



CONTROL DATA® COMPUTER SYSTEMS

INTERCOM Version 4.5, under the NOS/BE 1 operating system, provides time sharing access to CONTROL DATA® CYBER 170, CYBER 70 Model 72, 73, 74, or 6000 Series computers from terminals at central or remote sites. Detailed descriptions of terminal operations, INTERCOM command statements, and NOS/BE 1 control statement entries are listed in the INTERCOM reference manual, publication number 60494600.

NOTATION

Command verbs and keyword parameters are capitalized; acceptable abbreviations are underlined.

User supplied information is shown in lowercase characters.

† Indicates point where entry can terminate; INTERCOM requests required parameters interactively.

{ } Enclose required elements of alternative entries; only one alternative can be specified.

[] Enclose optional elements; any one can be specified or all can be omitted.

... Following an element indicates a variable number of similar elements can be specified.

___ Underline characters indicate allowable abbreviation of a command.

NOS/BE 1 CONTROL STATEMENTS

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Except as noted below, NOS/BE 1 control statements can be entered as INTERCOM commands:

CKP	RESTART	ADDSET	PAUSE
RFL	LABELMS	CMLOAD***	RPACK
DMPECS	LIMIT	ECLOAD***	VSN
EXECUTE**	LIBLOAD**	LOAD**	LABEL
LDSET**	REDUCE***	NOGO**	SLOAD**

*Page number references in INTERCOM 4.5 reference manual.

**NOS/BE 1 control statements allowed as options in the XEQ command only.

***Prohibited Loader requests.

SYSTEM CONTROL COMMANDS

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ASSETS

Causes INTERCOM to list: ASSETS OF (user-id) AT (hours, minutes, seconds), equipment and port numbers, maximum number of allotted local files, number of local files in use, field length, time limit, and total elapsed CP time. Settings of sense switches, EFL,ETL, SAVEFL, REDUCE, LOCK, and MAP are shown when they differ from installation defaults.

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EFL[,nnnnnn]

Specifies user's program execution field length, nnnnnn = octal length.

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ETL[,nnnn]

Sets user's program or command time limit. nnnn = octal seconds.

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LOGIN †,username †,password [,SUP]

Initiates INTERCOM session. System replies consist of date, log-in time, user-id, equipment number, and message-of-the-day, unless these messages are suppressed by the SUP parameter. System responds with COMMAND-when ready to accept a command.

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LOGOUT

Terminates an INTERCOM session. Only permanent files are retained between a LOGOUT and subsequent LOGIN.

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MAP, $\left\{ \begin{array}{l} \text{OFF} \\ \text{ON} \\ \text{PART} \end{array} \right\}$ Example: COMMAND – MAP,ON
COMMAND – DISCONT,OUTPUT
COMMAND – COBOL(I-filename)
COMMAND – MAP,OFF

Normally, no load map is produced. However, the NOS/BE 1 control statement MAP,ON specifies a full load map. MAP,PART omits entry point addresses. The example sequence of NOS/BE 1 control statements and INTERCOM commands disconnects the OUTPUT file to prevent the load map from being sent to the terminal; the map is saved on the file OUTPUT for diagnostics examination. MAP,OFF should be entered upon completion. Default is OFF.

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REDUCE, $\left\{ \begin{array}{l} \text{OFF} \\ \text{ON} \end{array} \right\}$

REDUCE,OFF inhibits automatic field length reduction when entered before program execution. After execution, REDUCE,ON should be entered to restore automatic reduction. Default is ON.

SAVEFL, { OFF }
 { ON }

INTERCOM saves and restores the field length after execution of each command or NOS/BE 1 control statement if SAVEFL,ON has been entered. This mode of operation is slower, but it is necessary with the dump utility, DMP. SAVEFL,OFF should be entered to return to normal operation upon completion of a dump. Default is OFF.

SCREEN [,width [,length]]

Selects CRT screen or TTY format other than the standard screen format for the installation.

TEACH

Displays a list of INTERCOM commands and equipment. Instructive descriptions can be displayed at user request.

FILE CONTROL COMMANDS

BRESEQ, filename [,startvalue [,increment]]

Resequences line numbers in a BASIC file; if unspecified, defaults are 100 for startvalue, 10 for increment.

