FOUR-PHASE SYSTEMS,INC.

VISION™

System Reference Card

TASK	COMMANDS
Format Entry	$FORMAT $SIZE $DOCHDR $DOUBLE $SUB $SCREEN $SUMMARY
Value Set Entry	$VALUES $SIZE
Job Definition	$DEFJOB $SIZE/$MAXSIZ $FORMAT $VALUES $PASSW $ACCUMS
Sort Batches	$SORT $SOURCE $TARGET $EBCDIC $F LOCn LENn
Index Set Compilation	$EXTERNAL $INDSET $IXBATCH $KEYFLD
Delete Object Code	$DELETE {FORMAT / VALUES / JOB} or $DELETE {INDSET / FYTYPE / FORMS / COBOL}
Insert/Delete Index Set Records	$INSERTIX $DELETEIX
Clear MKAM Index Sets	$CLEARIX
Purge/ClearBatches	$PURGE $CLEAR
Link Batches	$LINK $ACCTOT
Batch Directory Scan	$JOB or $JOBS
Reformat to Disc	$SOURCE $TARGET $P
Select Jobs for Transfer or Batch Directory Scan	$SELECT
Order Batches for Tape Write or Data Transfer	$ORDER
Perform Multiple Functions	$BRANCH $PAUSE $END $EXIT $START
Assign Printers to Screens	$SETPRINT
Define File Types (MSFP) for:	
Card Reader	$FTYPE nnn,CR
Magnetic Tape	$FTYPE nnn,MT $SIZE rrr $BLOCKS bbb
Printer	$FTYPE nnn,PR
Sequential Disc Batch	$FTYPE nnn,SD $JOB jobname,batch $ORDER
Indexed Disc Batch	$FTYPE nnn,XD

Define Forms Specification	$FORMS vvv Lmm Hnn
Create 7-Track Tape Translation Tables	$TRCODE
Create Tape Command String (Write/Reformat)	$TAPE WRITE $HDR $EOF $BLOCKS $RFT $DATA $INDSET $REWIND $EOV $P $NOP $MARK $SKIP AHEAD/ BACK $ZEROBC $VAR $RECSIZ $PAD $CHKPT $DRIVE $CONTAPE $TRANS $ALLREC $BADDOC $BADREC $GOODDOC $GOODREC $PABLK $PROCEED
Create Tape Command String (Read)	$TAPE READ $KEEP $DATA $INDSET $P $NOP $REWIND $MAXBAT $SEARCH $SKIP AHEAD/ BACK $VAR $RECSIZ $LABEL $FORCE $NFORCE $ZEROBC $DRIVE $CONTAPE $TRANS $CSKIP
Create Transfer Command String:	
IDOS	$TODOS $FRODOS
Local	$DIRECT $BLOCKS $EXIT $START
Bisync (2780 or 3780)	$BISYNC $EOT $JCL $NEWBAT $NONEWBAT $TARGET $P $DATA $SINGLE $PRINT $PRINTC $LOG $LOGC $NOLOG $STOP
Centralized Batch Transfer (HASP Workstation)	$HASP $LOGC $NOLOG $SIGNON $SIGNOFF $CARDS SINGLE $OFFSINGLE $PRINTC $OFFPRINT $JCL $NEWBAT $DATA $EOT $STOP
Centralized Batch Transfer (SNA 3770)	$SNA $LOGC $NOLOG $LOGON $LOGOFF $PRINTC $OFFPRINT $CARDS $SINGLE $OFFSINGLE $P $JCL $DATA $STOP
Decentralized Batch Transfer (HASP Workstation)	JOB * SET RWR or $BRANCH jobname, batch id (with rec#1 = $JOB * SET RWR) $HASP $LOGC $NOLOG $JCL $NEWBAT $P $DATA * $EOT $STOP
Decentralized Batch Transfer (SNA 3770)	$JOB * SET RWR or $BRANCH jobname, batch id (with rec#1 = $JOB * SET RWR) $SNA $LOGC $NOLOG $JCL $NEWBAT $P $DATA * $STOP
Read Cards	$FRODOS
Print: Batches	$SOURCE $PRINT $Hnn $Px $TODOS or $EDIT
IDOS Files	$FRODOS
Tape	$TAPE PRINT or $EDIT
Checkpoint/Restart	$RESTART (checkpoints are taken if $CHKPT is in the command string; write only)
Change Bisync Configuration	$BISYNC x,y,z
$COBOL Compile Program	$COBOL $SOURCE jobname, batch $OUTPUT program name [$TRKCE] [$NOLIST]
Execute Program	$CEX program name

