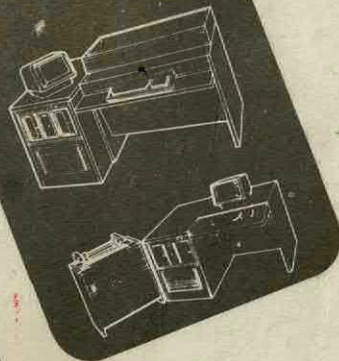


9010

NCR

NCR I-8100
SERIES 8140
POCKET
REFERENCE
SECOND EDITION

8"
Floppy



NCR

NCR Corporation
Dayton, Ohio 45479

Worldwide Headquarters
ST-9144-99 0678

ASCII CODE CHART

ASCII CODE CHART																
Binary b ₇ b ₆ b ₅ b ₄ b ₃ b ₂ b ₁ b ₀	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0	NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2	␣	!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{		}	~	DEL

THIS EDITION OF THE POCKET REFERENCE APPLIES
TO ISSUE 4.0 OF THE IDPS/SF AND IDPS/LF OPERATING
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Bar Code

$(\text{ASCII } x8) + 8 + 2 = \text{Large Dructon}$

Pascal:

PRON3 -

$E - < 900 : (xxx + 13) \times 2 + 1$

$> 900 : (xxx + 52) \times 2 + 1$

START OF DAY PROCEDURE

- Turn the power switch to ON, and turn on the CRT.
- For an NCR I-8130, install the SITE MASTER SOFTWARE flexible disk in unit number 0.
- RESTORE? displays. Enter N and press FT.
- LOAD DEVICE? displays. Press FT.
- DATE YY/MM/DD displays. Enter the current date and press FT.
- For systems with the Time Of Day feature, TIME HH:MM displays. Enter the current time and press FT.
- ? displays. Start of day is complete; enter any JCL instruction.

BREAK KEY OPTIONS

- Q - display status: PGM=xxxxxxxxxx
SS=nnnnnnnn JCL=j
- S - suspend operation and accept INQUIRY instruction
- P - suspend the operation being performed by the BASIC Interpreter
- R - continue interrupted program
- A - terminate program
- X - terminate program and procedure file

SYSTEM MESSAGES

General format for numbered system messages --

hhmr u,dt xxxxxx...

- hh - message number (in hexadecimal)
- m - code identifying the module sending the error
- r - code specifying the valid operator responses
- u,dt - when in a message, identifies the unit and device type where the error occurred
- xxx... - text of the message

TO LO HI LO HI LO HI
00 00 00 1E 00 10
Name, Address Length Transfer
sp. 104 3 16D

SYSTEM MESSAGES (cont)

Code (m)	Software Module
0	System Supervisor
1	I/O Executive
2	Application Loader
3	Start of Day
4	Cobol Runtime Interpreter
5	COBOL Compiler
6	BASIC Interpreter
7	RBS
A	INQUIRY
B	INOPFG
C	MOVE
D	DUMP
E	DISCIT
F	DATCIT
G	Text Editor
H	CHANGE
I	DELETE
J	PACK
K	DISPLAY
L	Disk Sort Utility Routine
M	Flexible Disk Sort Utility Routine
N	Flexible Disk Special Sort Utility Routine
P	FLEXIT
Q	OCOPY
R	DATPAT
S	SELECT
T	DDCOPY
U	INDCOMP
V	OVCOPY
W	AUTOPAT

Module Codes

Code (r)	Valid Responses
☒ 0	Display only messages
1	R*, O, and X (or A)
2	R* and X (or A)
3	O and X (or A)
4	X (or A)
5	R* and O
6	R*
7	V* and N
8	FT, Q, S, and X (or A)

*Specifies the assumed value if FT only is entered.
 ** Valid only when BASIC Interpreter is interrupted by the Break key

Response Codes

JOB CONTROL LANGUAGE INSTRUCTION FORMATS

PARAMETER DEFINITIONS

PARAMETERS

dt -device type
 kl -key length
 ko -key offset
 lfid -logical file name
 lpi -lines per inch
 m -numeric value
 n -numeric value
 ns -number of sectors
 pfid -physical file name
 pl -print left
 pr -print right
 unit -unit number
 vs -volume serial number

KEY WORDS

AEX -ASCII under hexadecimal display
 AP -approximate
 BUF -buffer for indexed file
 CLEAR -clear system log
 DEBUG -COBOL User Debug
 HEX -hexadecimal display
 I -data interchange flexible disk
 INDEX -index of indexed file
 N -ASCII double density flexible disk
 NEW -file to be created
 NO -no read after write check
 NOLIST -no listing of JCL
 NOT -reverse the comparison entry
 OLD -file exists
 PACK -build key index
 REBUILD -build key index using new key values
 SBS -ASCII beside hexadecimal display
 SCR -scratch the file
 SYSLOG -system log

DEVICE TYPES

BL* -lower bar code handler
 BU* -upper bar code handler
 CA -cassette
 CT -CRT
 C1* -continuous forms feeder 1
 C2* -continuous forms feeder 2
 DC -data cartridge
 DI -disk
 FD -flexible disk
 LL* -lower cut forms handler
 LP -line printer
 LU* -upper cut forms handler

*Visual Record Printer device types

JOB CONTROL LANGUAGE INSTRUCTION FORMATS (cont)