CONNECT, filename-1 [,filename-2] . . .

Connects named files so an executing program can receive input from the terminal and display output at the terminal. File names can be INPUT and OUTPUT, as well as any other files.

DISCARD, filename [,permanent-file-user-id]

Deletes a permanent file saved with STORE or a local file. Only the filename should be specified for local files and files previously attached with FETCH. Otherwise, unless the installation assumes user-id as file id, the id from STORE must be specified. ID= is not displayed to request entries.

DISCONT, filename-1 [,filename-2] . . .

Disconnects named files from the terminal and assigns them to allocatable mass storage.

FETCH, filename[†] [,permanent-file-user-id]

Retrieves a permanent file stored by a STORE command. If an id other than a user-id is required, ID= is displayed to request entries.

FILES

Lists names of all user's local files or attached permanent files, remote executing jobs, and remote input or output files. \$ identifies each file currently connected to the terminal, and * precedes local file names of each attached permanent file.

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PAGE [filename-1] [filename-2]

Provides terminal page-by-page display of filename-1 (OUTPUT if unspecified) and allows transfer for specified information to filename-2 (PRINT if unspecified) for subsequent printing. After response READY . . . , user can enter: nn to begin display at line nn, + to display next page, - to display previous page, +nn to advance beginning of display nn lines, -nn to reverse beginning of display nn lines, -* to go to beginning-of-information, or +* to go to end-of-information. Q to exit PAGE or QS to exit such that PAGE(*) positions file at point of interruption. +=/string/ to search forward or -=/string/ to search backward. Display begins at line containing search string. Other available commands may be obtained by entering HELP.

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RETURN filename-1, . . .

NOS/BE 1 control statement that releases named local files from a user's FILES list. Attached permanent files are also deleted from list but are retained as permanent files. User local files can be deleted entirely. Use DISCARD rather than RETURN to delete the file OUTPUT.

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STORE filename[†] [,permanent-file-user-id]

Retains a local file as permanent for single user access. If id not specified nor assigned as an installation option (user-id as the default permanent file identification), INTERCOM requests 1-9 letters and/or digits for ID= from the user.

MESSAGE CONTROL COMMANDS

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LOCK . { OFF }
 { ON }

ON prevents other users from sending message to the user. Default is OFF.

p. II-1-15

MESSAGE, up to 58 character message

Flashes user message on the central site operator's console.

A message from the central site has the following form:
user-id, message

A user-id of ** indicates a message sent to all users.

SEND[†],user name

Sends message lines of up to 149 characters to any specified user name. A user name of *** indicates all logged in users. Entering END at the beginning of a message line terminates the message.

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SITUATE

Displays a list of currently logged in user names and associated user ids. Displays list of remote batch terminals by terminal id and type. Users with LOCK,ON are noted by an asterisk (*).

BATCH CONTROL COMMANDS

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$$\text{BATCH}^{\dagger}, \text{filename}^{\dagger}, \left\{ \begin{array}{l} \text{PRINT} \\ \text{PUNCH } [,xxxx]^{\dagger} \\ \text{PUNCHB} \end{array} \right\}, \text{file-id}$$

$$\text{BATCH}^{\dagger}, \text{filename}^{\dagger}, \left\{ \begin{array}{l} \text{INPUT } [,xxxx] \\ \text{LOCAL} \\ \text{RENAME}^{\dagger}, \text{new-filename} \end{array} \right\}$$

Allows routing of files between remote site and central site queues: jobs can be submitted for execution at central site with optional remote output; files can be sent to central site for printing and punching. Files can be renamed also.

INPUT disposition directs file to NOS/BE 1 input queue. PRINT, PUNCH, or PUNCHB specify printing, punching in Hollerith, or punching in binary at central site. To output file to remote site, add xxxx as HERE for user's own site or MINE for user's own user id or substitute a 2-character user or terminal id.

LOCAL retrieves named file from output queue. RENAME changes name of local file. END terminates BATCH command.