TASK	PROCEDURE
Execute Single Command	Mode T, S
Execute Multiple Commands	Mode T, M
Broadcast Message	Mode L, Option B
Control Printer	Mode L, Option C STOP START CLEAR PRINT NOPRNT SCREEN NOSCRN
Control Log File	Mode L, Option L LOG NOLOG PRINT NOPRNT
Display Terminal Printer Assignments/Parameters	Mode L, Option D
Cancel Spool Print	Mode L, Option C
Place Terminal in Debug Mode	Mode D
Assign 3270 Device Numbers	DEVICE CONFIG
Display DEVICE Assignment Table	Mode T, Option D, key DEVICE, press ENTER/REL
Enter Native 3270 Mode	Mode 3
Print Screens	Press CTRL DUP
Enter Multiline Editor	Mode M
Exit to an IDOS Program	Mode T, E; key program name
Execute an IDOS Transfer	Mode T, D
Exit from VISION to IDOS/MFE/IV	Mode T, E
Sign Off Terminal	Mode X, S
Sign Off Other Terminals	Mode X, K

SYSTEM DISPLAYS

Display	Mode	Display	Mode
Over-all System		Programs and Files	
System Status	S-A	$COBOL Object Programs	S-E
Status Lines	S-S	MKAM Files	S-I
		VISION Spool Files	S-P
Jobs			
Job Directory	S-B	Communications	
Specific Jobs	S-J	Communications Controllers	S-L
		HASP Transmission Queue	S-Q
Format Program Elements	S-C	Systems Engineering	
Formats	S-C-F	Memory	S-M
Value Sets	S-C-V	Memory Resources	S-M-D
Index Sets	S-C-I	Physical Memory	S-M-Y
File Types	S-C-T	Format Pages and Active Jobs	S-H
Printer Forms	S-C-C	Performance Parameters	S-K

REFORMATTING INSTRUCTIONS AND PARAMETERS

Aw,c,d	Acquire and save character string (tape reformat only)
Dw,c	Duplicate saved characters (tape reformat only)
Fn	Force program level number
J	Eject a page (print only)
Nn	Concatenate program level number
P	Number pages or records (print only)
Rn	Reference program level number
Sw	Skip (blank) *w* columns in new record
Tw,...	Generate text field...
Uw,c	Copy *w* characters starting at column *c*
X	Ignore format n after $Pn or Nn
Zw,c	Same as Uw,c instruction, but suppress leading zeros (print only)
/	Begin a new record or begin a new line
c	Column number
d	Starting column in destination record
n	Program level (1-15)
w	Width in columns

FORMAT PROGRAM ELEMENTS

FIELD TYPES

fA[(i)]w	Alphabetic (A-Z or blanks)
fG[(i)]w	General (any characters)
fH[(i)]w	Hexadecimal (0-9 or A-F)
fI[(i)]w	Integer (0-9 only)
fL[(i)]w	Left-zero-fill on integer field
fL[(i)]w.p	Left zero-fill with implied decimal point on integer field
fN[(i)]w	Numeric (any characters except A-Z)

FIELD MODIFIERS

Ad	Duplicate characters or expression represented by *d* if AUX/DUP is pressed; for example, G6A"JUL 77" or I7AA3 + 10
Ba	Accumulate balance total on this field in accumulator *a*; for example, I6B2
Cw,m	Check the check digit in the last position of this field using modulus *m*; for example, I6C6,11
D	Duplicate automatically from the same screen position in the previous record if ASD is on; for example G10D
E	Must enter this field; for example, A18E
F	Must fill the field completely if entered; for example, N6F
Gd	Generate field from supplied expression *d* (ASD must be on); for example, I5GF3 + 1. A literal character string can also be generated; for example, I5G"55021"
Ix	Generate field from value set level *x* when INDEX and a specified key are pressed; for example, A8I2
J	Right-justify this field with blank fill; for example N12J
R	Must release this field; for example I5R
S	Skip automatically if ASD is on, and blank skipped columns (part of output record); for example, G12S
Za	Accumulate zero balance on this field in accumulator *a*; for example, I8Z3

