

INTRODUCTION

This disk contains a replacement for CP/M's Console Command Processor or CCP. This replacement adds enhanced functionality at no cost in memory. The replacement takes up exactly the same space 800H or 2048 bytes.

This CCP replacement is written in Z80 code in order to maximize space efficiency. It does not use the IX and IY or the alternative register sets.

This CCP replacement supports the following resident commands:

DIR - a sorted directory listing that provides file size and disk usage information.
COPY - copies files from one disk to another. Wild cards are permitted for multiple file copying.
TYPE - displays files on the CON: device. Supports end of screen pause for easy file viewing. Assembly time options make the pause either the default or optional. If default, no pause becomes optional.
LIST - displays files on the LST: device. Can be configured to send form feeds according to user specified page length.
REN - renames file
SAVE - saves memory to disk
ERA - erases file
LOG - resets disk system
CLS - clears the screen
GO - restart last program loaded into TPA

There is no longer a USER command. That has been replaced by the ZCPR2/3 method of changing drive and user numbers. ie

DU: - change drive and user
D: - change drive only
U: - change user only

As with the standard CCP, sixteen user numbers, 0 through 15, are supported.

INSTALLATION

- 1) The following files should be included on the distribution disk:
NEWCCP.AZM - source code for the replacement CCP. Ready to be assembled with Z80Mr, a public domain assembler, or M80/L80.
ADAMCCP.HEX - replacement CCP for Coleco Adam only.
FINDOFF.COM - program to assist in installing NEWCCP
- 2) Copy those files plus SYSGEN.COM and DDT.COM to a newly formatted blank diskette that already has CP/M on the system tracks. ADAM users use the ADAMSYS.COM provided in the library.
- 3) Create a disk file containing the CP/M system image by running SYSGEN as follows:

A>sysgen<ret>

SYSGEN VERSION X.X

SOURCE DRIVE NAME (OR RETURN TO SKIP): a<ret>

DESTINATION DRIVE (OR RETURN TO REBOOT): <ret>

A>save X cpm.com <- Coleco Adam use 64 in place of X.

X is the size of your CP/M system in 256-byte pages. If you are not sure what this number is, try 50. Remember, saving more than you need will not hurt anything, but too little is fatal.

- 4) Run FINDOFF.COM. If all goes well it will give you the following information:

"Your BDOS memory location is A",

"Your BIOS memory location is B" ,

"Your BDOS is located at C in file CPM.COM" and

"Your offset is D"

Write down A and D. Calculate A-800H and write this down. This is the start of your CCP.

Unfortunately, FINDOFF may not locate your BDOS in the system file image. If this happens, you will have to calculate your own offset. First, you will have to locate the CCP in the system file image (CPM.COM) using DDT.COM.

ddt cpm.com

Use the dump command (D) until you see COPYRIGHT (C)1979 DIGITAL RESEARCH. Note the address at which this occurs and calculate the previous even record boundary ie the first address before the copyright message that end in 00 or 80 (if your SYSGEN.COM is fairly standard it will be at 980H.) Now to calculate your offset. First, subtract the CCP memory location from the value just found. The CCP memory location is the larger of the two so the result should be negative (starting with F). Your offset is the first 4 numbers on the right. For example, my CCP memory location is C400H and my CCP is found at 2700H in my CPM.COM so my offset is

2700-c400=FFFF6300 or 6300H

- 5) Assemble NEWCCP as follows:

Check the equates for lines per screen (LPS), lines per page (LPP), and clear screen (CLRSCR) for compatibility with your system.

There are only 2 assembly time options:

DFLTPAUSE EQU TRUE (FALSE) which enables (disables) default pause at end of screen for TYPE and formfeed at end of page for LIST.

COL30 EQU FALSE (TRUE) which sets the directory display to four (one) columns.

IF using Z80MR:

First edit NEWCCP.AZM and set the equates as follows:

Z80MR EQU TRUE

M80 EQU FALSE

and set the origin to
ORG XXXXH
where XXXX is the CCP origin determined above.

