



USERS BULLETIN

280 Bernardo Ave., Mt. View, CA 94043 (415)964-7400

Issue #1 December 1978

* * * IT'S NEW! * * *

The new User Bulletin is designed to assist YOU in the use of your CROMEMCO products. The bulletin will be released periodically with information regarding hardware revisions, software updates, trouble-shooting and service hints.

* * * NEW CDOS * * *

CROMEMCO is pleased to announce the release of an enhanced version of CDOS. This release includes features such as CDOSGEN and a method of defining the value of the function keys on CROMEMCO's Model 3101 terminal.

CDOS-CP/M COMPATIBILITY

The Cromemco Disk Operating System (CDOS)* is an original product designed and written in Z80 machine code by Cromemco, Inc. for its own line of microcomputers. However, due to the large number of programs currently available to run under the CP/M** operating system, CDOS was designed to be upwards CP/M-compatible. Cromemco is licensed by Digital Research, the originator of CP/M, for use of the CP/M data structures and user interface. This means that most programs written for CP/M (versions up to and including 1.33) will run without modification under CDOS. This also means that programs written for CDOS will not generally run under CP/M.

There are several advantages to end-users which result from this compatibility. First, users of Cromemco machines are able to draw on the large library of existing CP/M and CP/M compatible

*CDOS is a Trademark of Cromemco, Inc.
Mountain View, California

**CP/M is a Trademark of Digital Research, Inc.
Pacific Grove, California

programs available on the market. Second, users familiar with CP/M can easily move up to CDOS taking advantage of the many additional features available with CDOS.

The enhancements contained in CDOS but not CP/M are primarily visible in the system calls. CDOS has added a number of new system calls to allow the user even more flexible means of device and disk I/O. System calls are in all cases executed by first loading the C register with the number of the call. In the case of the non-CP/M calls, the parity bit of the 8-bit quantity in C is set to allow for a new range of 128. This is apparent in the Summary of CDOS System Calls.

This new CDOS is a valuable addition to our software capabilities, and is easily interfaced to existing CROMEMCO software packages.

As an added bonus, this is an opportunity to bring your software library up to the latest revision levels. The appropriate software will be included with your copy of CDOS at no additional charge.

The package includes:

1. CDOS User Manual
2. Floppy Disk with:
 - A. New CDOS
 - B. Standard Utilities
 - C. Latest revision of System Software
i.e. Basic, Cobol, Fortran, etc.
(additional manuals may be purchased separately).

To obtain your copy, you must have the proper software registration forms on file with CROMEMCO. In addition, in order to update our files, and to comply with copyright law, you must fill out and return with your order, the enclosed Software License Agreement. When filling out these forms, please print or typewrite all information except where a signature is required. This will help us to speed delivery of your order.

CROMEMCO APPLICATIONS NOTE
Rev. C 4FDC Board Corrections

REV B OK

Please note that a jumper wire should be installed on all Rev. C 4FDC boards from pin 19 of IC 14 (74LS240 or 74S240) to ground (available at either pin 1 or pin 10 of IC 14). This correction grounds the chip-enable line for the output bus drivers, which prevents incorrect disk-restore operation of the 8" drives.

This problem will most likely occur with the new CDOS (versions 01.00 and higher), because the restore for fast seek drives is now done by a more accurate method in software. A symptom of the problem is the message:

Read Error: Drive A, Track 02, Sector 01, Status=10

which occurs when attempting to boot new CDOS.

A second correction which should be made to all revisions of 4FDC boards is to substitute a 4.7K resistor network as RN2 in place of the 1K network presently used. These resistors are used as pull-ups to the +5v. line and the incorrect 1K networks sink too much current, which may result in CRC errors on disk operations.

Please check your kit or wired 4FDC for this 4.7K network (RN2), and note that both the silk-screened board legend and the 4FDC manual may be printed with the incorrect value.



Cromemco

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Specialists in computers and peripherals

280 BERNARDO AVE., MOUNTAIN VIEW, CA 94043 • (415) 964-7400

August 18, 1978

Dear CROMEMCO Customer:

CROMEMCO now requires a return authorization number for any return of equipment for repair, replacement or credit. This number will be issued by the Customer Support Department. Any equipment received without the return authorization number clearly marked on the outside of the package will be immediately returned to the sender.