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$$Q \left[\begin{array}{l} [,X] [,YYY] [,OURS] \\ ,ID \\ ,SYNTAX \end{array} \right]$$

where X = a member of (I,O,P,E,J,A)

Allows user examination of NOS/BE 1 batch processing queues in a CDC CYBER single mainframe or CDC CYBER multi-mainframe environment. If parameter is omitted, INTERCOM replies with a count of jobs in input, output, and executing queues. Optional parameters are:

I	jobs in input queue
O	jobs in output queue
P	jobs in punch queue
E	jobs in executing queue
J	jobs in JANUS queues
A	jobs in (I,O,P,E,J) queues
YYY	mainframe identifier
OURS	jobs originating in host mainframe
ID	mainframe identifiers for a multi-mainframe environment
<u>SYNTAX</u>	Q syntax

ERRORS, $\left\{ \begin{array}{l} \underline{\text{ALGOL}} \\ \underline{\text{COBOL}} \\ \underline{\text{COMPASS}} \\ \underline{\text{FTN}} \end{array} \right\} [,\underline{\text{SUP}}]$

Displays compiler or assembler generated diagnostics from OUTPUT file. Line numbers appear for programs created under EDITOR, SUP suppresses listing of nonfatal and informative diagnostics.

PROGRAM EXECUTION COMMANDS

filename

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Executes binary program identified by local filename.

XEQ[†] [,option-1 [, . . . [,option-n]]]

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Initiates binary program loading for execution or absolute overlay construction. If no options are selected, the system responds with OPTION= and the user can begin entering some of the following options (enter EXECUTE,NOGO or filename to load, or END to exit):

EXECUTE [=entry point [,param-1 [, . . . [,param-n]]]]

NOGO [=filename [,entry point-1 [, . . . [,entry point-n]]]]

filename [param-1 [, . . . [,param-n]]]

LOAD=filename-1 [{ /R }] [, . . . [,filename-n [{ /R } }]]]

LIBLOAD=libname [,entry point-1 [, . . . [,entry point-n]]]

LOAD=filename [{ /R }] [,prog name-1 [, . . . [,prog name-n]]]

SATISFY [=libname-1 [, . . . [,libname-n]]]

LDSET { = } option-1 [, . . . [,option-n]]

Options for **LDSET** are as follows:

LIB [=libname-1 [/ . . . [/libname-n]]]

MAP=[p] [/lfn]

p may be 0, O, S, B, E, or X

PRESET=p

p can be NONE, ZERO, ONES, INDEF, INF, NGINDEF, NGINF, ALTZERO, or ALTONES

ERR=p

p may be ALL, FATAL, or NONE

REWIND

NOREWIN

USEP=pname-1 [/ . . . [pname-n]]

USE=entry point-1 [/ . . . [/entry point-n]]

SUBST=pair-1 [/ . . . [/pair-n]]

OMIT=entry point-1 [/ . . . [/entry point-n]]

FILES=lfn-1 [/ . . . [/lfn-n]]

OUTPUT CONTROL

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Teletype terminal:

{	ESC	}	{	%A	}
{	ALT MODE	}	{	%S	}
{	CTRL Z	}	{	RETURN	}

CTRL Z, ESC, or ALT MODE are alternate keys used to stop current output activity only. %A terminates current job, discards output. %S stops output, discards output awaiting transmission to terminal, and transmits additional output, if generated. RETURN resumes activity.

p. 1-2-8

Display terminal:

{	%A	}
{	%S	}

%A terminates current job, discards output, %S stops output, discards output awaiting transmission to terminal.

p. 11-3-2

All terminals:

%EOR

%EOF

Sends end of record or end of file signal to the executing program.

PROGRAM TEXT EDITOR

p. II-2-1

EDITOR

Initiates program editor; allows user to create, examine, and modify files. EDITOR signals readiness to receive input by displaying two periods:

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EDITOR COMMANDS

p. II-2-12

ADD [,line[,incr]] [,SUP] [,OVERWRITE]

Inserts or adds lines to existing edit file. To exit, enter an equals sign instead of text line.

p. II-2-4

BYE[,BYE]

Causes exit from EDITOR.

p. II-2-9

CREATE [,line[,incr]] [,SUP]

Allows entry of text lines to create new edit file. To exit, enter an equals sign instead of text line.

