASM 4 under the DOS).

## ASSEMBLY LANGUAGE GENERATION

### ASM 4.1 (P00105) - Assembler

TYPE: 1  
DATE: March 6, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

The ASM program generates a catalogable block of object code and, optionally, a listing on the screen or a printer (either local or baud selectable remote). It requires a source tape produced by the editor in space compressed numeric records.

An alphabetic symbol table listing and diagnostics are also provided.

It is essentially the same as ASM 3.1 except some minor problems have been corrected, a number of macros have been added, the 2200 Version II instruction mnemonics have been added, the dictionary capacity has been expanded to 413 labels, and the program has been written in such a way that it is independent of CTOS, enabling the user to make a load and go version of the program if so desired.

### GEDIT 1.3 (P00049) - General Purpose Editor

TYPE: 1  
DATE: March 30, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

GEDIT is a general purpose symbolic editor which provides editing in any of three formats:

- 1) 2200 assembler code as in P00002
- 2) Databus compiler code as in P00050
- 3) General text editing with user selectable tab stops.

The latest version (1.3) has extended tab functions, adjustable margin bell. The program name may now be edited. The program is now independent of CTOS. After an assembly CTOS is reloaded. Parity error handling has been improved. Legal tab characters are now limited.

### TRACE 1.2 (P00005) - Trace

TYPE: 1  
DATE: July 6, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

TRACE is a 2200 emulator which provides interactive control over memory contents and program execution. Program execution through the emulation provides screen display of register contents, P-Counter, I-Register, condition flags, as well as break points, etc. Version 1.2 will now run a tape from the front deck.



## ASSEMBLY LANGUAGE GENERATION

### \*ASM 4.2 (P00105) - Assembler

TYPE: 1  
DATE: March 6, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

The ASM program generates a catalogable block of object code and, optionally, a listing on the screen or a printer (either local or baud selectable remote). It requires a source tape produced by the editor in space compressed numeric records.

An alphabetic symbol table listing and diagnostics are also provided.

It is essentially the same as ASM 4.1 except some minor problems have been corrected.

The program is independent of CTOS, and the user may therefore make a load and go version of the program if so desired.

### \*GEDIT 1.4 (P00049) - General Purpose Editor

TYPE: 1  
DATE: October 2, 1972  
LISTING: Available  
SOURCE: Not Available

GEDIT is a general purpose symbolic editor which provides editing in any of three formats:

- 1) 2200 assembler code as in P00002
- 2) Databus compiler code as in P00050
- 3) General text editing with user selectable tab stops.

The latest version (1.3) has extended tab functions, adjustable margin bell. The program name may now be edited. The program is now independent of CTOS. After an assembly, CTOS is reloaded. Parity error handling has been improved. Legal tab characters are now limited. Editor commands may now be entered as single letters (e.g. :F for :FIND). An Editor manual is available.

### TRACE 1.2 (P00005) - Trace

TYPE: 1  
DATE: July 6, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

TRACE is a 2200 emulator which provides interactive control over memory contents and program execution. Program execution through the emulation provides screen display of register contents, P-Counter, I-Register, condition flags, as well as break points, etc. Version 1.2 will now run a tape from the front deck.

### CTOS 3.2 (C00106) - Program Generation System

TYPE: 1	ASM 4.2
DATE: April 25, 1972	TRACE 1.2
LISTING: Not Available	GEDIT 1.4
SOURCE: Not Available	LISTER 1.4
SUPPORT: 8K Machine	COPY 1.6

This is the assembly language program generation system tape with the latest version of CTOS, ASM, COPY, GEDIT, LISTER and TRACE.

## DATABUS SYSTEM GENERATION

- All DATABUS systems require 1) The program generation tape with CTOS, EDITOR and COMPILER.
- 2) Operating tape with CTOS, Interpreter and Master program.

In addition to these, several individual parts of the system are available in source language to aid the user who further wishes to study the system.

Databus can invoke very large computational processes from very little coding -- processes which can take a lot of time in a Version I machine. Serious consideration should be given to the choice of machine version when employing Databus on any system performing substantial computation or processing.

### DBEDIT 1.3 (P00050) - Databus Editor

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DBEDIT provides formatted editing of Databus compiler statements with the same features as P00049.

This version has been updated to the DATABUS made of GEDIT 1.3.

DBEDIT 1.3 (P00049) - General purpose Editor

TYPE: 1  
DATE: October 5, 1972  
LISTING: Available  
SOURCE: Not Available

DBEDIT is a general purpose symbolic editor which provides editing in any of three formats:

- 1) IBM assembler code as in P00021
- 2) Databus compiler code as in P00022
- 3) General card editing with user adjustable tab stops.

The latest version (1.3) has extended tab functions, adjustable margin delimiters, and the program may now be edited. The program is now independent of CTOS. After an assembly, CTOS is reloaded. Faulty error handling has been improved. Legal tab characters are now limited. Editor commands may now be entered as single letters (e.g. T for TAB). An Editor manual is available.



DB1CMP 1.3 (P00051) - Databus 1 Compiler

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Local Printer Only

Compiles Databus 1 programs using a 2200/Printer. DB1CMP is a business-oriented compiler providing full arithmetic, file handling, and I/O capability. A user or prospective user should acquire Databus 1 Manual listed later in this catalog.

Version 1.3 contains changes to correct bugs in KEYIN and DISPLAY instructions.

DB1CMP 2.3 (P00089) - Databus 1 Compiler

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Remote Printer (3300/P)

Compiles Databus 1 programs using a 3300/Printer. DB1CMP is a business-oriented compiler providing full arithmetic, file handling, and I/O capability. A user or prospective user should acquire Databus 1 Manual listed later in this catalog.

Changes have been made to correct bugs in the KEYIN and DISPLAY instructions.

DB1INT 2.4 (P00090) - Databus 1 Interpreter

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Remote Printer

Interprets Databus 1 programs compiled by DB1CMP 2.3 for a 3300/Printer. DB1INT is a business-oriented interpreter providing full arithmetic file handling and I/O capability. A user or prospective user should acquire Databus 1 Manual listed later in this catalog.

See (P00052) for changes.

DB1INT 1.4 (P00052) - Databus 1 Interpreter

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Uses Local Printer Only

Interprets Databus 1 programs compiled by DB1CMP 1.2 using a 2200/Printer. DB1INT is a business-oriented interpreter providing full arithmetic file handling and I/O capability. A user or prospective user should acquire Databus 1 Manual listed later in this catalog.

DB1INT 1.4 contains the following changes:

- 1) KEYIN and DISPLAY - cursor is now prevented from wrapping around if a line is more than 80 characters long.
- 2) PRINT - \*C now zeros the column counter and \*I, \*F, as well as other control characters do not increment the column counter.
- 3) WRITE - the bug in writing numbers to tape has been fixed and EOT's are now looked for correctly.

CTOS 2.2 (C00054) - catalog: DBEDIT 1.2  
 (Rev 2) DB1CMP 1.3

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Local Printer

This is the current Databus 1 program generator tape for users intending to operate with a Datapoint 2200/Printer.

DB1CMP and CTOS has been updated to fix the KEYIN and DISPLAY instructions.

CTOS 2.2 (C00055) - catalog: DBEDIT 1.2  
 (Rev 2) DB1CMP 2.3

TYPE: 1  
 DATE: March 8, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine  
 Remote Printer

This is the current Databus 1 program generator tape for users intending to operate with a 3300/Printer. DB1CMP and CTOS have been updated.



# DATABUS 1

CTOS 2.2 (C00056) - catalog: DBLINT 1.4  
(Rev 3) MASTER 1.1

TYPE: 1  
DATE: March 8, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Local Printer

This is the current Databus 1 interpretive tape for users intending to operate with a Datapoint 2200/Printer.

DBLINT contains the following changes:

- 1) KEYIN and DISPLAY - the cursor is now prevented from wrapping around when displaying a line more than 80 characters long.
- 2) PRINT - \*C now zeros the column counter and \*I, \*F as well as other control characters do not increment the column counter.
- 3) WRITE - the bug in writing numbers to tape has been fixed and EOT's are now looked for correctly.
- 4) SOSX has been incorporated into the CTOS 2.2 and no longer is a separate program.

CTOS 2.2 (C00057) - catalog: DBLINT 2.4  
(Rev 3) MASTER 1.1

TYPE: 1  
DATE: March 8, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Remote Printer

This is the current Databus 1 interpretive tape for users intending to operate with the 3300/Printer. Current DBLINT 2.4 is used and SOSX has been incorporated into CTOS.

MASTER 1.1 (P00053) - Databus 1  
Master Program

TYPE: 1  
DATE: August 11, 1971  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS, DBLINT, and 8K  
Machine

This is the version of the DATABUS 1 MASTER program to be used with DBLINT Version 1.4 and 2.4.

\*DBLCMP 3.1 (P00251) - Databus 1  
Compiler

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine - Configurable  
for either printer

Compiles Databus 1 programs for either printer. DBLCMP is a business-oriented compiler providing full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 1 Manual listed later in this catalog.

DBLCMP 3.1 contains the following changes:

- 1) Made it LOAD and GO.
- 2) It can be configured to run with either a remote or local printer, and to generate object code for an 8, 12, or 16K object machine.
- 3) DBLCMP can also be configured to have 25 more labels and 25 more variables if it is run in a 12 or 16K machine.
- 4) The INIT instruction no longer allows the user to initialize strings to numeric values, only quoted strings are now allowed.
- 5) DBLCMP reads source tapes written in either old or new format.

DBLCMP assumes a local printer with an 8K compiler and object machine.

\*CTOS 3.1 (C00254) - Databus 1 Program  
Generator Tape  
cat (Rev 1) DBLCC 1.1  
DBLCMP 3.1

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This Program Generation tape contains a DATABUS 1 compiler configurator, DBLCC, which configures the DATABUS 1 compiler to run with either a local or remote printer, and to generate code for an 8, 12, or 16K object machine.

The DATABUS mode of GEDIT may be used for editing source tapes.

The compiler reads source tapes written in either new or old tape formats. See the listing of the DATABUS 1 Compiler for changes made to DBLCMP 3.1 and refer to the DATABUS 1 Manual for any further information.



\*DBLINT 3.1 (P00252) - Databus 1 Interpreter

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine - Configurable for either printer

Interprets Databus 1 programs compiled by DB1CMP 3.1. DBLINT is a business-oriented interpreter providing full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 1 Manual listed later in this catalog.

DBLINT 3.1 contains the following changes:

- 1) Fixed bugs in the CHAIN and PRINT instructions.
  - 2) Fixed the COMPARE instruction so that the EQUAL flag is not set when an OVERFLOW occurs.
  - 3) Made it configurable to run in either a local or remote printer.
  - 4) The DISPLAY and PRINT instructions now start writing at the beginning of the string and continue to the physical end of the string, writing blanks after the logical end of the string.
  - 5) The READ and WRITE instructions use the new tape format and read and write to the physical end of the string. The WRITE instruction writes blanks after the logical end of strings.
- DBLINT assumes a local printer.

\*DBLIC 1.1 (P00139) - Databus 1 Interpreter Configurator

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine

DBLIC configures the DATABUS 1 Interpreter cataloged on the CTOS system as DB2INT to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400.

\*DB1CC 1.1 (P00138) - Databus 1 Compiler Configurator

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

DB1CC configures the DATABUS 2 Compiler cataloged on a CTOS system as DB2CMP to generate code for an 8, 12, or 16K object machine and to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud. It also configures the compiler to have 25 more labels and 25 more variables if the compiler is to be run in a 12 or 16K machine.

\*MASTER 1.2 (P00253) - Databus 1 Master Program

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS, DBLINT, and 8K Machine

This is the version of the DATABUS 1 MASTER program to be used with DBLINT Version 3.1.

