2631A/2635A Printer Utility Subroutine

Reference Manual

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PRINTING HISTORY

New editions are complete revisions of the manual. Update packages contain replacement pages or write-in instructions to be merged into the manual by the customer. Manuals will be reprinted as necessary to incorporate all prior updates. A reprinted manual is identical in content (but not in appearance) to the previous edition with all updates incorporated. No information is incorporated into a reprinting unless it appears as a prior update. The edition does not change.
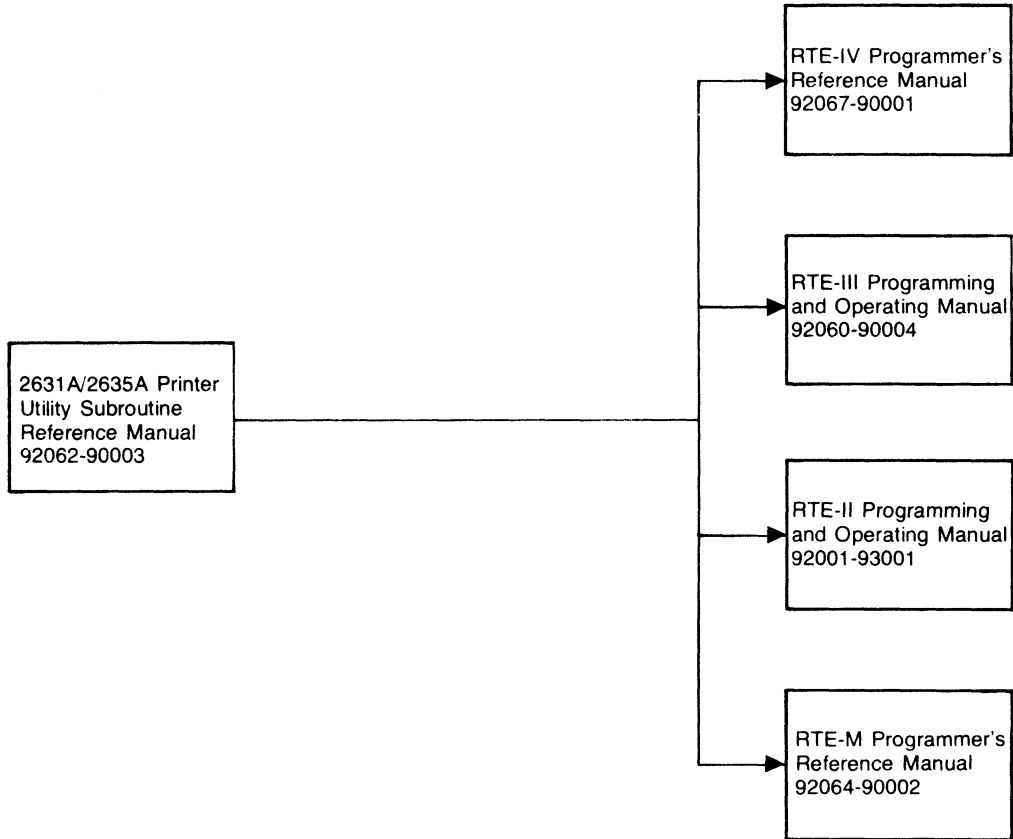
Second Edition .... Feb 1980

DOCUMENTATION MAP

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                                                    ┌─────────────────────┐
                                                    │ RTE-IV Programmer's │
                                              ┌────▶│ Reference Manual    │
                                              │     │ 92067-90001         │
                                              │     └─────────────────────┘
                                              │
                                              │     ┌─────────────────────┐
                                              │     │ RTE-III Programming │
                                              ├────▶│ and Operating Manual│
                                              │     │ 92060-90004         │
  ┌─────────────────────┐                     │     └─────────────────────┘
  │ 2631A/2635A Printer │                     │
  │ Utility Subroutine  │─────────────────────┤     ┌─────────────────────┐
  │ Reference Manual    │                     │     │ RTE-II Programming  │
  │ 92062-90003         │                     ├────▶│ and Operating Manual│
  └─────────────────────┘                     │     │ 92001-93001         │
                                              │     └─────────────────────┘
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                                              │     ┌─────────────────────┐
                                              │     │ RTE-M Programmer's  │
                                              └────▶│ Reference Manual    │
                                                    │ 92064-90002         │
                                                    └─────────────────────┘
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Refer to the documentation map of the appropriate Operating System Reference Manual for a complete listing of relevant documents.