General format of a JCL instruction - label: instruction;comment

Short forms of instruction verbs and parameters are underlined

FUNCTION	FORMAT
Terminate the current process	<u>ABORT</u>
Assign a disk file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,D1), <u>OLD</u> , <u>SCR</u> ,AP, <u>BUF</u>
Create a disk file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,D1), <u>NEW</u> , <u>SCR</u> ,ns,AP, <u>BUF</u>
Assign a flexible disk file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,FD), <u>OLD</u> , <u>SCR</u> ,AP,NO
Create a flexible disk file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,FD), <u>NEW</u> , <u>SCR</u> ,ns,AP,NO,I
Assign a flexible disk file (8130)	<u>ASSIGN</u> Ifid TO pfid (unit,FD), <u>OLD</u> , <u>SCR</u> ,AP

Create a flexible disk file (8130)	<u>ASSIGN</u> Ifid TO pfid (unit,FD), <u>NEW</u> , <u>SCR</u> ,ns,AP, $\begin{bmatrix} N \\ I \end{bmatrix}$
Assign a data cartridge file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,DC), <u>OLD</u> , <u>SCR</u>
Create a data cartridge file (8150)	<u>ASSIGN</u> Ifid TO pfid (unit,DC), <u>NEW</u> , <u>SCR</u>
Assign or create a cassette file	<u>ASSIGN</u> Ifid TO pfid (unit,CA)
Assign a line printer	<u>ASSIGN</u> Ifid (unit,LP)
Assign a visual record printer bar code device	<u>ASSIGN</u> Ifid (unit, $\begin{bmatrix} BL \\ BU \end{bmatrix}$),pi,pr
Assign a visual record printer form device	<u>ASSIGN</u> Ifid (unit, $\begin{bmatrix} LL \\ LU \\ C1 \\ C2 \end{bmatrix}$),pi,pi,pr

JOB CONTROL LANGUAGE INSTRUCTION FORMATS (cont)

FUNCTION	FORMAT
Load the BASIC Interpreter in direct mode (8150)	<u>BASIC</u> ,n
Load the BASIC Interpreter in indirect mode (8150)	<u>BASIC</u> pfid (unit,dt),n
Change a physical file name	<u>CHANGE</u> pfid-1 (unit,dt) TO pfid-2
Delete a single file	<u>DELETE</u> pfid (unit,dt), <u>SOFTWARE</u>
Delete all generations of a file	<u>DELETE</u> pfid/ALL (unit,dt), <u>SOFTWARE</u>
Delete all files on a media	<u>DELETE</u> vs (unit,dt), <u>SOFTWARE</u>
Display a single directory entry	<u>DISPLAY</u> pfid (unit,dt) TO (unit, $\begin{bmatrix} LP \\ CT \end{bmatrix}$)
Display all entries of a directory	<u>DISPLAY</u> vs (unit,dt) TO (unit, $\begin{bmatrix} LP \\ CT \end{bmatrix}$)
Display the system log on the CRT (8150)	<u>DISPLAY</u> SYSLOG TO (unit,CT)
Display the system log on a printer (8150)	<u>DISPLAY</u> SYSLOG TO (unit,LP),CLEAR
Display the system log on the CRT (8130)	<u>DISPLAY</u> SYSLOG (unit,FD) TO (unit,CT)
Display the system log on the printer (8130)	<u>DISPLAY</u> SYSLOG (unit,FD) TO (unit,LP),CLEAR
Display a disk data file (8150)	DUMP pfid (unit,D1),n,m TO (unit, $\begin{bmatrix} LP \\ CT \end{bmatrix}$), $\begin{bmatrix} ASCII \\ HEX \\ AEX \\ SBS \end{bmatrix}$, INDEX
Display a flexible disk, data cartridge, or cassette file	DUMP pfid (unit,dt),n,m TO (unit, $\begin{bmatrix} LP \\ CT \end{bmatrix}$), $\begin{bmatrix} ASCII \\ HEX \\ AEX \\ SBS \end{bmatrix}$

JOB CONTROL LANGUAGE INSTRUCTION FORMATS (cont)

FUNCTION	FORMAT
Display an absolute area of a media	DUMP n,m (unit,dt) TO (unit, $\begin{bmatrix} \text{LP} \\ \text{CT} \end{bmatrix}$), $\begin{bmatrix} \text{ASCII} \\ \text{HEX} \\ \text{AEX} \\ \text{SBS} \end{bmatrix}$
Perform a program (8150)	<u>EXECUTE</u> pfid (unit,DI), <u>DEBUG</u>
Perform a procedure file (8150)	<u>EXECUTE</u> pfid (unit,DI), <u>NOLIST</u>
Perform a program (8130)	<u>EXECUTE</u> pfid (unit,FD), <u>DEBUG</u>
Perform a procedure file (8130)	<u>EXECUTE</u> pfid (unit,FD), <u>NOLIST</u>
Test the JCL-CODE and branch on condition	IF $\begin{bmatrix} * \\ \text{NOT} \end{bmatrix}$ $\begin{bmatrix} \geq \\ = \end{bmatrix}$ n,...,n GO TO label *no entry
Perform inquiry (8150)	<u>INQUIRY</u> pfid (unit,DI)
Copy a single file (8150)	MOVE Ifid TO Ifid, $\begin{bmatrix} * \\ \text{PACK} \\ \text{REBUILD}, \text{ko}, \text{kl} \end{bmatrix}$, <u>SOFTWARE</u> *no entry