\*CTOS 3.1 (C00255) - Databus 1 Interpretive Tape cat (Rev 1)

DB1IC 1.1  
 DBLINT 3.1  
 MASTER 1.2

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

This Interpretive tape contains a DATABUS 1 interpreter configurator, DBLIC, which configures the DATABUS 1 interpreter to run with either a local or remote printer.

The MASTER program now displays the version/revision number of the Interpreter.

DBLINT reads and writes tapes in the new tape format. See the listing of DBLINT for the changes that have been made to it, and refer to the DATABUS 1 Manual for any further information.



## DATABUS 2

: DB2CMP 1.3 (P00071) - Databus 2  
Compiler

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine  
Configurable for either  
local or remote Printer  
at any baud rate

Compiles Databus 2 programs for a 2200/Printer or 3300/Printer. DB2CMP is a business-oriented compiler expanding on the capabilities of Databus 1. Databus 2 provides full string handling as well as full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 2 Manual listed later in this catalog.

The following changes were made to DB2CMP:

- 1) Made it LOAD and GO.
- 2) It can be configured to run with either a remote or local printer, and to generate object code for an 8, 12, or 16K object machine.
- 3) DB2CMP can also be configured to have 25 more labels and 25 more variables if it is run in a 12 or 16K machine.

DB2CMP assumes a local printer, with an 8K compiler and object machine.

: DB2CC 1.1 (P00124) - Databus 2  
Compiler Configurator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB2CC configures the DATABUS 2 Compiler cataloged on a CTOS system as DB2CMP to generate code for an 8, 12, or 16K object machine and to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud. It also configures the compiler to have 25 more labels and 25 more variables if the compiler is to be run on a 12 or 16K machine.

: DB2INT 1.4 (P00072) - Databus 2  
Interpreter

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Configurable for either  
local or remote Printer  
at any baud rate

Interprets Databus 2 programs compiled by DB2CMP for a 2200/Printer or 3300/Printer. DB2INT is a business-oriented interpreter providing full string handling as well as full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 2 Manual listed later in this catalog.

The following changes were made to DB2INT:

- 1) Fixed bugs in the CHAIN and PRINT instructions.
- 2) Fixed the COMPARE instruction so that the EQUAL flag is not set when an OVERFLOW occurs.
- 3) Made it configurable to run with either a remote or local printer.

DB2INT assumes a local printer.

: DB2IC 1.1 (P00125) - Databus 2  
Interpreter  
Configurator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB2IC configures the DATABUS 2 Interpreter cataloged on the CTOS system as DB2INT to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400.



! CTOS 3.1 (C00074) - Databus 2 Program Generator Tape

Cat.(Rev 2) \*DB2CC 1.1  
 \*DBEDIT 1.3  
 \*DB2CMP 1.3

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

This Program Generation tape contains a DATABUS 2 compiler configurator, DB2CC, which configures the DATABUS 2 compiler to run with either a local or remote printer, and to generate code for an 8, 12, or 16K object machine.

The DATABUS Editor has been changed to the latest version of GEDIT 1.3.

See the listing of the DATABUS 2 Compiler for changes made to DB2CMP, and refer to the DATABUS 2 manual for any further information.

! CTOS 3.1 (C00076) - Databus 2 Interpretive Tape

Cat.(Rev 2) \*DB2IC 1.1  
 \*DB2INT 1.4  
 \*MASTER 2.1

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

This Interpretive Tape contains a DATABUS 2 interpreter configurator, DB2IC, which configures the DATABUS 2 Interpreter to run with either a local or remote printer.

The MASTER program now displays the version/revision number of the Interpreter.

See the listing of DB2INT for the changes that have been made to it, and refer to the DATABUS 2 manual for any further information.

! MASTER 2.1 (P00073) - Databus 2 Master Program

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS, DB2INT, and 8K Machine

This is the version of the DATABUS MASTER program to be used with DATABUS 2 Version 1.4. The version/revision number of the Interpreter is displayed when this program is run.

\*DB2CMP 3.1 (P00271) - Databus 2 Compiler

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine  
 Configurable for either printer

Compiles DATABUS 2 programs for either local or remote printers. DB2CMP is a business-oriented compiler expanding on the capabilities of Databus 1. Databus 2 provides full string handling as well as full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 2 Manual listed later in this catalog.

The following changes were made to DB2CMP:

- 1) The INIT instruction no longer allows the user to initialize strings to numeric values, only quoted strings are now allowed.
- 2) DB2CMP reads source tapes written in either old or new format.

DB2CMP assumes a local printer with an 8K compiler and object machine.



## DATABUS 2

### \*DB2INT 3.1 (P00272) - Databus 2 Interpreter

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Configurable for either  
Printer

Interprets Databus 2 programs compiled by DB2CMP 3.1. DB2INT is a business-oriented interpreter providing full string handling as well as full arithmetic, file handling, and I/O capability. A user or prospective user should acquire a Databus 2 Manual listed later in this catalog.

The following changes were made to DB2INT:

- 1) The DISPLAY and PRINT instructions now start writing at the beginning of the string and continue to the physical end of the string, writing blanks after the logical end.
- 2) The READ and WRITE instructions use the new tape format and read and write to the physical end of the string. The WRITE instruction writes blanks after the logical end.

DB2INT assumes a local printer.

### \*MASTER 2.2 (P00273) - Databus 2 Master Program

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS, DB2INT, and 8K Machine

This is the version of the DATABUS 2 MASTER program to be used with DB2INT 3.1.

### \*CTOS 3.1 (C00274) - Databus 2 Program Generator Tape

cat (Rev 1):  
DB2CC 1.1  
DB2CMP 3.1

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This version of the Program Generation tape handles source tapes written in the new fold tape formats.

The DATABUS mode of GEDIT may be used for editing source tapes.

See the listing of Databus 2 Compiler for changes made to DB2CMP 3.1 and refer to the DATABUS 2 Manual for any further information.

### \*CTOS 3.1 (C00276) - Databus 2 Interpretive Tape

cat (Rev 1):  
DB2IC 1.1  
DB2INT 3.1  
MASTER 2.2

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This version of the Databus 2 Interpretive Tape reads and writes tapes in the new tape format.

See the listing of the Databus 2 Interpreter for the changes that have been made to it, and refer to the DATABUS 2 Manual for any further information.



! DB3CMP 1.2 (P00081) - Databus 3  
Compiler

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Configurable for  
either local or re-  
mote printer at any  
baud rate

DB3CMP generates object code for use by the Databus 3 Interpreter from source code supplied by the user. This program is used with the local or remote printers when listings are to be generated. Databus 3 provides all capabilities of Databus 2 (except full arithmetic) plus the capability to use two mag tape units and to communicate between 2200's over a 202 internal modem. Databus 3 cassette tapes are compatible with Databus 1 and 2 tapes. A user or prospective user should acquire a Databus 3 Manual.

The following changes were made to DB3CMP:

- 1) Made it LOAD and GO.
- 2) It can be configured to run with either a remote or local printer, and to generate object code for an 8, 12, or 16K machine.
- 3) DB3CMP can also be configured to have 25 more labels and 25 more variables if it is run in a 12 or 16K machine.

DB3CMP assumes a local printer with an 8K compiler and object machine.

! DB3CC 1.1 (P00126) - Databus 3  
Compiler Config-  
urator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB3CC configures the DATABUS 3 Compiler cataloged on a CTOS system as DB3CMP to generate code for an 8, 12, or 16K machine and to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud. It also configures the compiler to have 25 more labels and 25 more variables if the compiler is to be run on a 12 or 16K machine.

! DB3INT 1.3 (P00082) - Databus 3  
Interpreter

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Configurable for either  
local or remote Printer  
at any baud rate

DB3INT interprets Databus 3 programs compiled by the Databus 3 compiler. This program is used with local or remote printers when listings are to be generated. Databus 3 provides all capabilities of Databus 2 (except full arithmetic) plus the capability to use two mag tape units and to communicate between 2200's over a 202 internal modem. Databus 3 cassette tapes are compatible with Databus 1 and 2 tapes. A user or prospective user should acquire a Databus 3 Manual.

The following changes were made to DB3INT:

- 1) Fixed bugs in the mag tape read and write commands.
- 2) Made it disconnect when a program is aborted.
- 3) Made it configurable to run in a Version 1 or 2 machine.
- 4) Expanded the MOVE instruction to allow moving strings to indexes and indexes to strings so that index values may be displayed, printed, and written to tape.

DB3INT assumes a local printer with a Version 1 machine.

! DB3IC 1.1 (P00127) - Databus 3  
Interpreter  
Configurator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB3INT configures the DATABUS 3 Interpreter cataloged on the CTOS system as DB3INT, to run with either a Version 1 or 2 machine. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud.



## DATABUS 3

: CTOS 3.1 (C00083) - Databus 3 Program Generator Tape

Cat.(Rev 2) !DB3CC 1.1  
!DBEDIT 1.3  
!DB3CMP 1.2

TYPE: 1  
DATE: July 10, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This Program Generation tape contains a DATABUS 3 Compiler Configurator, DB3CC, which configures the DATABUS 3 Compiler to run with either a local or remote printer, and to generate code for an 8, 12, or 16K machine.

The DATABUS Editor has been changed to the latest version of GEDIT 1.3.

See the listing of the DATABUS 3 Compiler for the changes made to it, and refer to the DATABUS 3 manual for any further information.

: MASTER 3.2 (P00103) - Databus 3 Master Program

TYPE: 1  
DATE: February 26, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS, Databus 3 Interpreter and 8K Machine

MASTER 3.2 is the Databus 3 monitor program supplied with the Databus 3 interpretive tape. See Databus 3 Manual for description.

DATABUS 3 MASTER has been changed to display the version/revision number of the DATABUS 3 Interpreter. This is the MASTER program to be run with DB3INT 1.3.

: CTOS 3.1 (C00084) - Databus 3 Interpreter Tape

Cat.(Rev 2) !DB3IC 1.1  
!DB3INT 1.3  
!MASTER 3.2

TYPE: 1  
DATE: July 10, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

This is the current Databus 3 interpreter system. CTOS and Databus 3 interpreter are the latest versions.

This Interpretive tape contains a DATABUS 3 Interpreter Configurator, DB3IC, which configures the DATABUS 3 Interpreter to run with either a local or remote printer.

The MASTER program now displays the version/revision number of the Interpreter.

See the listing of DB3INT for the changes that have been made to it, and refer to the DATABUS 3 manual for any further information.

\*MASTER 3.3 (P00303) - Databus 3 Master Program

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS, DB3INT, and 8K Machine

This is the version of the Databus 3 Master Program to be used with DB3INT 3.1.



\*DB3CMP 3.1 (P00281) - Databus 3  
Compiler

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine  
Configurable for either  
printer

DB3CMP generates object code for use by the Databus 3 interpreter from source code supplied by the user. Databus 3 provides all capabilities of Databus 2 (except full arithmetic) plus the capability to use two mag tape units and to communicate between 2200's over a 202 internal modem. A user or prospective user should acquire a Databus 3 Manual.

The following changes were made to DB3CMP:

- 1) The INIT instruction no longer allows the user to initialize strings to numeric values, only quoted strings are now allowed.
- 2) DB3CMP reads source tapes written in either old or new tape format.

DB3CMP assumes a local printer with an 8K compiler and object machine.

\*CTOS 3.1 (C00283) - Databus 3 Program  
Generator Tape  
cat (Rev 1):

DB3CC 1.1  
DB3CMP 3.1

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This version of the Program Generation tape reads source tapes written in the old or new formats.

The DATABUS mode of GEDIT may be used for editing source tapes.

See the listing of DB3CMP for the changes that have been made to it, and refer to the DATABUS 3 Manual for further information.