VALIDATION/GENERATION DESCRIPTORS

Aa	Accumulator *a*; for example, I8 = A3 + A4 or I6GA3
B(bb,bl)	Randomly access work area buffer; for example, G18 = B(132,18)
Ff	Field number *f* in this record; for example I7 = F2 + F3 or I7GF1 + 10
Kiii	Key field in index set record; for example, I8 = K296
KNiii	Key field or next higher in index set record; for example, I5 = KN137
KNSiii	Key field or next higher in index set record (shared access); for example, I5 = KNS137
KSiii	Key field in index set record (shared access); for example, I8 = KS296
LFf	Local field in subroutine (may have same number as a global field); for example, I7 = LF2 + LF3 or I7GLF1 + 10

?LJNIB	Check for left-justified with no imbedded blanks (validation only); for example G6 = ?LJNIB or IF F2?LJNIB
?NEG	Check for rightmost character being a valid minus-overpunch character (validation only); for example, IF F1 = ?NEG or IF A2 ¬ ?NEG
Rfn(bbb,lll)	Randomly access record buffer for file *fn*; for example,SET R4(1,80) = R6(1,80)
RS(rc,w)	Screen position relative to the start of a subroutine, with offset *rc* from cursor position at the moment the subroutine was called and width *w*; for example, I6GRS(16,6) or I6 = RS(4,6)
S(r,c,w)	Extract field from screen; for example, I6GS(4,3,6) or I6 = S(4,3,6)
SA". . ."	Scan for any of the following characters (validation only); for example, G4 = SA"015A"
SN". . ."	Scan for none of the following characters (validation only); for example, G5 = SN"89"
Vx	Value set level number (validation only); for example, A16 = V2
X(iii,bbb,lll)	Field in index set record; for example, G4 = X(499,12,4)
". . ."	Character string constant (left-justified in field if shorter than field width); for example, G8 = "4X I" or G6G"JUL 75"
|	Logical OR: A12 = V2| = V3; also denotes column not to be tested; for example, I5 = "||100"
&	Logical AND; for example, IF A1 = "000000000030"&A2 = "000000000020" THEN. . .ELSE. . .
#BATCH	Six-character batch identifier from status line, left-justified; for example, G6E = #BATCH or G6G#BATCH
#BATCHfn	Six-character batch identifier of batch assigned to file *fn* (MSFP); for example G6E = #BATCH3 or G6G#BATCH3
#CONST	Alphanumeric system constant (12 characters maximum), left-justified; for example, G12 = #CONST or A8G#CONST
#DAY	Three-digit day of year set when system is loaded; for example, I3 = #DAY or I3EG#DAY
#JOB	Nine-character jobname from status line, left-justified; for example, A9 = #JOB or G9G#JOB
#JOBfn	Nine-character jobname for job assigned to file *fn* (MSFP); for example, A9 = #JOB7 or G9G#JOB7
#OPER	Three-character operator ID from status line; A3E = #OPER or A3G#OPER
#PLEVELfn	Program level of file *fn* (MSFP); for example, SET #PLEVEL2 = 1
#RECLENfn	Record length of the record just read or to be written for file *fn* (MSFP); for example, I3 = #RECLEN1
#RECNO	Six-digit record number from status line, right-justified; for example, I6 = #RECNO or I6G#RECNO
#RECNUMfn	Record number of the record just read or to be written for file *fn* (MSFP); for example, I3 = #RECNUM2
#TERMNO	Three-digit terminal number (000-031) of screen executing format code, right-justified with left-zero-fill; for example, I3 = #TERMNO
#TIMES	Nine-character time (bHH:MM:SS) from system clock set when VISION is loaded; for example, G9G#TIMES