Copy a single file (8130)	MOVE Ifid TO Ifid, <u>SOFTWARE</u>
Copy all files	MOVE (unit,dt) TO (unit,dt), <u>SOFTWARE</u> , <u>AUDIT</u> (unit, $\begin{bmatrix} \text{LP} \\ \text{CT} \end{bmatrix}$)
Print a file by records	MOVE Ifid,n,m TO Ifid, $\begin{bmatrix} \text{ASCII} \\ \text{HEX} \\ \text{AEX} \\ \text{SBS} \end{bmatrix}$
Display a file by records	MOVE Ifid,n,m TO CT, $\begin{bmatrix} \text{ASCII} \\ \text{HEX} \\ \text{AEX} \end{bmatrix}$
Pack active disk files so they are contiguous one to another (8150)	<u>PACK</u> (unit,DI), <u>AUDIT</u> (unit, $\begin{bmatrix} \text{LP} \\ \text{CT} \end{bmatrix}$)
Copy a disk (8150)	<u>QCOPY</u> (unit,DI) TO (unit,DI)
Copy a flexible disk (8130)	<u>QCOPY</u> (unit,FD) TO (unit,FD)
Perform Remote Batch Subsystem (8150)	RBS
Set a COBOL program switch	SET <u>SWITCH</u> n,...,n TO $\begin{bmatrix} \text{ON} \\ \text{OFF} \end{bmatrix}$
Set the JCL-CODE	SET JCL TO n

TEXT EDITOR INSTRUCTION FORMATS

FORMAT DEFINITIONS

lfid — logical file name
 m — beginning sequence or relative record number
 n — ending sequence or relative record number
 p — record length of fixed length records
 q — block size of fixed length record files
 x — relative record position or beginning sequence number
 y — increment value

FUNCTION	FORMAT
Change current pointer line record	CHANGE
Change record specified by sequence number	CHANGE n
Change record specified by relative record number	CHANGE *n

Copy entire file to work
 file

CONCAT lfid
 CONCAT lfid (p,q)

Copy records specified by sequence numbers to
 work file

CONCAT lfid,m
 CONCAT lfid (p,q),m
 CONCAT lfid,m,n
 CONCAT lfid (p,q),m,n

Copy records specified by relative record numbers
 to work file

CONCAT lfid,*m
 CONCAT lfid,*m
 CONCAT lfid,*m,n
 CONCAT lfid (p,q),*m
 CONCAT lfid (p,q),*m
 CONCAT lfid (p,q),*m,n

Delete current pointer line record

DELETE

Delete records specified by sequence numbers

DELETE n
 DELETE m,n

Delete records specified by relative record
 numbers

DELETE *n
 DELETE *m,n

Display the current pointer line record

DISPLAY

Satz Nr. 000 150
Folgt N * 12

TEXT EDITOR INSTRUCTION FORMATS (cont)

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Display records specified by sequence numbers

DISPLAY n
DISPLAY m,n

Display records specified by relative record numbers

DISPLAY *n
DISPLAY *m,n

Find record specified by sequence number

FIND n

Find record specified by relative record number

FIND *n

Duplizieren möglich

Insert records beginning in character position 1

INSERT *D

Insert records beginning in character position 7

INSERT D

1. Satz 2. Satz Aufg.

Move records specified by sequence numbers

MOVE DELETE, m,n-x,y

Neue Stelle (drehen)

Move records specified by relative record numbers

MOVE DELETE, *m,n-x

Erhöhung

Find record n positions above current pointer line record

POSITION n

Simuliert

Find record n positions below current pointer line record

POSITION ,n

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Print current pointer line record

PRINT

Print records specified by sequence numbers

PRINT n
PRINT m,n

Print records specified by relative record numbers

PRINT *n
PRINT *m,n

*Prog. Fehler
SA Druck*

Terminate Text Editor

QUIT

Renumbr records

RESEQUENCE x,y
RESEQUENCE m,n-x,y

Copy entire work file

SAVE Ifid
SAVE Ifid (p,q)

Search for a character string

SEARCH 'string'
SEARCH 'string',n

Replace a character string in current pointer line record

STRING 'string-1' WITH 'string-2'
STRING 'string-1','string-2'

Replace a character string in records to the end of file

STRING 'string-1' WITH 'string-2', ALL
STRING 'string-1','string-2',ALL

Replace a character string in n records

STRING 'string-1' WITH 'string-2',n
STRING 'string-1','string-2',n

Assi. Druck (D.L.P.)

RBS INSTRUCTION FORMATS

FORMAT DEFINITIONS

CP -- card punch CRT -- CRT displays copied into LOG file EXTENDED -- lengthens file Ifid Ifid-1 } --logical file name Ifid-2 }	LINE -- displays portions of first 10 records sent or received LP -- line printer option -- defines characteristic to be modified RECORDS -- displays total number of records sent or received rl -- record length TRANSPARENT -- printer control characters ignored
---	--

A comment may follow any instruction except DIAGNOSTICS. Example: MONITOR CRT ON;comment
 The short forms of the verbs and parameters are underlined.

FUNCTION

INSTRUCTION FORMAT

Send a record containing a sign-on message

SIGN ON Ifid [LABELLED
UNLABELLED]

Open the communication link

OPEN

Send the contents of the specified file

TRANSMIT Ifid [LABELLED
UNLABELLED]

Prepare the station to receive data

RECEIVE Ifid-1 [rl
EXTENDED] [CP
LP] Ifid-2

Print data received and stored previously

PRINT Ifid [LABELLED
UNLABELLED] TRANSPARENT

Provide a file to contain the data
 received if a reverse interruption occurs

REVINTERRUPT Ifid [rl
EXTENDED]

Provide information about communication
 activity

MONITOR [CRT
LINE
RECORDS] [ON
OFF]

Modify communication characteristics

RECONFIGURE option

Perform diagnostic functions

DIAGNOSTICS

Close the communication link

CLOSE

Send a record containing a sign-off message
 and close the communication link

SIGN OFF Ifid [LABELLED
UNLABELLED]

Terminate RBS

QUIT

SELECT INSTRUCTION FORMATS

FORMAT DEFINITIONS

bs -- block size	rl -- record length
EOR -- End-of-Record pointer	SIGNED -- signed numeric field
fl -- length of field	X -- alphanumeric field
fo -- offset from first byte in record to first byte in field	9 -- unsigned, unpacked numeric field
id } -- field identifier	= -- equal to
id-1	< -- less than
id-2	> -- greater than
IRLEN -- length of current input record	=< -- equal to or less than
IRNO -- current record count	=> -- equal to or greater than
lt -- literal or figurative constant	<> -- less than or greater than
PACKED -- packed numeric field	

The parameters PACKED and SIGNED may be shortened to P and S.