\*DB3INT 3.1 (P00282) - Databus 3  
Interpreter

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine  
Configurable for either  
printer

DB3INT interprets Databus 3 programs compiled by the Databus 3 Compiler. Databus 3 provides all capabilities of Databus 2 (except full arithmetic) plus the capability to use two mag tape units and to communicate between 2200's over a 202 internal modem. A user or prospective user should acquire a Databus 3 Manual.

The following changes were made to DB3INT:

- 1) The DISPLAY and PRINT instructions now start writing at the beginning of the string and continue to the physical end of the string, writing blanks after the logical end of the string.
- 2) The READ and WRITE instructions use the new tape format and read and write to the physical end of the string. The WRITE instruction writes blanks after the logical end of strings.

DB3INT assumes a local printer with a Version 1 machine.

\*CTOS 3.1 (C00284) - Databus 3 Inter-  
pretive Tape  
cat (Rev 1):

DB3IC 1.1  
DB3INT 3.1  
MASTER 3.3

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This version of the Databus 3 Interpretive tape reads and writes tapes in the new format.

See the listing of DB3INT for the changes that have been made to it, and refer to the Databus 3 Manual for further information.



## DATABUS 4

: DB4CMP 1.2 (P00085) - Databus 4  
Compiler

TYPE: 1  
DATE: February 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine  
Configurable for  
either local or re-  
mote printer at any  
baud rate

DB4CMP generates object code for use by the Databus 4 Interpreter from source code supplied by the user. This program is used with the local or remote printers when listings are to be generated. Databus 4 programs may be generated for 4K or larger machines. The size of the machine used may be specified at compile time so that overflow may be detected. Databus 4 provides file handling, keyboard, CRT, and cassette tape I/O, as well as limited string and numeric operations. A user or prospective user should acquire a Databus 4 Manual.

The following changes were made to DB4CMP:

- 1) A bug was fixed in the LENGTH command.
- 2) Made it LOAD and GO.
- 3) It can be configured to run with either a remote or local printer, and to generate object code for an 8, 12, or 16K machine.
- 4) Made the tape READ routine able to read numeric strings from cassette and store them into character strings.

DB4CMP assumes a local printer with an 8K compiler and 4K object machine.

: DB4CC 1.1 (P00128) - Databus 4 Com-  
piler Configurator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB4CC configures the DATABUS 4 Compiler cataloged on a CTOS system as DB4CMP to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud. It also configures the compiler to have 25 more labels and 25 more variables if the compiler is to be run on a 12 or 16K machine.

: DB4INT 1.4 (P00086) - Databus 4  
Interpreter

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 4K or larger Machine  
Configurable for either  
local or remote printer  
at any baud rate

DB4INT interprets Databus 4 programs compiled by the Databus 4 compiler. DB4INT may be run on a 4K or larger machine depending upon the size of the user program. However, one 8K machine is necessary to generate all user programs and the interpretive system. Databus 4 provides file handling, keyboard, CRT, and cassette tape I/O, as well as limited string and numeric operation. A user or prospective user should acquire a Databus 4 Manual.

The following changes were made to DB4INT:

- 1) Fixed a bug in the PRINT instruction.
- 2) Made it configurable to run with either a remote or local printer.

DB4INT assumes a local printer.

: DB4IC 1.1 (P00129) - Databus 4 Inter-  
preter Config-  
urator

TYPE: 1  
DATE: July 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB4IC configures the DATABUS 4 Interpreter cataloged on the CTOS system as DB4INT to run with either the remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 Baud.



## DATABUS 4

! CTOS 3.1 (C00087) - Databus 4 Program Generator

Cat. (Rev 2) !DB4CC 1.1  
 !DBEDIT 1.3  
 !DB4CMP 1.2

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine  
 Configurable for either local or remote printer at any baud rate

This Program Generation Tape contains a DATABUS 4 Compiler Configurator, DB4CC, which configures the DATABUS 4 Compiler to run with either a local or remote printer, and to generate code for an 8, 12, or 16K object machine.

The DATABUS Editor has been changed to the latest version of GEDIT 1.3.

See the listing of DB4CMP for the changes made to it, and refer to the DATABUS 4 manual for any further information.

! CTOS 3.1 (C00088) - Databus 4 Interpretive System

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 4K or larger machine.  
 Configurable for either local or remote printer at any baud rate

This is the current Databus 4 Interpreter system.

CTOS has been updated to the latest version.

This interpretive tape contains a DATABUS 4 Interpreter Configurator, DB4IC, which configures the DATABUS 4 Interpreter to run with a local or remote printer.

The MASTER program now displays the version/revision number of the Interpreter.

See the listing of DB4INT for the changes that have been made to it, and refer to the DATABUS 4 manual for any further information.

! MASTER 4.2 (P00104) - Databus 4 Master Program

TYPE: 1  
 DATE: July 10, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS, Databus 4 Interpreter (DB4INT) and 4K or larger machine

MASTER 4.2 is the Databus 4 monitor program supplied with DB4INT 1.2. See Databus 4 Manual for description.

DATABUS 4 MASTER has been changed to display the version/revision number of the DATABUS 4 Interpreter. This is the MASTER program to be run with DB4INT 1.2.

\*DB4CMP 3.1 (P00285) - Databus 4 Compiler

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine  
 Configurable for either printer

DB4CMP generates object code for use by the Databus 4 Interpreter from source code supplied by the user. Databus 4 provides file handling, keyboard, CRT, and cassette tape I/O, as well as limited string and numeric operations. A user or prospective user should acquire a Databus 4 Manual.

The following changes were made to DB4CMP:

- 1) The INIT instruction no longer allows the user to initialize strings to numeric values, only quoted strings are allowed.
- 2) DB4CMP reads source tapes written in either old or new tape formats.

DB4CMP assumes a local printer with an 8K compiler and 4K object machine.



## DATABUS 4

### \*DB4INT 3.1 (P00286) - Databus 4 Interpreter

TYPE: 1  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 4K or larger machine  
Configurable for either printer

DB4INT interprets Databus 4 program compiled by DB4CMP 3.1. Databus 4 provides file handling, keyboard, CRT, and cassette tape I/O, as well as limited string and numeric operations. A user or prospective user should acquire a Databus 4 Manual.

The following changes were made to DB4INT:

- 1) The READ and WRITE instructions use the new tape format and read and write the physical end of the string. The WRITE instruction writes blanks after the logical end of strings.
- 2) The DISPLAY and PRINT instructions now start writing at the beginning of the string and continue to the physical end of the string, writing blanks after the logical end of the string.

DB4INT assumes a local printer with a Version 1 Machine.

### \*CTOS 3.1 (C00287) - Databus 4 Program Generator Tape

Cat.(Rev 1) DB4CC 1.1  
DB4CMP 3.1

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine  
Configurable for either printer

This version of the Program Generation tape reads source tapes written in the old or new formats.

The Databus mode of GEDIT may be used for editing source tapes.

See the listing of DB4CMP for the changes that have been made to it, and refer to the DATABUS 4 Manual for further information.

### \*CTOS 3.1 (C00287) - Databus 4 Program Generator Tape

Cat.(Rev 1) DB4CC 1.1  
DB4CMP 3.1

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine  
Configurable for either printer

This version of the Program Generation tape reads source tapes written in the old or new formats.

The Databus mode of GEDIT may be used for editing source tapes.

See the listing of DB4CMP for the changes that have been made to it, and refer to the DATABUS 4 manual for further information.

### \*CTOS 3.1 (C00288) - Databus 4 Interpretive Tape

Cat.(Rev 1) DB4IC 1.1  
DB4INT 3.1  
MASTER 3.3

TYPE: 1  
DATE: November 2, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: CTOS and 4K or larger machine.  
Configurable for either printer

This version of the Databus 4 Interpretive tape reads and writes tapes in the new format.

See the listing of DB4INT for the changes that have been made to it, and refer to the Databus 4 Manual for further information.



Databus 6 differs from other Databus systems in that it is not compiled for a Databus interpreter. This system is available only one way and can be programmed by the operator through control cards. There are two tapes: 1) The system tape, ready to go, and 2) The source files for each of the system programs cataloged in a CTOS tape. The second is provided for the user wishing to modify the system.

DB6SYS 1.1 (L00097) - Databus 6 System

TYPE: 1  
 DATE: February 26, 1972  
 LISTING: Available  
 SOURCE: Available as cataloged items  
 in C00098  
 SUPPORT: 2K Machine

The Databus 6 system is a collection of programs on a specialized operating system which allows emulation of key-punch functions. Provisions are made for punching, editing, verifying, and transmitting data. The system appears to the operator in a manner quite similar to an electronic keypunch and should require little retraining while providing many features not available on common keyboards.

\*DB6SYS 2.1 (L00297) - Databus 6 System

TYPE: 1  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Available as catalogued  
 items in C00098  
 SUPPORT: 2K Machine

The following changes were made to Databus 6:

- 1) The tapes are now written and read in the new tape format.
- 2) The DB6SND only reads and transmits tapes written by Databus 6.

See L00097 for further information.

CTOS 2.2 (C00098) - Databus 6 Source

cat (Rev 1):  
 DB6MAK 1.1(s)  
 DB6OS 1.1(s)  
 DB6PCH 1.1(s)  
 DB6VER 1.1(s)  
 DB6EDT 1.1(s)  
 DB6DUP 1.1(s)  
 DB6PRO 1.1(s)  
 DB6DSP 1.1(s)  
 DB6SND 1.1(s)

TYPE: 11  
 DATE: February 26, 1972  
 LISTING: Available  
 SOURCE: Files on this tape  
 SUPPORT: 8K Machine

This CTOS tape contains all of the source files for the programs in the Databus 6 system plus DB6MAK which is used in generating the L00097 tape in conjunction with the LGO command in CTOS 2.2

\*CTOS 3.1 (C00298) - Databus 6 Source

cat (Rev 1):  
 DB6MAK 2.1(s)  
 DB6OS 2.1(s)  
 DB6PCH 2.1(s)  
 DB6VER 2.1(s)  
 DB6EDT 2.1(s)  
 DB6DUP 2.1(s)  
 DB6PRO 2.1(s)  
 DB6DSP 2.1(s)  
 DB6SND 2.1(s)

TYPE: 11  
 DATE: November 2, 1972  
 LISTING: Available  
 SOURCE: Files on this tape  
 SUPPORT: 8K Machine

See C00098 for description.



## DATABUS 7

### DB7CMP 1.1 (P00109) - Databus 7 Compiler

TYPE: 1  
DATE: May 24, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB7CMP converts Databus 7 source code into object code which can be interpreted by the Databus 7 Interpreter. DB7CMP can be configured to produce code for a 8K, 12K, or 16K object machine and to run with either a local or remote printer. Refer to the Databus 7 Manual for further information.

### DB7INT 1.1 (P00108) - Databus 7 Interpreter

TYPE: 1  
DATE: May 24, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB7INT is the Databus 7 interpreter which provides basically the same facilities as Databus 2 except the cassette routines have been replaced with a set of 2200/Disk routines. DB7INT will work with either a local or remote printer. Refer to the Databus 7 Manual for further information.

### MASTER 7.1 (P00110) - Databus 7 Master Program

TYPE: 1  
DATE: May 24, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS, DB7INT, and 8K  
Machine

The Databus 7 master program allows any Databus 7 program on the CTOS tape to be selected for execution.

### CTOS 3.1 (C00111) - Databus 7 Program Generation System cat (Rev 1): DB7CC 1.1 DB7CMP 1.1

TYPE: 1  
DATE: May 24, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This CTOS system contains the Databus 7 compiler and compiler configuration programs. The standard version of GEDIT is recommended for generation of Databus source code. Refer to the Databus 7 Manual for further information.

