

TTY August 29, 1969.

CGIM 79
Bary Pollack
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TELETYPE INPUT/OUTPUT PACKAGE
Varian DATA 620/i

Name: See below Date: June 1, 1969
Function: Teletype input/output
Programmer: Bary W. Pollack
Core Requirements: See below (Total, all routines: 331 or 513)
10 8

Special Equipment: TTY
Load Point: 15265

3
Source: Blocks 2030-46
Object: Blocks 2504-05

Description:

These routines provide the ability to communicate with the teletype: input/output of character strings, decimal numbers, octal numbers and single characters.

NAME	FUNCTION	PAGE
CHBI	Character string input	2
CHRO	" " output	3
CHSO	" " output	3
DECI	Decimal integer input	4
DECO	" " output	4
OCTI	Octal number input	5
OCTO	" " output	5
TTIA	Single character input to A	6
TTOA	" " output from A	6
TTIB	" " input to B	6
TTOB	" " output from B	6
DATA	Common data area	6

All routines use the single character input/output routines and common data area.

Character strings must be terminated with an escape character (ESC) for both input and output. RUBOUT is interpreted as backspace character.

Numeric strings may be terminated with any non-numeric character on input. RUBOUT is interpreted as restart numeric input.

Name: CHRI

Function: Character string input

Core Requirements: 53 or 65

10 8

Uses constants: N233, N334, N377, TTY1, TTY2

Description:

A sequence of characters is accepted from the teletype (and echoed) until an ESC is typed. Typing RUBOUT has the effect of backspace character. Characters are packed two to a word, left justified.

Calling sequence:

```
LDRI    CBUF
LDX     NCHR
CALL    CHRI
```

Where,

CBUF = Address of character buffer

NCHR = Maximum numbers of characters to be stored in CBUF (must be >0)

Name: CHRO, CHSO

Function: Character string output

Core Requirements: 36 or 44

10 9

Uses constants: N212, N215, N233, N377

Description:

A sequence of characters is typed on the teletype until an ESC is encountered. CHRO then types a carriage return, line feed and returns. CHSO returns immediately. Characters must be packed two to a word, left justified, and the final character must be ESC. The routine does not check to make sure the characters are valid teletype codes.

Calling sequence:

```
LDBI   CBUF           LDBI   CBUF
CALL   CHRO           CALL   CHSO
```

Where,

CBUF = Address of character buffer

Name: DECI

Function: Decimal integer input

Core Requirements: 67 or 103

10 8

Uses constants: N002, N003, N012, N205, N240, N272, TTY1, TTY2, TTY3

Description:

An optionally signed decimal integer between -32727 and +32767 is read from the teletype (and echoed). The integer is terminated by the first non-numeric character typed. DECI returns with the integer in A and the terminating character (not echoed) in B. X is returned non-zero if a number was input and is zero otherwise. Typing RUBOUT restarts the routine.

Calling sequence:

CALL DECI

Name: DECO

Function: Decimal integer output

Core Requirements: 40 or 50

10 8

Uses constants: N255, N260, M004, TTY1

Description:

A (possibly signed) decimal integer between -32767 and +32767 is typed on the teletype. The integer must be in A upon entry to the routine.

Calling sequence:

LDA NUM
CALL DECO

Where,

NUM = Number to be output

Name: OCTI

Function: Octal number input

Core Requirements: 61 or 75

10 8

Uses constants: N002, N003, N010, N107, N240, N243, N270, TTY1

Description:

An optionally signed octal number is read from the teletype (and echoed). The number is terminated by the first non-octal character typed. OCTI returns with the number in A and the terminating character (not echoed) in B. X is returned non-zero if a number was input and is zero otherwise. Typing RUBOUT restarts the routine.

Calling Sequence:

CALL OCTI

Name: OCTO

Function: Octal number output

Core Requirements: 16 or 20

10 8

Uses constants: N006, N260

Description:

An unsigned 6-digit octal number is typed on the teletype. The number must be in A upon entry to the routine.

Calling sequence:

LDA NUM
CALL OCTO

Where,

NUM = Number to be output

Name: TTIA, TTOA, TTIB, TTOB
 Function: Single character input/output from A or B
 Core Requirements, each routine: 9 or 11
 10 8
 Uses constants: (uses no constants)

Description:

TTIA and TTIB read a single character from the teletype and insert it right justified in A (B).

TTOA and TTOB type a single character on the teletype. The character must be right justified in A (B). The character is not checked to make sure it is a valid teletype code.

The routines do not alter any other registers than those specified for input.

Calling sequence:

CALL	TTIA	CALL	TTIB
LDA	CHAR	LDB	CHAR
CALL	TTOA	CALL	TTOB

Where,
 CHAR = Character to be output

Name: DATA
 Function: Common data area
 Core Requirements: 14 or 16
 10 8
 Uses constants: (uses no constants)

Description:

DATA is composed of all constants and temporaries used by the teletype input/output package. Only those portions of DATA which are referenced need be in core at execution time.