FUNCTION

INSTRUCTION FORMAT

Specify characteristics of the input file

INFILE $\left[\begin{array}{c} \text{FIXED} \\ \text{VARIABLE} \end{array} \right], rl, bs$

Specify characteristics of the output file

OUTPUT $\left[\begin{array}{c} \text{FIXED} \\ \text{VARIABLE} \end{array} \right], rl, bs$

Define each field within the input record

IN id, fo, fl, $\left[\begin{array}{c} 9 \\ X \end{array} \right] \text{PACKED, SIGNED}$

Define each field within the output record

OUT id, fo, fl, $\left[\begin{array}{c} 9 \\ X \end{array} \right] \text{PACKED, SIGNED}$

Write a record in the output file

INCLUDE ALL

Transfer data to a destination field

MOVE $\left[\begin{array}{c} lt \\ id-1 \\ IRNO \\ IRLEN \end{array} \right] \text{ TO } \left[\begin{array}{c} EOR \\ id-2 \end{array} \right]$

Specify a condition to be checked and operation (EXCLUDE, INCLUDE, MOVE)

IF $\left[\begin{array}{c} lt \\ id-1 \\ IRNO \\ IRLEN \end{array} \right] \left[\begin{array}{c} = \\ < \\ > \\ <= \\ >= \end{array} \right] \left[\begin{array}{c} lt \\ id-2 \\ IRNO \\ IRLEN \end{array} \right] \text{ operation}$

Terminate the input mode

END

Clear all SELECT statements entered previously to permit SELECT statements to be entered again.

CLEAR

Contr. (clear → hours)

DATA PATCHER INSTRUCTION FORMATS

Load instruction: EXECUTE DATPAT (unit,dt)

FUNCTION

Move tape forward 1 block

Print INBUF from beginning relative offset n through ending relative offset m, or entire INBUF on MODIFY or WRITE instruction

Move tape backward n blocks

Set checksums in a utility routine

Retention a data cartridge tape and select track n

Terminate DATPAT

Move tape backward n blocks while erasing

Put ASCII character c in INBUF from beginning relative offset n through ending relative offset m or entire INBUF

Display DATPAT instructions

INSTRUCTION FORMAT

ADVANCE

AUDIT $\begin{bmatrix} n,m \\ \text{INBUF} \end{bmatrix}$ (unit,dt), $\begin{bmatrix} \text{ASCII} \\ \text{HEX} \\ \text{AEX} \end{bmatrix}$

BACKSP n (unit,dt)

CKSUM (unit,dt)

CTENSION n (unit,dt)

END

ERASE n (unit,dt)

FILL $\begin{bmatrix} n,m \\ \text{INBUF} \end{bmatrix}$ c

HELP

Move tape to beginning of record following n tapemarks

Permit change to relative offset n of INBUF

Do not print INBUF on MODIFY or WRITE instruction

Display INBUF from beginning relative offset n through ending relative offset m, or entire INBUF

Read relative block number n or the first sector in pfid

Display disk or flexible disk format beginning in sector number n for m tracks

Move the disk or flexible disk read/write head to cylinder 0

Rewind the tape and select track n: track numbers 1-4 for data cartridge or 0 for cassette

Display device tables

Write contents of INBUF to specified media

Write n tapemarks to tape

LTAPMK n (unit,dt)

MODIFY n

NOAUDIT

PRINT $\begin{bmatrix} n,m \\ \text{INBUF} \end{bmatrix}$ (unit, $\begin{bmatrix} \text{LP} \\ \text{CT} \end{bmatrix}$), $\begin{bmatrix} \text{ASCII} \\ \text{HEX} \\ \text{AEX} \\ \text{SBS} \end{bmatrix}$

READ $\begin{bmatrix} n \\ \text{pfid} \end{bmatrix}$ (unit,dt)

RFORMAT n (unit,dt),m

RSET (unit,dt)

RWIND n (unit,dt)

STATUS

WRITE (unit,dt)

WTAPMK n (unit,dt)

USER DEBUG INSTRUCTION FORMATS

FORMAT DEFINITIONS

aaaa — relative byte location (ADDRESS column)
 bbbb — number of bytes (SIZE column)
 dddd ... — data
 nnnn — caller parameter number
 pfid — program physical file name
 tttt — type of data (DEBUG column)
 xx — overlay number
 yyyy — object instruction relative location

FUNCTION

Called stop

Address stop

FORMAT

@pfid

Axxxxxyy

Change data

Change parameter

Display data

Display location

Display parameter

Remove trap

Single step

Trap insert

Caaaa,bbbb,tttt,dddd ...

CPnnnn,aaaa,bbbb,tttt,dddd ...