### CTOS 3.1 (C00112) - Databus 7 Inter- preter System cat (Rev 1): DB7IC 1.1 DB7INT 1.1 MASTER 7.1 DB7CIO 1.1

TYPE: 1  
DATE: May 24, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

This CTOS system contains the Databus 7 interpreter and all of its supporting programs. Refer to the Databus 7 Manual for further information.

### DB7IC 1.1 (P00120) - Databus 7 Inter- preter Configurator

TYPE: 1  
DATE: May 24, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: CTOS and 8K Machine

DB7IC configures the Databus 7 interpreter cataloged on the CTOS system as DB7INT to run with either a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 baud.



DB7CC 1.1 (P00121) - Databus 7 Compiler  
Configurator

TYPE: 1  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine

DB7CC configures the Databus 7 compiler cataloged on a CTOS system as DB7CMP to generate code for an 8, 12, or 16K object machine and to run with a remote or local printer. Remote printer speed options are 110, 150, 300, 880, 1200, and 2400 baud.

DB7CIO 1.1 (P00123) - Databus 7  
Cassette Input/  
Output Program

TYPE: 11  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS, DB7INT and 8K  
Machine

DB7CIO is a non-Databus program that resides within the Databus 7 user space. This program must be chained to from a Databus 7 program and in turn will chain to another Databus 7 program. It provides a facility for transferring data from a Databus format cassette to the disk or from the disk to a Databus format tape. Refer to the Databus 7 Manual for further information.

COPY 1.1  
 TYPE: 11  
 DATE: April 14, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine  
 COPY 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: April 14, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine  
 COPY 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: April 14, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine

DB7CIO 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine  
 DB7CIO 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine

DB7CIO 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: 1K Machine and 3200/Disk  
 DB7CIO 1.1 (Rev. 11)  
 TYPE: 11  
 DATE: May 24, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: 1K Machine and 3200/Disk



## UTILITIES

COPY 1.6 (P00034) - Tape Duplication Program  
cat (Rev 2)  
COPY 1.1 (A)  
SCOPY 1.6 (S)

TYPE: 11  
DATE: April 14, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

COPY is a tape duplication and verification program and will copy any CTOS or CTOS file compatible tape.

The discriminating loader (which determines the machine version and thus the memory limitations) has replaced the original loader. Block count checks are performed. A terminating message is displayed when the copy is complete. The source file is cataloged on the tape as SCOPY.

DEBUG 2.1 (P00102) - Boot Block Debugging Tool

TYPE: 11  
DATE: February 28, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

DEBUG 2.1 is very helpful in debugging programs that overlay the CTOS debug routine. It resides in locations 0 through 0777 and provides all normal CTOS debug functions (except those that use the loader - i.e. F and G commands) while providing improved machine state saving and restoring facilities.

Version 1.5 contains a block counter to prevent dropping of blocks during the copying of a tape.

DDRIVE 1.1 (S00122) - Basic Disk Drive Routines

TYPE: 11  
DATE: May 24, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: 2K Machine and 2200/Disk

DDRIVE is a set of subroutines which allow selection of a drive, reading any specified sector into a 256 byte buffer in memory, and writing a 256 byte buffer in memory to any specified sector.

DUMP 1.1 (P00019) - Memory to Tape Dump

TYPE: 11  
DATE: May 4, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

The DUMP is a memory dump program which, when called, overlays the system debug area. The DUMP is an interactive program that dumps selected areas of memory onto a catalogable program tape. The options include program entry point selection.

FIX 2.1 (P00047) - Object Tape Patcher

TYPE: 11  
DATE: November 8, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

FIX provides the user a means of examining or changing object code directly on CTOS cataloged files and CTOS-loader compatible object tapes placed on the front deck. The syntax is similar to Debug in that the user specifies a location and FIX finds it on the tape, displays the contents and permits modification. (This is available as a command in CTOS 3.1 and CTOS 3.2).

FPAK 2.2 (S00061) - Floating Point Arithmetic Package

TYPE: 11  
DATE: October 27, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

FPAK provides full floating point arithmetic capability to the 2200 user, in the range of  $10^{38}$  to  $10^{37}$ . In addition to familiar floating point Add, Subtract, Multiply, Divide, FIX, and FLOAT (with 16 bit integers), FPAK also provides floating point compare (with presettable tolerances), negate, and move operations. A variety of error branch routines are available.



FTRANS 1.2 (S00059) - Floating Point  
Trancendental  
Routines

TYPE: 11  
DATE: October 27, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: (FPAK version 2.0 or later)

FTRANS provides the following functional calculation of floating point numbers as represented in the standard Computer Terminal Corporation Floating Point Arithmetic packages: SIN, COS, EXP, LOG, SORT, ATAN. FTRANS call routines of FPAK and requires at least version 2.1 or later.

FCON 1.5 (S00060) - Floating Point/String  
Conversion

TYPE: 11  
DATE: November 15, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

FCON is a routine providing for conversion of a numeric string in decimal or Fortran "E" string format to and from the internally normalized floating point form used by FPAK.

LISTER 1.4 (P00007) - Tape Lister

TYPE: 11  
DATE: June 16, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

LISTER provides complete interactive tape inspection facilities and will read symbolic, numeric or numeric-compressed-string formats on either the front or rear tape. The user can specify the file to be inspected by number or can inspect the tape unformatted beginning at its resting point. Other options include the local or baud selectable remote printer, start-stop screen listing, etc.

PRINT\$ 1.2 (S00027) - String Print  
Subroutine

TYPE: 11  
DATE: June 16, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 2K Machine

The PRINT\$ is a string memory-to-printer routine which operates on CTOS or STATH compatible strings. The options include local or baud rate selectable remote printer.

CORDMP 1.1 (P00185) - Core Dump  
Program

TYPE: 11  
DATE: August 28, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS 3.1 (for configuration only)

CORDMP configures and writes a boot block core dump program, which will operate with either a local 2200 Printer or a remote printer.

STATH 1.2 (S00006) - String Math Sub-  
routine Package

TYPE: 11  
DATE: November 30, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 4K Machine

STATH is a string math subroutine package providing Add, Subtract, Multiply, Divide, MOD 10 and MOD 11 check sums providing for results up to 128 decimal digits. Field checked numeric-string-keyboard inputs are also provided. All string in STATH are compatible with the basic CTOS string formats.

TDRIVE 1.2 (S00068) - 9-track Tape  
Drive Sub-  
routines

TYPE: 11  
DATE: November 30, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 2K Machine

TDRIVE is a set of subroutines which enable the user to read and write unformatted variable length data on the 9-track tape write file marks, and position forward and backward to the file marks.



## UTILITIES

### TDUMP 1.2 (P00058) - 9-track Tape Dump

TYPE: 11  
DATE: November 30, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

TDUMP is a program which performs an octal dump of any 9-track tape to the CRT. File markers and parity errors are indicated. Positioning is available through keyboard commands.

### CTOS 3.1 (C00134) - Selectric Type-writer Driver

Cat.(Rev 1) TYPE 1.1 (a)  
STYPE 1.1 (s)

TYPE: 11  
DATE: August 14, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: 8K CTOS

This program permits typing at a 2200 keyboard to compose a line. When the ENTER key is pressed, the line is converted and sent to a Selectric typewriter connected via a 2200 Selectric Interface Adaptor. The program serves as a test for the Interface and as an example of how to convert and deliver code to the IBM Selectric.



## TERMINAL EMULATORS

ASR103 2.2 (P00010) - DP3300/3300T  
Emulator with  
Autodial/Answer

TYPE: 11  
DATE: April 7, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

ASR103 is a Datapoint 3300/3300T emulator and, therefore, it is a model 33ASR teletype emulator for use up to 600 baud. Options include internal or external modem, baud selectable, full or half duplex and automatic telephone dialing, answering, local tape rollup and rolldown, fully compatible X-on, X-off, tape-on, tape-off facilities.

The following facilities are available in this version:

- 1) Local Printer (2200/Printer) Enable and Disable functions.
- 2) Seven cursor controls (H-UP, EEOL, EEOF, C↓, C↑, C+, C-).
- 3) The RESTART function does not hang up.
- 4) Up to 20 digits are allowed for the telephone number, and an "\*" causes a two second delay while dialing.
- 5) ASR103 works with both Version 1 and 2 machines.
- 6) An option to allow transmission of GEDIT and DATABUS tapes in either continuous or X-on mode.

EM2741 2.1 (P00021) - 2741 Emulator

TYPE: 11  
DATE: May 15, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 2K Machine

The EM2741 is an IBM 2741 terminal emulator. This program provides operation in EBCDIC over external modem. Options include tap-stop configuration. EM2741 makes the Datapoint 2200 a plug-to-plug replacement for an IBM 2741 with no hardware or software changes.

This revision incorporates two minor software changes which enable the program to function with cassette tape decks whose timing characteristics are marginally near the tolerance limits. The first change is to insist upon a "deck ready" condition before commencement of a tape operation; the second is to read through the entire record following the one being read for transmission in order to avoid stopping anywhere within the second record.

EM2265 1.1 (P00020) - 2265 Emulator

TYPE: 11  
DATE: August 3, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine to configure. Will run unsupported in a 6K machine.

The EM2265 is an IBM compatible 2265 terminal emulator. This program will operate up to 1200 baud with an internal modem and up to 2400 baud with an external modem or hard-wired. The EM2265 will permit plug-to-plug replacement of the IBM 2265 with the Datapoint 2200 requiring no hardware or software changes.

KSR202 1.3 (P00009) - DP3300 Emulator  
With Autodial  
(1200 Baud)

TYPE: 11  
DATE: April 25, 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: CTOS and 8K Machine

KSR202 is a Datapoint 3300 emulator to operate with 202 modems or on other 1200 baud full or half-duplex lines (the latter provided with turn-around handshaking). The KSR 202 buffers up to 256 characters to provide buffering against the 60 CPS write rate of the screen.

Version 1.3 has the following changes:

- 1) Timing loops, changed to determine machine version before setting counters.
- 2) Asterisk (\*) in dialing sequence causes a three-second delay.
- 3) Disconnect occurs if both carriers are dropped.



## TERMINAL EMULATORS

DB2780 1.3 (P00099) - Databus 2780  
Communications  
Converter

TYPE: 11  
DATE: May 5, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: 4K Machine, 2200-404 Syn-  
chronous Communications  
Adaptor, Bell 201-Compat-  
ible Modem

DB2780 transmits and receives 80-  
column card-image records using IBM  
Binary Synchronous Communications  
(BSC) line discipline so as to be  
compatible with an IBM 2780 Model  
4. The source and destination of all  
transmissions are Databus-compatible  
cassette tape records.

This revision incorporates two minor  
software changes which correct errors  
observable in DB2780 1.2 (3/13/72).  
The first change permits successful  
transmission of DATABUS 'numeric'  
strings (the earlier releases of  
DB2780 did not transmit the first  
character), but it should be noted  
that they are transmitted (and written  
to cassette tape if the receiving  
device is also a DB2780) as 'character'  
strings, with trailing blanks and a  
fixed length of 80. The second change  
positions the cursor correctly on the  
indicator display during receipt of  
transmissions (DB2780 1.2 reversed  
the cursor positionings for 'Receive  
Odd' and 'Receive Even') so that the  
operator is properly informed of the  
parity of the record being received  
(i.e. whether it is an odd-numbered  
or even-numbered record).