COMMAND CODES

ASD	Turn ASD on for fields that follow until next ASD#.
ASD#	Turn ASD off until next ASD.
ATR(t,i)r,c	Create field one attribute at row *r*, column *c*, using field type *t* and intensity *i*; for example, ATR(A,H)10,40.
B(i)]r,c	Blank to row *r* column *c* (not part of output record); for example, B4,32
B(i)]w	Blank *w* columns (not part of output record); for example, B24.
BEEP	Sound audible alarm.
BLANKB	Fill work area buffer with blanks.
BLANKRfn	Fill record buffer associated with file *fn* with blanks (MSFP).
BROWSEiii	Browse through index set records with operator control and selection.
CALL "name"	Transfer execution to subroutine *name;* for example, CALL "SCREEN3"
CLEARMDT Ff	Clear MDT bit in attribute for field *f;* for example, CLEARMDT F3
CLEARMDT ALL	Clear MDT bit in each attribute on the screen.
CLOSEfn [,R] [,L] [,C] [,D] [,NJ]	Close file *fn* after completion of processing (MSFP); for example, CLOSE2,R; optional parameters are as follows: R (rewind tape) L (lock the disc batch) C (set the COMP flag) D (delay printing of spool file) NJ (inhibit page eject after the CLOSE)
COMMENT. . . ;	Does not compile (descriptive text); for example, COMMENT ADD TAX;
CORR	Allow record correction without use of shifted CORR/RESET key.
fCw,m	Generate check digit, modulus *m* using *w-1* preceding characters; for example, I8 C9,11.
DELETEfn	Delete record from index set for file *fn* (MSFP).
DELIXRiii	Delete exclusively accessed index set record; for example, 16 IF = K112 THEN DELIXR112 ELSE NULL.
Er,c	Erase all characters to row *r* column *c;* for example, E2,14
Ew	Erase next *w* characters from the screen (no duplications from previous screen); for example, E400.
EDIT. . . = . . . USING picture	Modify the string on the right, using a formatting picture, to produce the string on the left; for example,EDIT F1 = A0 USING $ZZZ,ZZZ.99
END	Mark end of source code for main format program.
ENDSUB	Mark end of source code for subroutine and return to main program.
EUAr,c	Erase unprotected characters to row *r* column *c*.

EUAw	Erase unprotected characters in next *w* columns.
Fn	Release the record and go to program level *n;* for example, F3.
FDR	Force disc record after key verify.
GETBUF	Allocate a 192-character work area buffer for reference by the B validation/generation descriptor.
IF. . .THEN. . .ELSE	Conditional statement.
INCLUDE	Include the format code in the named job batch in the current compilation; for example, INCLUDE "MASTER,15".
INSERTfn	Insert record in record buffer for file *fn* into index set, based on key in same record (MSFP).
INSIXR(iii,len,pl)	Insert record into index set; for example, I6 IF¬K284 THEN INSIXR(284,80,1) ELSE NULL.
INTEN H	Set default intensity to high.
INTEN L	Set default intensity to low.
LOCATEfn {BOF / EOF / exp}	Move file *fn* to a record number relative to the current record number (MSFP), according to the parameter given after the file number: BOF (move to beginning of file) EOF (move to end of file) exp (move to record number c + n + 1, where *c* is the current record number and *n* is the value to which the arithmetic expression *exp* is evaluated)
NDR	Do not create disc record (no disc record).
NOBACK	Prohibit manual backspacing in a record.
NOUP	Prohibit REC↑ (record up) and CTRL REC↑ (document up).
ONLINE	Vary the terminal online.
ONLINE#	Vary the terminal offline.
OPENfn,nnn,type [,R] [,S] [,C] [,L]	Open file *fn* for processing, where *nnn* is the file type number (1-999) and *type* is the open type (I for input, or READ; O for output, or WRITE); for example, OPEN4,125,I; optional parameters are as follows: R (rewind file before opening) S (spool printer output to disc) C (clear disc batch of records before the first record is written) L (print file on a log printer)
fP[(i)]". . ."	Prompt (not part of output record); for example, P"PRESS MODE".
fP[(i)]r,c". . ."	Prompt at row *r* column *c* (not part of output record); for example, P3,14"DATE:".
Riii	Release exclusive access to index set record; for example, R996.
RAiii	Release all access to a selected index set record; for example, R996.