Daaaa,bbbb,tttt

L

Pnnnn,aaaa,bbbb,tttt

R

S

Txxxxxyy

DISK SORT UTILITY ROUTINE

Load instructions: ASSIGN SI TO pfid (unit,dt) OLD
 ASSIGN SO TO pfid (unit,dt), NEW ,ns
 ASSIGN PRM TO pfid (unit,dt)
 ASSIGN SWn TO pfid (unit,dt), OLD
 EXECUTE SORT (unit,dt), NEW ,ns,SCR

Screen displays for keyboard entered sort keys:

DISPLAY	DESCRIPTION
ENTER SORT COMMANDS	
L?	
KEY ko,kl, U , S , P , A , D	ko is the 1-3 digit relative byte offset of the key; kl is the 1-2 digit number of characters or digits in the sort key; U for unsigned or S for signed key; U for unpacked or P for packed key; A for ascending or D for descending order
END	Terminates sort key input and begins sort function

FLEXIBLE DISK SORT UTILITY ROUTINE

Load instructions: ASSIGN SI TO pfid (unit,dt)
 ASSIGN PRM TO pfid (unit,dt)
 ASSIGN SWF TO pfid (unit,dt)
 EXECUTE SORT (unit,dt)

Screen displays for keyboard entered sort keys:

DISPLAY	DESCRIPTION
ENTER K FOR KEY, O FOR OUTPUT	K to enter a key descriptor or O to enter file organization
KEY OFFSET	1-3 digit relative byte offset of the sort key
KEY LENGTH	1-2 digit number of characters or digits in the sort key
KEY TYPE ENTER S FOR SIGNED	S for signed key; U for unsigned key
KEY TYPE ENTER P FOR PACKED	P for packed key; U for unpacked key
SORT ORDER ENTER D FOR DESCEND	D for descending sort order; A for ascending sort order
OUTPUT FILE ORG. ENTER I OR S	I for indexed output file; S for sequential output file

FLEXIBLE DISK SPECIAL SORT UTILITY ROUTINE

Load instructions: ASSIGN SI TO pfid (unit,dt)
 ASSIGN SWF TO pfid (unit,dt)
 EXECUTE SPECSORT (unit,dt)

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DISK/DATA CARTRIDGE COPY UTILITY ROUTINE

Load instructions: ASSIGN PRM TO pfid (unit,dt)
 EXECUTE DDCOPY (unit,dt)

Screen displays:

DISPLAY	DESCRIPTION
(1) INPUT UNIT NUMBER (0-7)	Unit number containing input file: 0-7 for disk or 0 for data cartridge
(2) INPUT DEVICE TYPE (DI/DC)	DI for disk input; DC for data cartridge input
(3) OUTPUT UNIT NBR. (0-7)	Unit number containing output file: 0-7 for disk or 0 for data cartridge
(4) OUTPUT DEVICE TYPE (DC/DI)	DI for disk output; DC for data cartridge output
(5) COPY USER FILES? (YES/NO)	YES to copy data files and application programs; NO to copy utility routines only
(6) COPY UTILITY FILES? (YES/NO)	YES to copy utility routines; NO to copy data files and application programs only
(7) FILE NAME?	pfid of the file on data cartridge
(8) AUDIT (U,DD)	YES to output audit list; NO for no audit list
(9) LIST DCPY FILE ONLY?	YES to only list file in a data cartridge DDCOPY file; NO to perform copy function
WISH TO CHANGE AN ITEM?	Y to change an item; N to perform the copy
ENTER ITEM NUMBER (1-9)	Item number (1-9) to change

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INQUIRY PARAMETER FILE GENERATOR UTILITY ROUTINE

Load Instructions:

ASSIGN PRM TO pfid (unit,dt), OLD, ns
EXECUTE INQPPG (unit,dt)

Screen displays:

DISPLAY	DESCRIPTION
(1) PASSWORD:	0-10 character password
(2) DATA FILE NAME:	pfid of data file associated with the parameter file
(3) RECORD CODE OFFSET:	1-3 digit relative byte offset of the record code (not including VLI) or FT if no record code
RECORD CODE LENGTH:	1 digit number of characters or digits (1-4) in the record code
RECORD CODE PACKED:	Y for record code packed; N for record code unpacked
(4) KEY OFFSET:	1-3 digit relative byte offset of the record key (not including VLI)
KEY LENGTH:	1-2 digit number of characters or digits in the record key
KEY PACKED:	Y for key packed; N for key unpacked
(5) PTR PAGE SIZE (9-255):	1-3 digit number of lines (9-255) to print on one page
(6) SCR FMT SIZE (9/12):	9 for 9-inch CRT; 12 for 12-inch CRT
ENTER PASSWORD	1-10 character password required to access the parameter file
WISH TO CHANGE AN ITEM?	Y to change in item; N to select a function; LP to print parameter screen
ENTER ITEM NUMBER	Item number (1-6) to change
ENTER CREATE/ALTER/DELFMT/LP/END	CREATE to create a format; ALTER to change a format; DELFMT to delete a format; LP to print all formats; END to terminate the program
ENTER FORMAT NUMBER (1-35)	Format number (1-35) to create, change, or delete; END to terminate the program
PRINTER OR SCREEN FORMAT?	P for printer format; S for screen format

INQUIRY PARAMETER FILE GENERATOR UTILITY ROUTINE (cont)

30	ENTER RECORD CODE CHANGE RECORD CODE? PRINTER SPACING? (1-255) CHANGE SPACING? ENTER DESC-TYPE, LINE, CURSOR	1-4 digit record code associated with the selected format number; END to terminate the program Y to change record code; N to not change record code; END to terminate the program Number of lines (1-255) to space after printing this format; END to terminate the program Y to change printer spacing; N to not change spacing; END to terminate the program Descriptor type is L for label, D for data, or DELETE to delete the descriptor; line to display on is 1-14 for 9-inch CRT, 1-20 for 12-inch CRT, or 1-8 for printer; cursor is position 1-32 for 9-inch CRT, 1-80 for 12-inch CRT, or 1-128 for printer; LP to print the format; STOP to terminate the function; END to terminate the program
----	---	---