DB2780 2.2 (P00132) - Databus 2780  
Communicator

TYPE: 11  
DATE: September 28, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: 6K Machine (Version I or  
II), CTOS 2.3 loader, SCA,  
201-compatible modem

DB2780 2.2 upgrades, but does not  
replace, DB2780 1.3 (P00099, 5/5/72).  
The new features are 1) 6K machine  
required, 2) CTOS 2.3 loader re-  
quired, 3) increased I/O buffer size,  
4) swing buffering during the "Send"

command, 5) buffer overflow protect  
during the "Receive" command, 6)  
universal delay logic to allow oper-  
ation on either version I or version  
II machines without any operator  
intervention, 7) two internal card  
images which may be entered at any  
time from the keyboard and sent at  
any time as singleton files, 8) ex-  
tended ENQ retry feature to allow  
15 ENQs and a 48-second timeout, 9)  
no limit on the number of text re-  
transmissions in response to NAKs,  
and 10) legality of all 128 ASCII  
characters possible in DATABUS  
strings. This release is completely  
compatible with P00099 (as well as  
the IBM 2780) from a communications  
standpoint

The following changes were made to  
DB2780 2.2:

- 1) a NAK is now transmitted in  
response to a block of text  
followed by an incorrect CRC.
- 2) Any number of SYN characters  
are now accepted following a  
DLE/ITB/CRCC/CRCC sequence.
- 3) Any function can now be  
aborted at any time by depres-  
sing the KEYBOARD key.

!UNITRM 1.1 (P00137) - Universal Terminal  
Emulator

TYPE: 2  
DATE: November 2, 1972  
LISTING: Available  
SOURCE: Available  
SUPPORT: 8K Version 2

UNITRM is a Universal Terminal Emulator.  
It is a model 33ASR teletype emulator  
for use at selectable baud rates up to  
1200 baud. Options include internal or  
external modem, baud selection, full or  
half duplex and automatic telephone  
dialing, answering, local tape rollup,  
and rolldown, fully compatible X-on,  
X-off, tape-on, tape-off facilities.

In addition to all the facilities of  
ASR103, UNITRM allows the user to write  
GEDIT and DATABUS format tapes.



## WORD PROCESSING

### SCRIBE 1.1 (C00133) - Text Processing System

cat (Rev 1):  
 SCRIBE 1.1  
 SUTIL 1.1(s)  
 SMAIN 1.1(s)

TYPE: 11  
 DATE: August 22, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: 8K 2200 with printer

SCRIBE is part of a system for arranging unformatted text into structured copy. It prints on one of five devices: the IBM 735 Selectric typewriter, 2200-200 serial printer, 2200-200 line printer, 3300-200 thermal printer or an IBM 2741 communications terminal.

The SCRIBE text processing system is designed to provide easy update facilities and complete, simple to use, formatting capabilities. Because SCRIBE produces copy with regulated format, there is the added advantage of the increased aesthetic quality of the final output page.

SCRIBE must be used in conjunction with GEDIT (P00049). A SCRIBE Manual is available. Source tapes and listing must be specially ordered.

### SCRIBE 1.1 (M00133) - Scribe Manual

TYPE: 11  
 DATE: August 22, 1972  
 LISTING: Manual  
 SOURCE: Available  
 SUPPORT: 8K Version 1 Machine

This tape contains the SCRIBE formatted source text for the SCRIBE Manual.

### GEDIT 1.4 (P00049) - General Purpose Editor

TYPE: 1  
 DATE: October 2, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

GEDIT is a general purpose symbolic editor which provides editing in any of three formats;

- 1) 2200 assembler code as in P00002
- 2) Databus compiler code as in P00050
- 3) General text editing with user selectable tab stops.

The latest version (1.3) has extended tab functions, adjustable margin bell. The program is now independent of CTOS. After an assembly, CTOS is reloaded. Legal tab characters are now limited. Edit commands may be typed as a single letter (e.g. :D for :DEL). An Editor Manual is available.



## DIAGNOSTICS

ENDURE 1.6 (L00066) - Combined Memory and Tape Endurance Tester

TYPE: 1  
DATE: October 11, 1971  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

ENDURE is a Datapoint 2200 memory and tape deck test. The program stores a consecutive mask in memory. As it stores, beeps and clicks are executed. It will then write to the tape deck, backspace, read what was written and compare it to memory. The program alternates tape decks. Each pass (one mask, one deck) takes thirty minutes.

FOXER 1.4 (L00011) - Printer Tester (local or remote option)

TYPE: 1  
DATE: October 26, 1971  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 2K Machine

The FOXER is a test-message generator for printers. This program gives the operator the ability to select the local printer, remove the printer, select baud rate for the remote printer, and select long or short lines.

PITEST 1.1 (L00070) - Parallel Interface Tester

TYPE: 1  
DATE: February 11, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 2K Machine

PITEST fully exercises the parallel interface card and diagnoses errors.

TSTALL 1.1 (L00079) Test for Processor, Tape Decks, Display, and Memory

TYPE: 1  
DATE: March 8, 1972  
LISTING: Not Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

A general test program to determine whether the processor, tape decks, display, and memory are working correctly. Diagnostics are displayed if possible.

TSTDIS 1.1 (L00013) - Display Tester

TYPE: 1  
DATE: March 31, 1971  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 2K Machine

The TSTDIS is a Datapoint 2200 CRT display tester. This program will test all 95 characters and the roll-up feature of the machine.

TSTDSK 1.1 (L00114) - 2200/Disk Tester

TYPE: 1  
DATE: April 17, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine

TSTDSK is a Datapoint 2200/Disk tester that makes long term functional tests of all aspects of the disk drive and controller. Complete diagnostics are displayed in the event of error.

TSTDBM 1.1 (L00119) - Disk Controller Buffer Memory Test

TYPE: 1  
DATE: May 10, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 4K Version II Datapoint 2200

TSTDBM continuously writes and checks a pseudo random pattern in the disk controller buffer memory. Error diagnostics are provided in the form of Z numbers of the memory chip(s) in error. This test also provides a rigorous test of the input/output circuitry in the disk controller.

TSTKEY 1.4 (L00014) - Keyboard Tester

TYPE: 1  
DATE: July 2, 1971  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 2K Machine

The TSTKEY is a Datapoint 2200 keyboard tester. It contains a programmed series of interactive steps testing the validity of each key code and the addressing mechanism of the keyboard and keyboard logic.



MEMTST 1.1 (L00118) - Pseudo Random  
Low Memory Test

TYPE: 1  
 DATE: May 10, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: Any size and version 2200

MEMTST tests the area in memory in which the TSTMEM program resides as well as the area in which the loader resides. Both MEMTST and TSTMEM should be run to confirm correct operation of the 2200 memory.

TSTMEM 1.7 (L00015) - Memory Tester

TYPE: 1  
 DATE: May 10, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: Any version and memory size Datapoint 2200

The TSTMEM is a Datapoint 2200 memory test. This program tests the memory by continuously writing and reading the memory with a random number sequence. A memory fault is specified down to the specific integrated circuit pack number.

The 1.7 version of TSTMEM will run in any size machine and give correct P and Z numbers in the error diagnostics.

TSTPRO 1.1 (L00017) - Processor Tester

TYPE: 1  
 DATE: March 5, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 4K Machine

The TSTPRO is a processor tester. This program tests and verifies all internal instructions. By using the accessory light box, the precise internal instruction failure can be determined, also the external commands can be tested.

TSTTAP 1.2 (L00016) - Tape Deck Tester

TYPE: 1  
 DATE: July 27, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

The TSTTAP is a Datapoint 2200 cassette tape deck tester. This program makes a functional test of both tape decks.

TSTPLP 1.1 (L00115) - 2200/Printer  
Diagnostic

TYPE: 1  
 DATE: April 20, 1972  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

This program fully tests and exercises the 2200-200 135 lpm printer.

CTOS 1.2 (C00035) - 2200 Cassette Tape  
Exerciser  
cat (Rev 1):  
EXRTAP 1.1(a)

TYPE: 1  
 DATE: May 18, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine

EXRTAP provides keyboard manipulation over all cassette deck functions.

CTOS 1.2 (C00038) - 9-track Tape Exer-  
ciser  
cat (rev 3):  
EXRIBM 1.3(a)

TYPE: 1  
 DATE: September 17, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS and 8K Machine

EXRIBM provides for keyboard manipulation of the 9-track tape accessory deck. It is an interpreter for a number of instructions which can be keyed in sequence and executed. Data can also be written and read to screen for verification.

CTOS 1.2 (C00065) - 2200/Printer Tester  
cat (Rev 2):  
TST22P 1.2(a)

TYPE: 1  
 DATE: October 11, 1971  
 LISTING: Available  
 SOURCE: Not Available  
 SUPPORT: CTOS, 8K Machine, 2200P  
 and 15 pages of 11 by  
 14-7/8 inch paper

TST22P exercises the 2200-200 and 201 30 cps printer in all possible modes and functions. The program may be used as a diagnostic to find most malfunctions.



## DIAGNOSTICS

CTOS 3.1 (C00101) - Synchronous Communi-  
cations Adaptor  
Diagnostic  
cat. (Rev 2)  
SCATST 1.2 (a)

TYPE: 1  
DATE: April 25, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Machine and CTOS

Tests the 2200-404 synchronous com-  
munications adaptor - transmits  
either ASCII or EBCDIC.

SINGER 1.1 (L00131) - Singer 2200/Printer  
Diagnostic

TYPE: 1  
DATE: July 31, 1972  
LISTING: Available  
SOURCE: Not Available  
SUPPORT: 8K Version 1 or 2 machine

This program is a self explanatory  
functional test of the 2200/Printer  
using the Singer mechanism. All aspects  
of the printer system are tested in a  
procedure that is explained to the  
operator as it proceeds.



## DEMONSTRATIONS

BASCAL 2.2 (P00048) - Basic Desk Calculator

TYPE: 11  
 DATE: October 16, 1971  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: 8K Machine with CTOS and FPAK (version 2 or later) and FCON appended

BASCAL allows execution of typed or up to two stored equations involving constants and up to 10 variables, SIN, COS, LOG, EXP, ARCTAN, Addition, Subtraction, Division, Multiplication or Power in any Basic Language compatible format.  
 Example:  $A=(\text{SIN}(B)+\text{COS}(A))\uparrow(1/2)-D^*E$

CTOS 3.1 (C00067) - Demonstration Package cat (Rev 2)

TYPE: 1  
 DATE: May 1, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine

This is the current Demonstration tape. INFO now reloads CTOS at completion of run. MORSE can now receive messages by tapping on KEYBOARD key. ASR103 is the latest version and the picture files have been reduced to GIRL, SNOOPY and CLASS.

INFO  
 BANDIT  
 ASR103  
 TICTAC  
 MORSE  
 REDBAR  
 DCALC  
 BASCAL  
 DENTRY  
 HENTRY  
 PIX  
 GIRL  
 SNOOPY  
 CLASS

DCALC 1.1 (P00037) - Desk Calculator

TYPE: 11  
 DATE: June 3, 1971  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine with STATH cataloged.

DCALC demonstrates the string math package in a useful desk calculator routine.

DENTRY 1.1 (P00046) - Data Entry Demo Multiply Form Editing

TYPE: 1  
 DATE: June 25, 1971  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine

DENTRY is a demonstration data entry program showing typical data entry with formatted and checked fields and reformatted tape records.

MORSE 2.1 (P00033) - Morse Code Transceiver

TYPE: 11  
 DATE: June 12, 1972  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: 2K Version 1 or 4K version 2 Machine

MORSE demonstrates the wide communication capability of the 2200. It receives from either the KEYBOARD or DISPLAY keys or the communications interface with wide variations in speed (1 to 100 wpm) and form (virtually any 'fist') and display the characters on the screen. It also transmits over the communications interface (while making a tone in the internal CLICK speaker) characters that are entered from the keyboard. Shift U and Shift D change sending speed.

TICTAC 1.1 (P00036) - Tictactoe Game

TYPE: 11  
 DATE: April 29, 1971  
 LISTING: Available  
 SOURCE: Available  
 SUPPORT: CTOS and 8K Machine

TICTAC is a learning tic-tac-toe game which is hard to beat after 20 games.