Next assemble NEWCCP.AZM:

A>z80mr newccp.aaz

The assembly will take several minutes and when completed should leave you a 5 or 6K NEWCCP.HEX file.
IF using M80:

Edit NEWCCP.AZM as set the following equates:

Z80MR EQU FALSE
M80 EQU TRUE

Next assemble NEWCCP.AZM as follows:

A>M80 =newccp.azm/1

and link with L80

A>L80 /p:XXXX,NEWCCP,NEWCCP/n/x/e
where XXXX is the CCP origin determined above.

Any changes to the source code other than those described above are strongly discouraged. The CCP is very size sensitive and the code as it now stands barely fits into the size allocated to it. If it is made any bigger it will overwrite parts of the BDOS, trashing the system.

6) Overlay the old CCP with NEWCCP:

```
A>ddt cpm.com
NEXT PC
NNNN 100 ;displayed by DDT; NNNN should be fairly large
        ;for Coleco Adam NNNN=4100
-inewccp.hex
-rDDDD ;DDDD=offset calculated above <- Coleco Adam 6300
NEXT PC
NNNN 100 ;should not have changed from above
-G100 ;this will start the execution of SYSGEN again

SYSGEN x.x
SOURCE DRIVE: <ret>
DESTINATION DRIVE: a
DESTINATION DRIVE: <ret>
```

7) The system should now reboot with the CCP replacement in place. The first indication of success will be a ZCPR2/3 style drive prompt: A0>. Test the system by copying files, changing drives and users and running other resident and transient files until you are satisfied that everything is working.

USAGE

The following will be a brief description of the resident commands of NEWCCP. The following nomenclature is observed:

DU drive/user specification as popularized by ZCPR2/3. Either or both of drive and user are option. When omitted, the appropriate default drive/user is assumed
afn ambiguous filename. The standard CP/M wildcards are permitted.
ufn unambiguous filename. No wildcards allowed.

COMMAND SYNTAX

DU: change drive/user. Either drive or user can be omitted.

DIR sorted directory listing for the default drive/user. Provides file size and total disk usage statistics

DIR du: as above for specified drive/user

DIR du:afn as above for all files matching the ambiguous filename spec (total disk stats reported)

DIR du:ufn as above for file matching file spec. (total disk stats reported)

If disks are changed, the drive space statistics will not be correct unless the drive is logged in with a warmboot or the LOG command (see below).

COPY du:afn D: copy all files matching the du:afn spec to drive D. The user specification on the destination drive will match the source specification. If either source or destination drive is omitted, the default drive will be used. Source and destination drives must be different.

TYPE du:ufn display the file matching du:ufn on the CON: device. No wildcards permitted. Depending upon the assembly time options selected, the output will pause after the user specified number of lines.

TYPE du:ufn P display with pause

TYPE du:ufn N display with no pause

LIST du:ufn same as TYPE but output goes to both the CON: and LST: devices.

LIST du:UFN P

LIST du:ufn N

REN du:old-ufn new-ufn rename old-ufn file to new-ufn. This is the reverse of the standard CCP sequence and also omits the "=" delimiter. This sequence does however follow the syntax adopted by many other computer operating systems including MS-DOS.

SAVE nn du:ufn save nn (in decimal) pages of memory starting at 100H as file du:ufn.

ERA du:afn erase all files matching the du:afn specification. Confirmation will be needed for an ERA *.* request.

LOG reset the disk system. Equivalent to BDOS function 13 (0DH).

CLS clears the screen

GO restart the last program loaded into the TPA. This can be either
 the last program executed or the last program copied with the
 resident COPY command. Note DDT, ZSID and other self-relocating
 programs will not restart.

DU:UFN load and execute transient program. Note if DU: is omitted and
 UFN matches one of the resident commands the resident command
 will be executed. If DU: is specified, the transient program will
 be executed even if UFN matches a transient.

ERROR HANDLING

NEWCCP does not echo the portion of the command line in error as does the standard CCP. Instead it provides more informative error messages such as NO FILE (for programs not found) or BAD SYNTAX. As a consequence, you are no longer able to send control characters to the screen. Thus, of the ADAM control characters that affect the smart keys, only shift UNDO works.

CREDITS

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However, any remaining bugs remain the sole responsibility of the author. If you have any problems (or even if you don't) I would be most happy to hear from you.

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