31	ENTER LABEL ENTER DATA-TYPE, OFFSET, LENGTH ENTER EDIT PICTURE DELFMT??	1-32 characters if input on a 9-inch CRT; 1-80 characters on 12-inch CRT Data type is X for alphanumeric or 9 for numeric; offset is 1-3 digit relative byte offset of the data field; length is number of characters or digits (1-80) in the data field; P if field is packed; S if field is signed; STOP to terminate the function; END to terminate the program Edit picture if required; FT if not required; STOP to terminate the function; END to terminate the program Y to delete the format; N to keep the format; END to terminate the program
----	---	--

INQUIRY PARAMETER FILE COMPRESS UTILITY ROUTINE

Load instruction: EXECUTE INQCOMP (unit,dt)

Screen displays:

DISPLAY	DESCRIPTION
(1) INPUT FILE:	pfid of uncompressed parameter file
(2) INPUT UNIT:	Disk unit number (0-7) containing input file
(3) INPUT DEVICE:	DI for disk
(4) OUTPUT FILE:	pfid of compressed parameter file
(5) OUTPUT UNIT:	Disk unit number (0-7) containing output file

(6) OUTPUT DEVICE:	DI for disk
WISH TO CHANGE AN ITEM?	YES to change an item; NO to perform the program
ENTER ITEM NUMBER	Item number (1-6) to change

DISK INITIALIZER UTILITY ROUTINE

Load instruction: EXECUTE DISCIT (unit,dt)

Screen displays:

DISPLAY	DESCRIPTION
34 (1) FUNCTION(PURGE/ALTER)INIT	INIT performs initialization or rebuild volume header; PURGE attempts to restore defective tracks; ALTER assigns alternate tracks for defective tracks
(2) VOLUME SERIAL NBR.	1-6 digit numeric volume serial number
(3) USER-ID(0-50 CHARS) —or—	0-50 character user identification
(3) ALTER(ALL/SECTOR #)	ALL to assign alternate tracks to all defective tracks; sector number to assign only track containing the specified sector (specify sector number from 24-9695)
(4) UNIT NBR.(0-7)	Disk unit number (0-7) to process
(5) REBLD VOLHDR ONLY?	Y for yes; N for no
(6) DATA CHECK (N/Y)	Y to perform read after write check; N to not perform check
(7) LACING?(Y/N)	Y to lace sectors (use if disk is to be processed only on NCR I-8100 Series Systems); N to not lace sectors (required to process disk on an NCR 8200 or larger system)
(8) CERTIFY NBR. (1-9)	Number of times (1-9) to check for defective sectors
35 (9) DIRECT SIZE (10-100)	Number of sectors (10-100) to allocate for disk directory
(10) DIRECTORY SECTOR	Start directory sector; 28 for system disk, 12 for all other disks
(11) NBR ALT TRKS(6-40)	Number of alternate tracks (6-40) to assign
WISH TO CHANGE AN ITEM?	Y to change an item; N to perform the function
ENTER ITEM NBR(1-11)	Item number (1-11) to change

REMOTE BATCH SUBSYSTEM (RBS)

Load instructions: ASSIGN Ifid TO pfid (unit,dt)

ASSIGN Ifid TO pfid (unit,dt),

OLD
NEW

,ns,AP

ASSIGN LOG TO pfid (unit,dt)

OLD
NEW

,ns,AP
ASSIGN PRM TO pfid (unit,dt)
RBS

Parameter file input: If a parameter file is assigned, RBS automatically reads RBS instructions from the parameter file.

Manual input: If a parameter file is not assigned, RBS displays RBS? on the screen; RBS instructions must be input through the keyboard.

SELECT UTILITY ROUTINE

Load instructions: ASSIGN SI TO pfid (unit,dt)

ASSIGN SO TO pfid (unit,dt),

OLD
NEW

,ns,AP
ASSIGN PRM TO pfid (unit,dt)
EXECUTE SELECT (unit,dt)

Parameter file input: If a parameter file is assigned, SELECT automatically reads SELECT instructions from the parameter file.

Manual input: If a parameter file is not assigned, SELECT displays S? on the screen; SELECT instructions must be input through the keyboard.

PROCEDURE/PARAMETER FILES

COBOL compiler procedure file

```

ASSIGN SI TO pfid (unit,dt)
ASSIGN BO TO pfid (unit,dt), [OLD] ,ns,AP
ASSIGN LO TO (unit,dt)
EXECUTE COBOL (unit,dt),DEBUG,LIST

```

DDCOPY procedure file

```

ASSIGN PRM TO pfid (unit,dt)
EXECUTE DDCOPY (unit,dt)

```

DDCOPY parameter file

```

$AUDIT (unit,dt)
$NAME:xxxxxxxxxxx
$UTIL:xxx
$USER:xxx
$IN (unit,dt)
$OUT (unit,dt)
$LIST:xxx

```

Text Editor procedure file

```

ASSIGN lfid TO pfid (unit,dt);input file
ASSIGN lfid TO pfid (unit,dt),NEW,ns;output file
ASSIGN EWF TO pfid (unit,dt),NEW,ns;work file
ASSIGN LO TO (unit,dt);print file
EXECUTE EDIT (unit,dt),RE

```

RBS procedure file

(RBS instructions may be stored in a parameter file; refer to the RBS INSTRUCTION FORMATS section for descriptions of these instructions.)

```

ASSIGN lfid TO pfid (unit,dt), [OLD] ,ns,AP
ASSIGN LOG TO pfid (unit,dt), [NEW] ,ns,AP
ASSIGN PRM TO pfid (unit,dt)
RBS