## MANUALS

### CASSETTE TAPE OPERATING SYSTEM MANUAL 3.1

DATE: May 1972

This is the complete guide to using CTOS. It replaces the majority of the Datapoint 2200 Programmer's Manual which is now obsolete.

Persons programming under CTOS should also order a copy of CTOS LISTING 3.1 for references to subroutines, etc.

### DOS OPERATOR'S GUIDE

DATE: November 2, 1972

The Disk Operating System is a conversational program enabling the user to create, debug, and execute programs utilizing the 2200/Disk peripheral. This guide explains how to generate a DOS on a disk cartridge, how to generate bootstrap tapes for loading the DOS, what the various commands that are supplied with the DOS generation system do and how to use them, and how the DOS is laid out.

### DOS SYSTEM MANUAL

DATE: November 2, 1972

The Disk Operating System provides routines that enable the user to program the keyboard, CRT, cassettes, and disk with ease. The System Manual describes in detail the structure of the system and how the major routines are used. With this document, the programmer will be able to understand how to use the system to its greatest extent.

### CTOS LISTING 3.1

DATE: May 1972

This manual provides a listing of the Cassette Tape Operating System.

### ASSEMBLER 4.1

DATE: May 1972

This manual is a companion to the 2200 Assembler tape and provides a thorough guide to its use and facilities.

### GENERAL PURPOSE EDITOR 3.1

DATE: August 1972

For programmers using GEDIT this manual provides a complete reference and instructions for use.

### DATAPOINT 2200 REFERENCE MANUAL -

Version 1

Version 11

DATE: May 1972

The Reference Manuals describe the specific hardware details, physical design, instruction set and the input/output specifications. They cover the basic elements: CRT, keyboard, processor and cassette tape decks. A thorough knowledge of this manual is imperative before attempting operation of the Datapoint 2200. Specify whether a Version 1 or 11 manual is required.

### DATAPOINT 2200 INSTALLATION MANUAL

DATE: June 1971

The Installation Manual describes the Communications Adaptor, Communications Adaptor Options, Data Access Arrangements, telecommunication channels, external devices and installation procedures related to the Datapoint 2200.

### DATAPOINT 2200 TRACE PROGRAM MANUAL

DATE: March 1971

This manual describes the trace program which is an interactive octal debugging aid for the Datapoint 2200 and operating system. It describes the commands, operations, procedure for starting the trace program, and the operation summary.

### DATABUS 1 PROGRAMMER'S MANUAL

DATE: July 1971

Databus 1 is a powerful higher level business-oriented language providing the user with full arithmetic, file handling, keyboard input, screen formatting, and printer formatting capability.

The Databus 1 Programmer's Manual is a complete course of instructions on the use of the Databus 1 system. It describes the editor, compiler and interpreter and includes step-by-step operational instructions and sample coding.



## DATABUS 2 PROGRAMMER'S MANUAL

DATE: February 1971

Databus 2 is a powerful higher-level business-oriented language. It is more powerful than Databus 1 in that it now provides full string handling capabilities. It still contains full arithmetic, file handling, keyboard input, screen formatting, and printer formatting capability.

The Databus 2 Programmer's Manual is a complete course of instructions on the use of the Databus 2 System.

## DATABUS 3 PROGRAMMER'S MANUAL

DATE: February 1971

Databus 3 is a powerful higher-level business-oriented language. It is cassette-tape compatible with the other versions of Databus. Databus 3 provides all capabilities of Databus 2 except full arithmetic. Databus 3 provides, in addition, the capability to use two mag tape units and to communicate between 2200's over a 202 internal modem.

The Databus 3 Programmer's Manual is a complete course of instruction on the use of the Databus 3 System.

## DATABUS 4 PROGRAMMER'S MANUAL

DATE: February 1971

Databus 4 is a powerful high-level business-oriented language. Databus 4 programs may be generated for a 4, 6, or 8K machine. The size of the machine may be specified at compile time. However, one 8K machine is necessary to generate user programs and an interpretive system. Databus 4 provides the user with the following capabilities: file handling, keyboard, CRT, and cassette tape I/O, as well as limited string and numeric operations.

The Databus 4 Programmer's Manual is a complete course on the use of the Databus 4 System.

## DATABUS 6 OPERATOR'S MANUAL

DATE: February 1972

Databus 6 is a system of programs on a specialized operating system tape which allows emulation of key-punch functions. Provisions are made for punching, editing, verifying, and transmitting data. The system appears to the operator in a manner quite similar to an electronic keypunch and should require little retraining while providing many features not available on common keypunches.

The Databus 6 Operator's Manual is a complete course of instructions from the operators viewpoint on the use of the Databus 6 system.

## DATABUS 7 OPERATOR'S MANUAL

DATE: June 1972

Databus 7 is basically the same as Databus 2 with the 2200/Disc serving as a file storage device.

All the arithmetic and string abilities of Databus 2 are retained. Cassette handling is limited to loading and retrieving files to and from the disc. Databus 7 can also be configured for any printer.

The Databus 7 Operator's Manual contains all necessary instructions and provides a complete guide to programming in the language.

## SCRIBE 1 OPERATOR'S MANUAL

DATE: September 1972

The SCRIBE 1 manual describes the system for arranging unformatted text into structured copy. It prints on one of five devices: the IBM 735 Selectric typewriter, 2200-200 serial printer, 2200-220 line printer, 3300-200 thermal printer or an IBM 2741 communications terminal.

The SCRIBE text processing system is designed to provide easy update facilities and complete, simple to use, formatting capabilities. Because SCRIBE produces copy with regulated format, there is the added advantage of the increased aesthetic quality of the final output page.

SCRIBE must be used in conjunction with GEDIT (P00049). Source tapes and listing must be specially ordered.



## COMMERCIAL SOFTWARE SOURCES

This section lists software packages or services available from outside sources, such as 2200 users or consultants. Computer Terminal Corporation makes no guarantee or recommendation as to their usefulness, efficiency or performance. The listing is a service only, available to all who have software or services for sale or giveaway.

If interested in these products or firms, please contact the firm or person directly. Computer Terminal Corporation, San Antonio, does not have listings or tapes available for this software and cannot make any recommendations as to quality.

Persons wishing to advertise software packages or Datapoint capability should send a description following this catalog format to G. Cullen, Technical Publications, San Antonio.

### Firms offering Datapoint 2200 Programming Services:

Bristol Information Services, Inc.  
Box 789  
Fall River, Mass. 02722  
Mr. F. M. Gottlieb  
(617) 679-1051

Radix Corporation  
1380 West North Temple  
Salt Lake City, Utah 84116  
Attn: R. M. Davis  
(801) 328-9674

Computerm Corporation  
Box 811  
Bellevue, Washington 98005  
(206) 455-1246

PBX Systems, Inc.  
16223 N. E. 2nd St.  
Bellevue, Washington 98008  
Attn: Mr. P. Schofield  
(206) 641-1962

Dialogue Systems  
P. O. Box 728  
Richardson, Texas 75080  
Attn: Richard N. Raymond

Diana M. Engel  
Consulting Program Analyst  
Teleprocessing Systems Design  
4101 Cathedral Avenue, N. W.  
Washington, D. C. 20016



## COMMERCIAL SOFTWARE PACKAGES

### 2200 FILE EDIT PROGRAM - File Handler Program

DATE: December 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 8K, CTOS 1.2  
PRICE: \$150

This program allows the user to store any type of file on a multi-file cassette. Up to 40 files can be stored on a tape cassette. Very helpful in storing source programs, as they can all be stored on one tape cassette instead of individual cassettes.

Gust and Associates

### 2200 SORT PROGRAM - Fixed Record Sorting

DATE: December 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 8K, CTOS 1.2  
PRICE: \$400

This program will sort fixed length Records on Tape. The Records can be any length up to 256 bytes. The Sort Key can be any length within the Record, starting in any position.

Gust and Associates

### 2200 TAPE I/O ROUTINE - A Tape Deck Handler Program

DATE: December 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 8K, CTOS 1.2  
PRICE: \$50

This program will Read or Write a Record of Data up to 2 to the 16th bytes in length. The Routine has Parity Checking and upon encountering a Parity Error, control is returned to the user. This program may be run on any size 2200.

Gust and Associates

### 2200 TAPE LISTER

DATE: December 1971  
LISTING: Available  
SOURCE: Available  
SUPPORT: 2200/Tape I/O Routine from Gust and Associates  
PRICE: \$50

This program will provide octal listings of large buffers that have been written with the above Tape I/O Routines. The program will allow the user to select a desired file for printing and/or displaying. Upon the completion of the printing of a file for printing and/or displaying without reloading the program.

Gust and Associates  
David L. Gust  
1725 E. Cottage Ave.  
St. Paul, Minn. 55106  
(612) 854-4626



## COMMERCIAL SOFTWARE PACKAGES

AR

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine plus Printer  
PRICE: \$950 or lease

An accounts receivable system including input with printed transaction list; an aged listing with five age columns and detail information; statements with the age information and optional message capability; a departmental sales summary listing; a year-to-date analysis by service code; master-file maintenance and listing programs. "Trial" outputs can be obtained, and input can be in several batches.

Computerm Corp.

AP

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine plus Printer  
PRICE: \$550 or lease

An accounts payable system with input transaction listing from vendor invoices and checks issued, GL code analysis, and aged listing of amounts payable.

Computerm Corp.

FUEL - 2200 Fuel Oil Program

DATE: June, 1972  
LISTING  
SOURCE:  
SUPPORT: 16K 2200 and 2200-350 Disk  
PRICE: \$2,500

This package provides an automatic publication of delivery tickets as a by product of Accounts Receivable posting. The degree day for the next delivery is calculated, using the history of oil consumption for each account. As delivery efficiency increases with the use of this program, the user may increase optimum gallonage for each tank size. A detailed statement and aging is available and are provided monthly. Complete file maintenance and input procedures are provided.

Computerm

GL

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine plus Printer  
PRICE: \$950 or lease

A general ledger system including input with running totals and printed transaction list; general ledger output with three-level accumulation, and printing controls; balance sheet with the same facility; profit and loss statement with current and year-to-date columns and percentages of sales; schedules; master-file maintenance and listing programs. Trial balances and other trial outputs can be obtained, and input can be in several batches.

Computerm Corp.

INVI

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine plus Printer  
PRICE: \$950 or lease

An inventory system using cassette master files, typically useful for a 10,000-part inventory with a 10-day cycle. Produces input transaction listing, order requirements, inventory listing with stock status-average usage, turn ratios, and current balance summaries. Three reorder algorithms. Master file maintenance and listing routines.

INV2 for larger inventories an on-line inquiry, requires a disk and 16K and is under development.

Computerm Corp.

RA360

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine plus Printer  
PRICE: \$1750

A route accounting system for price extension (with easy price changing) and totalling on the Datapoint followed by a 360 package for reporting. Reports include transaction listing by invoice number, salesman settlement account and product item report. Samples, sales and spoilage are included. Master file maintenance and listing routines are provided.

RA2 to do the same job on a 16K Datapoint and disk is under development.

Computerm Corp.



## COMMERCIAL SOFTWARE PACKAGES

### PAY

DATE: June 2, 1972  
 LISTING:  
 SOURCE:  
 SUPPORT: 8K Machine plus Printer  
 PRICE: \$550 or lease

A payroll system with input transaction listing, monthly check register, quarterly payroll information, W-2's output at year end, and job cost distribution by employee.

Computerm Corp.

### SORTC

DATE: June 2, 1972  
 LISTING:  
 SOURCE:  
 SUPPORT: 8K Machine plus Printer  
 PRICE: \$375

A sort using two cassettes. The sort is parameterized to allow variation in sort field position and length; fixed or variable numeric records can be sorted including regular Databus files. The comparison algorithm is a separate module to allow easy modification for collating sequence and for multiple sort fields.