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DELETE, $\left\{ \begin{array}{l} \underline{A}LL \\ \text{line-1} \\ \underline{L}AST \end{array} \right. \left[\begin{array}{l} \text{,line-2} \\ \underline{L}AST \end{array} \right] \left[\text{, /text/ [,col-1[,col-2]) } \right] [,\underline{U}NIT] [,\underline{V}ETO]$

Deletes lines in edit file

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EDITION, filename [,SEQUENCE]

Loads local or attached permanent file into edit file and replaces old edit file.

p. II-2-4

END

Causes exit from EDITOR.

p. II-2-6

FORMAT $\left[\begin{array}{l} \text{,language-name} \\ [\underline{T}AB=c] [,tab-1 [, \dots [,tab-n]]] \\ \underline{S}HOW \end{array} \right] [,\underline{C}H=nnn]$

Changes installation defined format specifications for EDITOR user input.

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LIST $\left[\begin{array}{l} \underline{A}LL \\ \text{,line-1} \\ \underline{L}AST \end{array} \right. \left[\begin{array}{l} \text{, /line-2} \\ \underline{L}AST \end{array} \right] \left[\text{, /text/ [,col-1[,col-2]) } \right] [,\underline{U}NIT]$

Lists edit file lines at terminal.

RESEQ [,line[,incr]]

Resequences line numbers in the edit file.

RUN,system-name[,**FILE**=filename] [,**NOEX**] [,**SUP**]

Transfers edit file (or local file) to language system named for compilation and, possibly, execution.

SAVE,filename[,**NOSEQ**] [,**OVERWRITE**] [,**MERGE**] [,ALL [,line-1 [,line-2]]]
 [,/text/ [,(col-1[,col-2])]] [,**UNIT**] [,**VETO**]

Saves edit file as local file.

[=] line=text

Replaces or inserts text at given line number. First equals sign required only when line is entered out of sequence under ADD or CREATE.

/text-1/= /text-2/ [{ ,ALL } [{ ,line-2 }]] [,(col-1[,col-2])]
 [,**UNIT**] [,**VETO**]

Replaces text strings in lines of the edit file.

Parameter Descriptions for Editor Commands

ALL	All lines in editor file are considered by command.
CH=nnn	Maximum characters to be permitted in each line.
col-1	First or only column of text search string.
col-2	Last column of text search string range.
filename	File name of local file, or, for EDIT or RUN, file name of attached permanent file.
incr	Increment value of edit file line numbers; default is installation option.
LAST	As first parameter, command considers only last line in edit file; as second parameter, affects range from line-1 to last line in edit file.

line	First line considered by command; default is installation option.
line-1	First or only line considered.
line-2	Final line of range beginning at line-1.
<u>M</u>ERGE	Merges successive files or parts under the same file name. <u>N</u> OSEQ is recommended to avoid duplication of line numbers. EOR is written at end of each file or part added.
<u>N</u>OEX	Compiles without execution.
<u>N</u>OSEQ	Saves file without line numbers.
<u>O</u>VERWRITE	Permits bypassing or replacing existing line numbers (ADD) or writing over existing local files (SAVE).
<u>S</u>EQUENCE	Assigns line numbers as file is entered into edit file.
<u>S</u>HOW	Displays current FORMAT conditions.
<u>S</u>UP	Suppresses display of line numbers at terminal (ADD, CREATE, LIST) or listing of non-fatal errors (RUN).
system-name	Compiler language <u>A</u> LGOL, <u>B</u> ASIC, <u>C</u> OBOL, <u>C</u> OMPASS, or <u>F</u> ORTRAN Extended.
<u>T</u>AB=c	Identifies character that selects tab function.
tab-n	Successive tab column positions.
/text/ /text-1/	Text search string of 1 to 20 characters. Slash delimiters can be other special characters.
/text-2/	Text replacement string of 0 to 20 characters delimited by slashes or equivalent delimiters. Replaces text search string when search conditions are satisfied.
<u>U</u>NIT	Text search string is recognized only if separated from surrounding text by other than letter or digit.
<u>V</u>ETO	Displays affected lines for approval. Responding <u>Y</u> ES accepts the displayed line; <u>C</u> ONTINUE completes the command. Other characters reject the displayed line.