```

SELECT procedure file

(SELECT instructions may be stored in a parameter file; refer to the SELECT INSTRUCTION FORMATS section for descriptions of these instructions.)

```

ASSIGN SI TO pfid (unit,dt)
ASSIGN SO TO pfid (unit,dt), [OLD] ,ns,AP
ASSIGN PRM TO pfid (unit,dt)
EXECUTE SELECT (unit,dt)

```

PROCEDURE/PARAMETER FILES (cont)

Disk SORT procedure file

```

ASSIGN SI TO pfid (unit,dt)
ASSIGN SO TO pfid (unit,dt), [OLD] ,ns
ASSIGN PRM TO pfid (unit,dt)
ASSIGN SWn TO pfid (unit,dt), [NEW] ,ns,SCR
EXECUTE SORT (unit,dt)

```

Disk SORT parameter file

```

KEY ko,kl, [U] , [U] , [A]
END

```

Flexible Disk SORT procedure file

```

ASSIGN SI TO pfid (unit,dt)
ASSIGN SWF TO pfid (unit,dt)
ASSIGN PRM TO pfid (unit,dt)
EXECUTE SORT (unit,dt)

```

Flexible Disk SORT parameter files

Sequential file	Indexed file
KE ko,kl, [U] , [U] , [A]	IN ko, kl,
END	END

Flexible Disk SPECSORT procedure file

```

ASSIGN SI TO pfid (unit,dt)
ASSIGN SWF TO pfid (unit,dt)
EXECUTE SPECSORT (unit,dt)

```

IDPS/SF HARDWARE CONFIGURATION IDENTIFICATION NUMBER

D I G I T P O S I T I O N	20	Memory size; 1=48 KB, 2=64 KB
	19	Number of system log sectors
	18	Not used
	17	Number of flexible disks
	16	Number of CRTs
	15	Not used
	14	Number of line printers
	13	Number of cassette transports
	12	Number of C1 devices
	11	Number of LL devices
	10	Number of BL devices
	9	Number of C2 devices
	8	Number of LU devices
	7	Number of BU devices
	6	
	5	
	4	
	3	
	2	
	1	

Not Used

IDPS/SF SOFTWARE CONFIGURATION IDENTIFICATION NUMBER

B Y T E 10	8	Memory support subsystem
	7	9-inch CRT
	6	User debug
	5	Indexed file support
	4	Not used
	3	Line printer support
	2	Not used
	1	Even parity bit
B Y T E 9	8	Keyboard translation
	7	CRT translation
	6	Printer translation
	5	Boolean option
	4	String option
	3	Binary option
	2	Linage/VRC option
	1	Even parity bit
B Y T E 8	8	Period currency character
	7	Comma currency character
	6	Katakana keyboard
	5	Not used
	4	Not used
	3	Relative file support
	2	VRP with power fail recovery
	1	Even parity bit
B Y T E 7	8	VRP with power fail and LU but no C2
	7	10 pitch
	6	12 pitch
	5	12-inch paper
	4	11-inch paper
	3	Not used
	2	Arabic/Farsi
	1	Even parity bit
B Y T E 6	8	12-inch CRT
	7	Not used
	6	Not used
	5	Not used
	4	Not used
	3	Not used
	2	Not used
	1	Even parity bit
B Y T E 5-1		

* VRP=Visual record printer

IDPS/LF HARDWARE CONFIGURATION IDENTIFICATION NUMBER

D I G I T P O S I T I O N	20	Memory size; 1-48 K 2-64 K
	19	Number of system log sectors
	18	Number of disk drives
	17	Number of flexible disk drive
	16	CRT
	15	Data cartridge transport
	14	Number of line printers
	13	Number of cassette transp.
	12	Visual record printer
	11	Upper continuous forms feeder
	10	Upper cut forms handler
	9	Paper size; 1-12-inch 2-11-inch 3-8.5-inch
	8	Time Of Day feature
	7	
	6	
	5	
	4	
	3	
	2	
	1	

Not used

IDPS/LF SOFTWARE CONFIGURATION IDENTIFICATION NUMBER

B Y T E 10	8	Memory support subsystem
	7	CRT; 0-9-inch 1-12-inch
	6	Relative file support; 0-non-resident 1-resident
	5	Indexed file support
	4	Resident line printer support
	3	Line printer buffering support
	2	Keyboard translation table
	1	Even parity bit
B Y T E 9	8	CRT/Visual record printer translation table
	7	Line printer translation table
	6	COBOL boolean option
	5	COBOL string option
	4	COBOL binary option
	3	COBOL linage/VRC option
	2	Currency character; 0-comma 1-period
	1	Even parity bit
B Y T E 8	8	Katakana keyboard
	7	BASIC Interpreter
	6	BASIC error messages; 0-short form 1-long form
	5	Visual record printer; 0-12 pitch 1-10 pitch
	4	Not used
	3	Reversed option
	2	Remote Batch Subsystem
	1	Even parity bit
B Y T E 7	8	RBS code set; 0-ASCII 1-EBCDIC
	7	RBS transparent EBCDIC
	6	RBS modemless operation
	5	RBS 2400 bps line speed
	4	RBS 4800 bps line speed
	3	RBS 7200 bps line speed
	2	RBS 9600 bps line speed
	1	Even parity bit
B Y T E 6	8	RBS connection; 0-two-wire 1-four-wire
	7	RBS line; 0-dialed 1-leased
	6	RBS requires circuit assurance
	5	RBS sends circuit assurance
	4	RBS station bid at connection
	3	RBS primary station
	2	Utilities; 0-required utilities 1-all utilities
	1	Even parity bit
B Y T E 5	8	DUMP
	7	DATPAT
	6	CHANGE
	5	INQUIRY
	4	INOPFG/INQCOMP
	3	SORT
	2	SELECT
	1	Even parity bit
B Y T E 4	8	OCOPY
	7	FLEXIT
	6	COBOL Compiler
	5	Menu processor
	4	Native Language Support Utility
	3	Non-resident line printer support
	2	Language support; 0-Hebrew 1-Arabic/Farsi
	1	Even parity bit
B Y T E 3	8	COBOL Run Time Interpreter
	7	
	6	
	5	
	4	
	3	
	2	
	1	Even parity bit
B Y T E 2	8	
	7	
	6	
	5	
	4	
	3	
	2	
	1	