Computerm Corp.  
 P.O. Box 811  
 Bellevue, Wa. 98005  
 (206) GL5-1246

### PDQ220 - Speedy Print Routines

DATE: March 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 4K Version 1 Machine  
 PRICE: \$200

PDQ220 is a set of subroutines which allow the Version 1 2200 to drive the 2200-220 Printer at its rated speed of 135 lpm. These routines will not work in a Version II machine (which doesn't need them anyway). A sample driver program is included to illustrate calling sequences, etc.

the difference engine  
 615 West Union  
 Champaign, Ill. 61820

### INPUT A - Tailored Input Program

DATE: June 1972  
 LISTING: Available with purchase  
 SOURCE: Available with purchase  
 SUPPORT: 8K, CTOS 1.2  
 PRICE: \$450 (In form specified below)

This family of programs may be put together in modular form to meet a variety of specifications for data input, error checking and visual verification. A tailored program is prepared which 1) displays a format containing 25-50 information fields on the screen; 2) accepts the information to be keyed in; 3) permits data displayed on the screen to be visually checked for errors before inputting to tape; 4) if an error is found permits the cursor to be moved back to the specified field and the error corrected; 5) permits each field to be checked by the program for up to 100 specific legitimate numeric or alphabetic codes (up to 1000 total characters) or for numbers greater than or less than specified values; 6) duplicates selected fields at the option of the operator; and 7) may add common information to each record automatically. The tape created by this program is in Databus format.

Merle Canfield  
 PRAIRIE VIEW :  
 Box 467  
 Newton, Ks 67114  
 (316) 283-2400

### AUTOX 1.0 Autox

TYPE:  
 DATE: January 17, 1972  
 LISTING: Not Available  
 SOURCE: Not Available  
 SUPPORT: 8K Machine  
 PRICE: \$65

Autox frees the programmer from the chore of sitting with the 2200 to give it information. A string of separate keyboard commands or responses to CTOS, ASM or any other program is stored and used to simulate operator response. For example, a final assembly could be made without operator intervention by the string

RUN ASM,N,Y,R,300,N,"PROGX",Y.

The string of operation can be up to 256 characters long. Autox can also be used as an extended buffer to CTOS to permit longer commands to be used. Full instructions are included with the program.

PBS Systems, Inc.



## COMMERCIAL SOFTWARE PACKAGES

### TAPEX 1.0 - Tape Manipulator

DATE: January 17, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine  
PRICE: \$450

TAPEX is a powerful tape correction program. It reads, writes, copies, and rewinds tapes; displays individual records in character or octal representation; and allows alteration of records while copying. Erroneous, non-standard, and over-length records can be read, displayed, altered, and rewritten to permit recovery of information from damaged tapes.

Alterations are made by adding, replacing, or deleting strings of characters. Tape reading and copying will operate from either deck on single records, on files, or on a whole tape.

Complete operating guide supplied with each tape.

PBS Systems, Inc.

### CALC

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine  
PRICE: \$375

A formula calculator which accepts regular arithmetic formulae to define variables and then evaluates the formulae. Permits 128 variables, 20 levels of nesting and input during evaluation. Useful for commercial or scientific research calculations where a desk calculator gets too tedious and programming would be uneconomical.

PBS Systems, Inc.

### MACROX

DATE: June 2, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Machine and Communications  
or 9-TRK  
PRICE: \$350

An OS or DOS/360 program which accepts a dataset as input to the 360 assembler, allows complete use of the IBM macro assembler facilities, and produces a dataset in the same format as the input for use by the Datapoint assembler. The input/output format is 80-byte fixed length records and is compatible with the ASR103 transmission of GEDIT records. The IBM-compatible tape drive can also be used with an optional translator which runs on the Datapoint.

PBS Systems, Inc.  
16223 N.E. 2nd St.  
Bellevue, Wa. 98008  
(206) 641-1962

### CROSS - A Datapoint 2200 Assembler for Large Computers

DATE: Immediate  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
4K Version I, 7 or 9  
Channel Tape  
PRICE: \$2,500.00

The CROSS assembler is a two pass assembler for the Datapoint 2200 which operates on any computer having a UASI standard FORTRAN IV compiler and a magnetic tape unit. The assembler supports all instructions and assembler directives for both the Version I and Version II machines. The assembly language is free form and will meet the specifications of the Datapoint 2200 assembler. The input need not be formatted exactly into columns as required by many small computer assemblers. The binary output of the assembler is transferred to the Datapoint 2200 via the magnetic tape. The system has been implemented successfully on the UNIVAC 1108 using a 9-track unit. Other implementations should be simplified by the fact that the only machine dependent portion of the system is the subroutine which formats the magnetic tape output buffer.

RADIX Corporation



## COMMERCIAL SOFTWARE PACKAGES

### APL - APL Time Sharing Package

DATE: Immediate  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration 4K Version II,  
Thermal Printer  
PRICE: \$750.00

The IBM APL time sharing language is a concise and powerful programming tool. However, its efficiency in some instances leaves something to be desired. This package, combined with the versatility of the Datapoint 2200, increases APL efficiency by providing several expanded features. As a result, the APL user saves time sharing expenses while expanding his terminal capability. The areas of enhancement include:

- . OFF-LINE DATA ENTRY AND EDITING
- . HIGHER TRANSMISSION SPEEDS UP TO 180 CHARACTERS PER SECOND
- . A FILE SYSTEM CAPABILITY
  - . . USE OF CASSETTES FROM THE APL PROGRAM
  - . . AUTOMATIC SWAP OF WORKSPACE FROM THE PROGRAM LEVEL
- . OFF-LINE FORMATTING AND PRINTING OF REPORTS.

Together these features can significantly reduce connect and C.P.U. time on the host computer.

RADIX Corporation

### DACPAY - Disk Accounts Payable

DATE: October 30, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration 8K Version II, 132 Col. Printer, Controller and Disk  
PRICE: \$950.00

This package includes the features as outlined in TACPAY. It also provides for the following extended capabilities:

- 1) Cost Analysis Reporting
- 2) Faster access, larger files and easier operation

RADIX Corporation

### CSORT - Cassette Sort

DATE: June 23, 1972  
LISTING:  
SOURCE:  
SUPPORT: 8K Version I  
PRICE: \$1,650.00

The Cassette Sort is a modular, assembly language written, program designed to operate on any data base, (including Databus data tapes), which can be stored on one cassette tape. The interface for the data is provided by a user supplied sort control program. This program must supply the sort with a parameter table which contains the descriptive information necessary to perform the ordering operation. This table driven method of implementation provides the maximum latitude for the user in performing the sort. The basic sort options provided in the parameter table are:

- 1) Files can be either numeric or symbolic
- 2) The input data blocks can be variable in length
- 3) The number of sort fields and their lengths are variable
- 4) Fields can be sorted in ascending or descending order
- 5) Edit control links are provided for both blocks and individual records

Finally the sort controls have been set up to allow stopping the sort during any intermediate pass and restarting to continue the sorting process.

RADIX Corporation

### DPAYRL - Disk Corporate Payroll System

DATE: October 30, 1972  
LISTING:  
SOURCE:  
SUPPORT:  
PRICE: \$1,325.00

This package includes the features as outlined in TPAYRL. It also provides for the following extended capabilities:

- 1) Payroll by department
- 2) Job cost distribution by cost center
- 3) Faster access, larger files and easier operation

RADIX Corporation



## COMMERCIAL SOFTWARE PACKAGES

### GDEP - General Document Entry Program

DATE: August 1, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
4K Version I  
PRICE: \$1,375.00

This package allows the user to establish a specific data entry procedure with little difficulty. The flexibility of the program allows for a multitude of document types and entry procedures. They may be used with the efficiency of assembler language without the time consuming efforts required in low level programming. This flexibility is made possible through the use of a procedural command language. The language is composed of a group of characters and symbols which, when combined in a particular order, become individual instructions to the GDEP. These instructions define storage definition and instruct data movement, testing, labeling, transfer of control, computation, I/O from keyboard and cassettes, message displays, screen erasing, error signal beeping, etc.

RADIX Corporation

### DLGGER - Disk General Ledger

DATE: October 30, 1972  
LISTING:  
SOURCE:  
SUPPORT:  
PRICE: \$1,050.00

This package includes the features as outlined in TLDGER. It also provides for the following extended capabilities:

- 1) Detail and consolidation reporting
- 2) Capabilities of getting percentage analysis of cost and income
- 3) Faster access, larger files and easier operation

RADIX Corporation

### TACPAY - Cassette Tape Accounts Payable

DATE: June 23, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
8K Version I, 132 Col.  
Printer  
PRICE: \$695.00

In a manner similar to Accounts Receivable, this subsystem is written in assembly language and it includes the following:

- 1) Detail report of past and new balances due
  - . payment made and charges accrued
- 2) Summary report that includes for each vendor
  - . total amount due
  - . date and amount of last payment
- 3) Printing of voucher checks
- 4) Maintenance of
  - . master payable information
  - . name and address file
- 5) Flexibility in types of check forms and usage
- 6) Turn-key easiness for novice operation

Document balance calculations are also included in this subsystem.

Completely upgradable to the disk version without any changes to files etc. When used with TLDGER, summary entries are automatic to general ledger.

RADIX Corporation

### DACREC - Disk Accounts Receivable

DATE: October 30, 1972  
LISTING:  
SOURCE:  
SUPPORT:  
PRICE: \$1,325.00

This package includes the features as outlined in TACREC. It also provides for the following extended capabilities:

- 1) Reports - Available at any time
  - . invoice register
  - . cash receipt summary
  - . product analysis
  - . sales analysis
- 2) Faster access, larger files, and easier operation

RADIX Corporation



## COMMERCIAL SOFTWARE PACKAGES

### TLDGER - Cassette Tape General Ledger

DATE: June 23, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
8K Version I, 132 Col.  
Printer  
PRICE: \$795.00

A powerful assembly language written general ledger system that includes:

- 1) Balance Forwards
- 2) Current period detail including net charge
  - . net charge for each account
  - . new balances for each account
- 3) Subsidiary check register
- 4) Profit/loss report
- 5) Balance sheet
- 6) Flexibility and ease of operation
- 7) Turn-key easiness for novice operation

A document balance is calculated at the time the information is entered, thereby minimizing data entry error and allowing immediate corrections.

Completely upgradable to the disk version without any changes to files etc. When used with TACREC and TACPAY, summary entries are automatic to general ledger.

RADIX Corporation

### TACREC - Cassette Tape Accounts Receivable

DATE: June 23, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
8K Version I, 132 Col.  
Printer  
PRICE: \$930.00

A generalized accounts receivable system written in assembly language that includes:

- 1) Detail report of cash receipts and billed invoices
  - . previous and new balances forward
- 2) Composite report that includes:
  - . total amount due
  - . new activity within the period
  - . aging schedules for past due accounts
- 3) Printing of statements
- 4) Maintenance of
  - . master receivable information
  - . name and address file
- 5) Flexibility in types of statement form and usage
- 6) Turn-key easiness for novice operation

Document balances are calculated as with the General Ledger subsystem in order to minimize error correction efforts. Completely upgradable to the disk version without any changes to files etc. When used with TLDGER, summary entries are automatic to general ledger.

RADIX Corporation



## COMMERCIAL SOFTWARE PACKAGES

### TPAYRL - A Cassette Tape Corporate Payroll System

DATE: June 23, 1972  
LISTING:  
SOURCE:  
SUPPORT: Minimum Configuration  
8K Version I, 132 Col.  
Printer  
PRICE: \$1,145.00

A complete assembly language written payroll system that includes:

- 1) Printed payroll register
- 2) Printed Checks
- 3) Printed 941 and W-2 forms
- 4) Computation of applicable federal and state taxes
- 5) Additional withholding and deduction allowances
- 6) Automatic initialization of quarterly and annual taxes
- 7) Automatic cutoff of FICA withholdings
- 8) Flexibility and ease in tailoring to customer needs including check forms, report forms and calculations used
- 9) Turn-key easiness for novice operation

In addition, a printed data entry document is automatically produced to greatly simplify and assist the next payroll preparation.