Effective September 1, 1978 repair of all kit and nonwarranty boards will be \$70.00.

Returns for credit will be subject to a 15% restocking charge.

If a Persci drive is returned without the head loader card correctly inserted for shipping, the warranty will be void. Persci drives are extremely sensitive to shock, so please be careful to insert the head loader card properly. Disk drive nonwarranty repair charges range between \$100.00 and \$350.00.

If you have any questions regarding special handling, packaging of equipment, or procedures for returning equipment, please contact the Customer Support Department for assistance.

Yours truly,

CROMEMCO, INC.

Alan O'Neill
Customer Support Engineer

AO'N:emc



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TWX 910-379-6988

Dear CROMEMCO User:

The enclosed order form and software license agreement is designed to help us process your order for software updates as fast as possible. Please fill them out carefully.

At present, the new CDOS is not included with the DATA BASE MANAGEMENT, WORD PROCESSOR, MULTI-USER BASIC, DAZZLER GAMES or DAZZLER GRAPHICS packages, even though some are listed on the order form.

The new CDOS package is compatible with BASIC, FORTRAN, COBOL, and ASSEMBLER software, and if you choose to get only one updated disk, select your oldest software and you may then implement the new CDOS and utilities on your other disks.

The back of this sheet contains a listing of the latest revision numbers of the systems programs and utilities. Please note that the new CDOS does require about 3 to 4K additional memory. If you are already running in a minimum (32K) system, this will be a problem for you.

Please contact the CUSTOMER SUPPORT DEPARTMENT if we may be of further assistance.

Sincerely,

CROMEMCO, INC.

Alan O'Neill
Customer Support Manager

AO'N:emc

NOTE: THIS SPECIAL OFFER EXPIRES MARCH 31, 1979.

CURRENT VERSION LISTINGS

FDA	ASSEMBLER	2.15
FDB	BASIC	5.40
FDC	COBOL	2.00
FDF	FORTRAN	3.10
DGR	DAZZLER GRAPHICS	0.08
TSS	TRACE	2.06
MUB	MULTI-USER BASIC	1.00
WPS	TEXT FORMATTER	4.06
DBM	DATA BASE MANAGEMENT	0.02
CDOS	(WPS, DBMS, DGR, FDG, MUB)	0.20
CDOS	(ALL OTHER SOFTWARE)	1.07
RDOS		1.10
LINK		3.10
DEBUG		0.08
EDIT		0.10
BATCH		1.03
DUMP		0.06
INIT		0.04
STAT		0.06
XFER		1.03
WRTSYS		0.10
MEMTEST	(16KZ TEST)	0.06

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9) **Termination:** Within one month after the date of termination of the license granted under this agreement, the Customer will furnish CROMEMCO a certificate certifying that through the Customer's best efforts, and to the best of the Customer's knowledge, the original and all copies, in whole or in part, in any form, of the CROMEMCO Software have been returned to CROMEMCO or destroyed.

10) **Enhancements and Updates:** From time to time, CROMEMCO may advise customers who have completed registration forms and returned them to CROMEMCO of enhancements and updates to the CROMEMCO Software. Upon written request of any such registered Customer within one year from the date of the Customer's receipt of the CROMEMCO Software, CROMEMCO will provide the Customer an updated version of the CROMEMCO Software for a nominal copying charge.

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CROMEMCO, INC.

SOFTWARE REGISTRATION FORM

CROMEMCO Software: _____

Software Serial Number: _____

CROMEMCO Computer System: _____

Computer System Serial Number: _____

Software Obtained From: _____ (Name of Dealer)

(Address of Dealer)

Date of Customer's Receipt of Software: _____

Location where CROMEMCO Software will be used: _____

As the authorized representative of the Customer named below, I agree to the terms and conditions of the CROMEMCO Software License Agreement enclosed with the above CROMEMCO Software.

Name of Representative: _____ Signature of Representative

STANFORD UNIVERSITY
JAMES T. WALKER

Name of Customer: _____
AEL 203
STANFORD, CA

Address of Customer: _____
94305

City, State, Zip: _____

Please return this registration form to:

CROMEMCO, INC.
280 Bernardo Avenue,
Mountain View, California 94040
Attn: Software Registration Department.

