ADDENDA TO CROMEMCO FORTRAN IV INSTRUCTION MANUAL

CROMEMCO INCORPORATED

2400 CHARLESTON ROAD, MOUNTAIN VIEW, CALIFORNIA

ERRATA

CROMEMCO FORTRAN IV INSTRUCTION MANUAL

PAGE

3 The sequence of FORTRAN statements in a program unit should conform to the following:

1. PROGRAM, SUBROUTINE, FUNCTION, BLOCK DATA
2. INTEGER, REAL, LOGICAL, BYTE, EXTERNAL, DIMENSION
3. COMMON
4. EQUIVALENCE
5. DATA
6. Statement Functions
7. ASSIGN, BACKSPACE, CALL, CONTINUE, ENDFILE, GOTO, IF, PAUSE, READ, RETURN, REWIND, STOP, WRITE
8. END

The exception to this ordering is FORMAT, which may appear anywhere after PROGRAM, SUBROUTINE, FUNCTION, and BLOCK DATA.

4	Table 3-1, 2nd Column	"1 above" should read "In (b) above"
4	Table 3-1, Examples	"Z'FFFFFF'" should read "Z'FFFFF'"
5	Top, 1st Column	"MAXA1$C" should read "MAX,A1$C"
5	Table 3-2, INTEGER type	"S Binary Value" should read "Sign/Binary Value"
5	Table 3-2, REAL type	"S Mantissa" should read " Sign/Mantissa"
9	Bottom, 1st Column	"declarator AMAT(3,2,1)" should read "declarator AMAT(3,2,2)"

9 Additional Type declarations have been added for convenience:

```
BYTE
INTEGER*1
LOGICAL*1
LOGICAL*2
INTEGER*2
REAL*4
```

BYTE, INTEGER*1, and LOGICAL*1 are equivalent to LOGICAL. LOGICAL*2 and INTEGER*2 are equivalent to INTEGER. REAL*4 is equivalent to REAL.

11	Top, 1st Column	"L(1,1)" should read "R(1,1)"
	Bottom, 1st Column 3rd line	"7.86" should read "7.86/"
	7th line	"H4(2.1)" should read "H4(2,1),"
	11th line	"'NOGO'" should read "'NOGO'/"

PAGE		
13	Bottom, 1st Column, between statements 30 & 20 in example	Insert the statement: "50 A(I)=B(I)+C"
14	Top, 1st Column Formula Example	"AkjBm" should read "Akj*Bm"
16	Bottom, 1st Column	No parentheses should be used around the "u" of BACKSPACEu REWINDu ENDFILEu
17	Bottom, 2nd Column, 1st line of Examples	"bb388.42ØØ" should read "bb368.42ØØ"
22	The line:	DATA A/'(3F1,Ø.3,4I6)'/ should be changed to: DATA A/'(3F1','Ø.3,',4I6)'/ because FORTRAN IV does not allow splitting of constant values across items in a DATA statement.
26	Middle, 2nd Column, 3rd line of Example	"B*3.3)" should read "B(3.3)"
	7th line of Example	"/.TRUE/" should read "/.TRUE./"
27	Line Ø of the Example	"^C" should be deleted.
	Line 17 of the Example	"IOERR" should read "$IOERR"

29	Example	The 8Ø8Ø opcodes are in Z80 code:
		SUBR: LD (P1),HL
		EX DE,HL
		LD (P2),HL
		LD A,3
		LD HL,P3
		CALL $AT

30	Character numbered Ø96 Characters numbered 125-127	"'" should be "`", the accent symbol They should be, respectively, "}", "~". and "DEL"

THERE ARE SEVERAL FUNCTIONS WHICH WERE INADVERTENTLY OMITTED FROM THE TABLES ON PAGE 23 OF THE FORTRAN IV INSTRUCTION MANUAL. THESE ARE SUMMARIZED IN THE FOLLOWING TABLE.

FUNCTION NAME	DEFINITION	TYPE ARGUMENT	TYPE FUNCTION
AMIN0	MIN(A1,A2,...)	INTEGER	REAL
AMIN1		REAL	REAL
MIN0		INTEGER	INTEGER
MIN1		REAL	INTEGER
ALOG10	LOG(A)	REAL	REAL
INP(I)	INPUT FROM A PORT	INTEGER*1 OR BYTE	INTEGER*1 OR BYTE
OUT(I,J)	OUTPUT TO A PORT	INTEGER ADDRESS, BYTE VALUE	INTEGER*1 OR BYTE
PEEK(K)	LOOK AT A BYTE FROM MEMORY	INTEGER ADDRESS	INTEGER*1 OR BYTE
POKE(K,J)	PLACE A BYTE IN MEMORY	INTEGER ADDRESS, BYTE VALUE	INTEGER*1 OR BYTE

WHERE I IS A ONE-BYTE PORT NUMBER, J IS A SINGLE BYTE VALUE TO BE EITHER OUTPUT OR LOADED INTO MEMORY, AND K IS A TWO-BYTE INTEGER SPECIFYING AN ADDRESS IN MEMORY. I, J, AND K ARE EITHER INTEGER CONSTANTS OR INTEGER VARIABLES.

AMIN0 THROUGH MIN1 CORRESPOND EXACTLY IN ARGUMENT AND FUNCTION TYPE TO AMAX0 THROUGH MAX1 IN TABLE 9-1, PAGE 23. ALOG10 IS SIMPLY THE DECIMAL BASE, RATHER THAN THE NATURAL BASE, LOGARITHM. THE IMPLEMENTATION OF THE OTHER FOUR FUNCTIONS NEEDS SOME FURTHER EXPLAINING, HOWEVER.

INP AND PEEK ARE CONSIDERED FORTRAN FUNCTIONS IN THE TRADITIONAL SENSE. THEY REQUIRE ONLY ONE ARGUMENT, WHICH MUST BE AN INTEGER CONSTANT OR VARIABLE. IN THE CASE OF INP, THIS ARGUMENT SHOULD BE A BYTE; HOWEVER, IF IT IS NOT, THE LOW BYTE OF THE TWO-BYTE INTEGER WILL BE USED. THUS, THE FOLLOWING ARE ACCEPTABLE EXAMPLES OF THE USE OF THESE FUNCTIONS:

```
BYTE IVALUE
IVALUE=INP(14)                    (INPUT A VALUE FROM
                                   PORT 0EH)

JSTORE=4096
IF(PEEK(JSTORE).EQ.0) GO TO 20    (GET A BYTE FROM THE
                                   LOCATION POINTED TO
                                   BY JSTORE)
```

OUT AND POKE, BECAUSE THEY RESIDE IN THE FORLIB.REL FILE, ARE CONSIDERED SUBROUTINES AND MUST BE CALLED AS SUCH. THEY REQUIRE TWO PARAMETERS, A PORT OR AN ADDRESS, AND A VALUE TO BE OUTPUT OR WRITTEN, RESPECTIVELY. THE FOLLOWING EXAMPLES WILL ILLUSTRATE THIS:

```
INTEGER ADDRS
BYTE JNEXT
DATA JNEXT/Z'3C'/
ADDRS=256
CALL POKE(ADDRS,JNEXT)          (PUT THE BYTE 3CH,
                                  WHICH IS THE VALUE
                                  OF JNEXT, INTO THE
                                  LOCATION POINTED TO
                                  BY ADDRS)

NPORT=LASTPT+3
CALL OUT(NPORT,32)              (OUTPUT THE VALUE 32,
                                  OR 20H, TO THE PORT
                                  NUMBER WHICH IS THE
                                  VALUE OF NPORT)
```

Computer Technology Ltd

Cambridge Consultants