Also, payroll records maintenance is available to provide for situations where some or all of the checks processed by the C.P.A. system must feed to a larger centralized system.

Completely upgradable to the disk version without any changes to files etc.

Radix Corporation  
1380 West North Temple  
Salt Lake City, Utah  
(801) 328-9674

### PAYROLL SYSTEM FOR USE ON THE DATAPOINT 2200

DATE: December 1972  
LISTING:  
SOURCE:  
SUPPORT: DATAPOINT 2200 8K Version 1 with 2200/Printer  
(Also available with 12K disc system)  
PRICE: \$1,250.00 for cassette system (\$1,500.00 for disc system)

The BIS Payroll System is a modular system designed to be customized for each user for the calculation of gross pay. The system can handle any combination of hourly, overtime, double time, salary multirate, incentive, piecework, commissions (both weekly and monthly with and without draw), no check, no pay and vacation pay. Calculation of net pay includes all federal and state taxes, 8 deductions plus extra withholding. Once the operator has input data for the calculation of gross pay, all other operations are performed by the system automatically. All required quarterly and yearly reports as well as complete file maintenance and audit trails are provided. The unique advantage to a system of this type is its ability to handle unusual payroll problems.

Some of the reports provided are:

- Master file list - entire file or specific employees
- Master file additions and changes
- Job classification and rate report
- Name and address list
- Mailing Labels
- Time card labels
- Payroll check - customized upon basic BIS pattern prenumbered and machine numbered for security
- Payroll register
- Departmental and Grand Totals for all register items
- Deductions register - with option to print any or all deductions
- Check register
- No pay/Terminations to date report 941's
- W-2
- Quarterly taxes withheld report
- Weekly summary by employee each quarter

Bristol Information Systems, Inc.



## COMMERCIAL SOFTWARE PACKAGES

### OPEN ITEM ACCOUNTS RECEIVABLE

DATE: March 1973  
LISTING:  
SOURCE:  
SUPPORT: DATAPOINT 2200 - 8K  
Version 1 with 2200  
Printer, CTOS  
PRICE: \$1,000.00

The BIS Accounts Receivable System is an open item system with controls set to accept data based upon specific customer invoices. Thus, the reports and statements show what the customer actually owes in terms of invoices rather than list what transactions took place during the month. This approach is very useful for users with relatively few customers but many invoices per customer, eg. manufacturers. An audit trail of all transactions and batch totals provide for complete accounting control by the operator. Data is accepted from invoices, payments with discounts and deductions, credit and debit memos, and internal adjustments. Payments may be applied against a specific invoice or against the oldest invoices for each customer.

Among the reports provided are:

- 1) Daily sales totals by customer and sales category
- 2) Daily Cash Receipts
- 3) Monthly Statements
- 4) Aging by invoice with options for control by due date or by overdue only, plus options on full printing or a short form with customer totals only
- 5) Complete File Print with options for specific customers only

Bristol Information Systems, Inc.

### PERPETUAL INVENTORY SYSTEM

DATE: January 1973  
LISTING:  
SOURCE:  
SUPPORT: DATAPOINT 2200  
PRICE: \$600.00

The BIS Perpetual Inventory System for use on the DATAPOINT 2200 computer accepts information from the keyboard to maintain the inventory master file, the data base upon which this system is built. Using this data base reports can then be produced to provide the information management needs for the proper maintenance of the inventory.

The system input accepts receipts, orders, physical inventory, master file additions and deletions, and record changes such as price, prime vendor, etc. in a one pass update program providing complete control of the master file. The system also provides for period and year end file maintenance and reports.

Standard reports provided with the system include:

- 1) Current Status reports with controls providing for printing the entire file and/or specific records.
- 2) Report of items at or below the Order Point
- 3) Period to date Usage Report showing both quantities and dollar amount used

Bristol Information Systems, Inc.



## COMPUTER SOFTWARE PACKAGES

### COMPUTERIZED DIRECT PAY ACCOUNTS PAYABLE SYSTEM

DATE: December 1972-January 1973  
LISTING:  
SOURCE:  
SUPPORT: DATAPOINT 2200 8K  
30CPS Printer  
PRICE: \$750.00

This system accepts data to write checks with vouchers and distributes the amounts to the various purchase and expense accounts. At the end of each period the system accepts data from other journals and applies these amounts to the proper accounts, then sorts all entries and produces an updated trial balance, both period and year to date. A full audit trial and file maintenance system are provided.

#### Reports Produced:

- 1) Check and Voucher
- 2) Audit Trial of all journal entries for the period.
- 3) Check register showing amount of check, total discount taken, Vendor name and check number, and date.
- 4) Trial Balance by Corporation or Division
- 5) Vendor File listing

Bristol Information Systems, Inc.

Bristol Corporation  
1880 West North Temple  
Salt Lake City, Utah  
(801) 488-1100

### SALES ANALYSIS

DATE: January-February 1973  
LISTING:  
SOURCE:  
SUPPORT: DATAPOINT 2200 - 8K  
Version 1 with 2200  
Printer, CTOS  
PRICE: \$750.00

The BIS Sales Analysis system is designed to give reports that give information on sales by Territory/Salesman with data for current month, year-to-date, this month last year, last year total, with subtotals by Salesman and grand totals for all accounts. Reports are also provided for total commission and non-commission sales by customer and for territory/salesman. Also credits issued to each customer are accumulated on a year-to-date basis. A name and address list for the customer file is also available, plus year end reports and file maintenance. A complete audit trial provides for control of the entire system.

Bristol Information Systems, Inc.

Bristol Information Systems, Inc.

Departmental and Grand Totals  
for all registers (with option  
to print out of all deductions  
check register  
No pay/terminations to date report  
4-2  
Quarterly sales withheld report  
Weekly summary by employee each  
quarter

Bristol Information Systems, Inc.



## APPENDIX

### How To Generate a "Jump-to-Debug" Tape

This is an extremely valuable tool for debugging. It provides an entry to the "Debug" routine when the restart key is struck with the Jump-to-Debug tape loaded in the rear deck. This is convenient if the main program has halted or started looping because it will allow inspection of all of memory.

Registers A, B, C, D, and E are available for inspection in their state at the time of jumping to debug. They are in locations 16770 through 16774 respectively.

With CTOS 3.1, the OUT! command will create a Jump-to-Debug tape on the front deck. Otherwise, running this program will generate a Jump-to-Debug tape on the front deck.

Note: This program is the Jump-to-Debug generator only. To use, assemble (or key-in using Debug) and put it in the catalog of a CTOS tape. Place a blank tape in the front deck and run this program. The resulting tape is the Jump-to-Debug tape used in the above manner.

16453		DEBUGS	EQU	016453	
01000			SET	01000	
01000	006 360	START	LA	0360	ADDRESS DECK
01002	121		EX	ADR	
01003	157		EX	DECK2	
01004	106 041 002		CALL	DEKWAT	
01007	163		EX	REWIND	
01010	106 041 002		CALL	DEKWAT	
01013	163		EX	WBK	START WRITE
01014	036 104		LD	0104	
01018	106 051 002		CALL	WRITE\$	
01021	036 053		LD	DEBUGS	
01023	106 051 002		CALL	WRITE\$	
01026	036 035		LD	DEBUGS>8	
01030	106 051 002		CALL	WRITE\$	
01033	106 041 002		CALL	DEKWAT	
01036	104 053 035		JMP	DEBUGS	
01041	123	DEKWAT	EX	STATUS	WAIT DECK RDY
01042	101		IN		
01043	044 001		ND	1	
01045	150 041 002		JTZ	DEKWAT	
01050	007		RET		
01051	123	WRITE\$	EX	STATUS	WAIT WRITE RDY
01052	101		IN		
01053	044 010		ND	010	
01055	150 051 002		JTZ	WRITE\$	
01060	303		LAD		
01061	127		EX	WRITE	WRITE CHARACTER
01062	007		RET		
01000			END	START	



*For further information on Datapoint products, please write or call the Computer Terminal Corporation office nearest you.*

## **Computer Terminal Corporation**



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TRW Communications/Lyss/Berne, Switzerland/Telex: 845-34446  
TRW Electronics-International/Los Angeles, California/Telex: 674593  
The Systems Corp./Honolulu, Hawaii/(808) 955-6638  
Unidata Limited/London, England/Telex: 851-923038



# DATAPOINT 2200/PRICES



July 1972

<u>Datapoint 2200</u>	<u>Purchase</u>	<u>Model No.</u>	<u>Monthly Lease Prices<sup>1</sup></u>		<u>Installation</u>
			<u>2 Yr. Lease</u>	<u>4 Yr. Lease</u>	
2K Memory (Version 1)	\$ 6,040	102	\$ 151	\$ 128	\$ 80
4K Memory (Version 1)	6,630	104	166	141	80
6K Memory (Version 1)	7,210	106	180	153	80
8K Memory (Version 1)	7,800	108	195	166	80

ABOVE PRICING IS FOR THE COMPLETE UNIT, INCLUDING:

- A. 960-character CRT (12 lines x 80 columns)
- B. Both typewriter and 10-key adding machine keyboards
- C. Dual digital cassette tape decks - 100K characters typical
- D. Central Processor Unit - general purpose small computer
- E. Memory - 2, 3, 6, or 8 thousand words (8 bits)

4K Memory (Version 2)	\$ 7,792	114	\$ 195	\$ 168	\$ 80
8K Memory (Version 2)	9,094	118	227	196	80
12K Memory (Version 2)	10,392	122	260	223	80
16K Memory (Version 2)	11,690	126	292	251	80

ABOVE PRICING IS FOR THE COMPLETE UNIT, INCLUDING:

- A. 960-character CRT (12 lines x 80 columns)
- B. Both typewriter and 10-key adding machine keyboards
- C. Dual digital cassette tape decks - 100K character storage typical
- D. Central Processor Unit - general purpose small computer with interrupts and dual general purpose registers.
- E. Memory - 4, 8, 12, or 16 thousand words (8 bits) of 3.2 microseconds Random Access Memory



## DATAPOINT PERIPHERAL PRICING

	<u>Purchase</u>	<u>Model No.</u>	<u>Monthly Lease Prices<sup>1</sup></u>		<u>Installation</u>
			<u>2 Yr. Lease</u>	<u>4 Yr. Lease</u>	
Synchronous or Asynchronous Communications Adaptor	\$ 910	400 404	\$ 23	\$ 19	\$ 15
Bell 103 or 202 data set equivalent	1,500	401 402	38	31	15
132-column impact 30cps printer & console	3,950	200	99	84	120
132-column impact 135 lpm printer, freestanding	8,300	220	213	181	150
9-track, 800 bpi, 1/2 in. tape drive-Industry compatible	8,500	300	213	181	120
7-track, 556/800 bpi, tape drive	8,500	302	213	181	120
Disk Controller, With One Drive Unit	9,800	350	245	211	120
Disk Controller, With Two Drive Units	13,600	352	340	292	120
Disk Add-On, Single Drive	8,500	354	213	183	120
Disk Add-On, Double Drive	12,900	355	323	277	120
Card Reader	5,600	500	125	110	110
Selectric Interface	750	240	22.50	15	15

<sup>1</sup>Shipping costs and maintenance prices are not included.

All prices subject to change without notice.

Short-term leases available.

All products sold under this schedule will be shipped F.O.B. San Antonio, Texas Net 30.



**Datapoint 2200**