READfn[,R]	Read record from file *fn* (card reader, magnetic tape, index set, or sequential disc batch) to record buffer for same file (MSFP); for example, READ3,R; the optional parameter *R* specifies that the file is to be rewound before reading.
READfn(KEY = . . .)	Read record from file *fn* (index set) to record buffer (MSFP).
RELBUF	Release work area buffer allocated by GETBUF.
RELEASEfn	Release exclusive access to a record in indexed file *fn*.
SEND aid	Send screen, test request, or program request to mainframe; for example, SEND PA2 or SEND ENTER.
SET . . . = . . .	Set accumulator [Aa], field [Ff], work area buffer [B(bbb,lll)], record buffer [Rfn(bbb,lll)], screen area [S(r,c,w)], index set [X(iii,bbb,lll)], program level [#PLEVELfn], or record length [#RECLENfn] to value that follows; examples: SET A4 = A4 + 10, SET A4 = "180", SET F1 = F2 + 5, SET B(2,10) = F1 + F2, SET R54,15) = F3, SET S(3,2,6) = A5 + 9, SET X(796,24,12) = A5-F3, SET #PLEVEL5 = 3, SET #RECLEN7 = 80 (see individual elements for more details).
SETMDT Ff	Set MDT bit in attribute for field *f*; for example, SETMDT F6.
SPLIT s WAYS ON exp	Multiple branching statement; for example, SPLIT 6 WAYS ON AO.
SUBROUTINE "name"	Begin source code of subroutine *name;* for example, SUBROUTINE "SCREEN3".
USE BRANCH b	Used in SPLIT command to cause execution of statement *b*.
fT[(i)]"..."	Generate text (part of output record); for example, T"MAY 77".
V	Verify the following fields (V# is assumed if V is not specified).
V#	Do not verify the following fields until the next V command.
VALID	Flag record for sight verify.
WAIT	Causes execution of format object code to be suspended momentarily.
WAITW	Causes execution of the format object code to be suspended until a mainframe response is received.
WRITEfn[TM,] [,Cc] [,Ss] [,CR]	Write contents of record buffer for file *fn* to file *fn* (MSFP); for example, WRITE3,C12,S2,CR; the optional parameters are as follows: TM (write a tape mark for magnetic tape file) Cc (jump to carriage control channel *c* (1-12)) Ss (skip *s* lines (1-15) before printing the buffer) CR (print the buffer, then execute carriage return, i.e., suppress page advance)
Za	Clear accumulator *a* to zero; for example Z4.
f@[(i)]r,c	Tabulate to row *r* column *c* (not part of output record); for example, @4,42.
f@[(i)]w	Tabulate *w* columns (not part of output record); for example, @18.

CONDITIONAL COMMANDS		CONDITIONAL INDICATORS			
EXITF	MARK	BOBfn	EOFfn	NEWREC	RECSELfn
		BOFfn	EXCLUSIVE(iii)	OPENEDfn	SELREC(iii)
		DOCVER	KEYVER	OUTBAL	SHARED(iii)
KVDOC	NULL	EOBfn	MARKED	PASTWO	VRECON

PARAMETERS FOR FORMAT DESCRIPTORS

a	Accumulator number (0-23); accumulator 0 cannot be used with Ba or Za field type modifiers.
aid	Attention id code specified by one of the following: ENTER, CLEAR, TREQ, PA1-PA3, or PF1-PF12.
b	Branch number used in USE BRANCH statement (1-60).
bb	Beginning column of work area buffer (1-750).
bbb	Beginning column of index set field (1-750).
bl	Length of work area buffer field in columns (1-750 for record buffer, 1-192 for work area buffer).
c	Column number (1-80 depending on screen width).
d	Character string for aux dup or generate, may be either a character string enclosed in quotes or an arithmetic expression.
exp	Arithmetic expression used in the SPLIT statement.
f	Optional field number (1-999); up to 128 per format.
fn	File number (1-8) for $EDIT and MSFP features.
i	Attribute specification for display intensity (H = high, L = Low, B = blank, − = no attribute). Omit the code for default intensity.
iii	Index set identifier (001-999).
len	Length of index set *record* in columns (1-750)
lll	Length of index set *field* in columns (1-750)
m	Modulus for check digit (7, 10, or 11)
n	Number of next program level (1-15)
"name"	Name of a subroutine (1-9 characters)
p	Number of places to right of implied decimal point (up to 15)
pl	Program level of inserted record (1-15)
r	Row number (1-24)
rc	Relative column number in a subroutine.
s	Number of branches in a SPLIT statement (2-61).
t	Attribute specification for field type (A = alphanumeric, N = numeric, P = prompt, T = text).
w	Width of field in columns (1-750)
x	Value set level number (1-15)