Not Used

COBOL FILE STATUS VALUES

FILE STATUS	DESCRIPTION	OPEN	CLOSE	READ	WRITE	RE- WRITE	DELETE	START	TRANS- PORT	TEST
00	Successful operation	SRI	SRI	SRI	SRI	SRI	RI	RI	S	SRI
0E	Tapemark			S						
0F	End of tape hole			SRI					S	
10	At end condition									
11	At end of page									
21	Invalid key, sequence				S	I				
22	Invalid key, duplicate				RI	RI				
23	Invalid key, no record									
24	Invalid key, boundary									
30	Permanent error									
34	Boundary violation	SRI	SRI	SRI	SRI	SRI	RI	RI	S	
39	Device not ready	SRI	SRI	SRI	S	SRI	RI	RI		
90	File Not available	SRI	SRI	SRI	SRI	SRI	RI	RI		
91	File not closed									
92	File not opened				SRI	SRI	RI	RI	S	
93	Invalid operation			SRI	SRI	SRI	RI	RI		
94	Invalid boundary			SRI	SRI	SRI	RI	RI		
95	Invalid open									
97	Invalid label	SRI								
98	Physical length	S								
99	Blank tape	SRI								
9A	Insufficient memory	SRI		S						
9D	Clear trailer									
FF	I/O not complete			S						

S - Sequential; R - Relative; I - Indexed

COBOL PERMITTED I/O INSTRUCTIONS DISK

File Access Mode		Instruction	Open Mode	File Organization											
				Sequential			Relative			Indexed					
				INPUT	OUTPUT	I/O	EXTEND	INPUT	OUTPUT	I/O	EXTEND	INPUT	OUTPUT	I/O	EXTEND
Sequential	READ	X		X		X		X		X		X			
	WRITE		X		X		X			X					
	REWRITE			X							X				
	START					X		X		X		X			
Random	DELETE							X				X			
	READ					X		X		X		X			
	WRITE						X	X			X	X			
	REWRITE												X		
Dynamic	DELETE							X				X			
	READ					X		X		X		X			
	READ NEXT					X		X		X		X			
	WRITE						X	X			X	X			
	REWRITE												X		
	START					X		X		X		X			
File Access Mode	DELETE							X				X			

FLEXIBLE DISK

File Access Mode		Instruction	Open Mode	File Organization										
				Sequential			Relative			Indexed				
				INPUT	OUTPUT	I/O	EXTEND	INPUT	OUTPUT	I/O	EXTEND	INPUT	OUTPUT	I/O
Sequential	READ	X		X		X		X		X		X		
	WRITE		X		X		X				X			
	REWRITE			X									X	
	START					X		X		X		X		
	DELETE							X				X		
Random	READ					X		X		X		X		
	WRITE						X		X			X		
	REWRITE							X				X		
	DELETE							X				X		

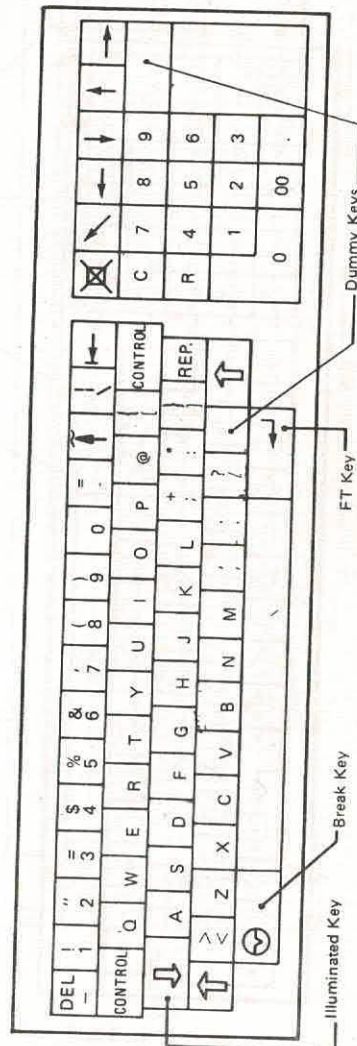
BASIC PERMITTED I/O INSTRUCTIONS DISK

File Access Mode		Instruction	Open Mode					
			Sequential			Relative		
			INPUT	OUTPUT	I/O	EXTEND	INPUT	OUTPUT
Sequential	Sequential	INPUT	X					
		LINE INPUT	X					
		PRINT		X		X		
		PRINT USING		X		X		
		GET	X		X		X	
		PUT		X		X		X
		REPUT			X			X
		DELREC						X
		GET					X	X
		PUT					X	X
Dynamic	Random	REPPUT						X
		DELREC						X
		GET					X	X
		PUT					X	X
		REPUT					X	X
		DELREC						X
		GET					X	X
		PUT					X	X
		REPUT					X	X
		DELREC						X

FLEXIBLE DISK

Sequential Access Mode		Instruction	Open Mode			
			Sequential File Organization			
			INPUT	OUTPUT	I/O	EXTEND
Sequential Access Mode	Sequential	INPUT	X			
		LINE INPUT	X			
		PRINT		X		X
		PRINT USING		X		X
		GET	X		X	
		PUT		X		X
		REPUT			X	
		DELREC				

LATIN KEY CAP CHART



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