CONTENTS

TABLES

Title	Page

INTRODUCTION

The 2631A/2635A printer utility subroutine facilitates programming the 2631A line printer and the 2635A printer. It sends control strings to the printer that change the printer's state, which determines the character set, the tab settings, the number of printed lines per inch, and other characteristics of the final printed output.

LOADING THE 2631A/3635A PRINTER UTILITY SUBROUTINE

The relocatable code for the 2631A/2635A printer utility subroutine is contained in file %LP31 (92062-16003). To load the subroutine in an RTE-II/III Operating System, the subroutine should be appended to the program that calls it using the following commands:

    :MR,program
    :MR,%LP31
    :RU,LOADR,2,6,99

For more information on using the LOADR in a particular operating system, refer to the appropriate RTE Programming and Operating Manual.

To load the subroutine in an RTE-M Operating System, use the following commands to relocate the subroutine after the program that calls it:

    RELOCATE program
    RELOCATE %LP31

For more information refer to the relocating loader section of the RTE-M Programmer's Reference Manual.

CALLING THE 2631A/2635A PRINTER UTILITY SUBROUTINE

The 2631A/2635A Printer Utility Subroutine can be called from both RTE FORTRAN IV programs and from RTE Assembly Language programs. The subroutine is coded in Assembly Language and contains a call to EXEC as its only external.

The calling sequence in RTE FORTRAN IV is:

    CALL LPCON(LU,CODE,DATA)

The calling sequence in RTE Assembly Language is:

    JSB LPCON
    DEF RTN
    DEF LU
    DEF CODE
    DEF DATA
    RTN −return point−

where:

LU   is the logical unit number of the printer to which to send the control information. It's driver must be DVA12, DVR00, DVR37, or DVR05.

CODE and DATA are as described in Table 1-1.

Table 1-1. Values for CODE and DATA Parameters

CODE	DATA	ACTION
1	+N	Set tab at column N
1	−N	Clear tab at column N
1	0	Clear all tabs
2	1	Enable display functions
2	2	Disable display functions
3	0	Select primary char set 0
3	1	Select primary char set 1
4	0	Selct secondary char set 0
4	1	Select secondary char set 1
5	0	Disable underlining
5	1	Enable underlining
6	0	Print normal size
6	1	Print expanded size
6	2	Print compressed
7	0	Select 12 lines per in.
7	1	Select 1 line per in.
7	2	Select 2 lines per in.
7	3	Select 3 lines per in.
7	4	Select 4 lines per in.
7	6	Select 6 lines per in.
7	8	Select 8 lines per in.
8	—	Set printer to 6LPI, normal print, primary set 0, secondary set 1, disable display func., disable underlining, clear all tabs

2631A/2635A PRINTER UTILITY SUBROUTINE

The subroutine sets variable CODE to indicate the completion status. The meanings of the values returned in CODE are explained in Table 1-2.

Table 1-2. Meaning of Values Returned in CODE

CODE	DESCRIPTION
−10	LU is not driven by DVR00, DVR05, DVA12 or DVR37
−8	Illegal operation code
−7	Illegal data value for selecting line density
−6	Invalid print size specification
−5	Underline command not valid
−4	Specified secondary character set not valid
−3	Specified primary character set not valid
−2	Enable disable display functions command not valid
−1	Tab command to column greater than 240
0	Normal completion

This subroutine uses the line feed suppress mode of drivers DVR00, DVR05, DVR37, and DVA12 for output. Therefore its output sequences are non-printing unless "display functions" is enabled. In normal operation, these control functions will have no visible effect on the device.

However, when a 2631A/2635A printer is connected as a peripheral to a 264X terminal, DVR05 does not perform line feed suppression. Therefore, line movement (carriage return and line feed) will occur when any command is sent to a printer connected in such a manner.

The escape sequences issued by this subroutine and their effects on the 2631 line printers can be found in the 2631A Operator's Manual (02631-90901).

NOTE

Any commands issued to the printer while it is in "display functions" mode will be printed but will not change the state of the printer. The only exception is the command to disable "display functions", which will be printed and then disable "display functions".

CAUTION

Use of this subroutine or transmission of the corresponding escape sequences may leave the printer in an unacceptable state. Care should be taken to leave the device in an acceptable state before leaving the device area.

NOTE

LINE SPACING ON THE 2631A

DVA12 does not supply carriage return and linefeed characters. Instead, it issues a VFU (Vertical Formatting Unit) command which causes a vertical space. The 2631A, however, does not interpret a VFU as carriage return/linefeed. (The effect of a VFU on the 2631A is to set line spacing to the default value of six lines per inch.) When using LPCON to set line spacing, carriage return and linefeed characters must be explicitly supplied by the user, and the VFU command must be inhibited with an asterisk ("*") as the carriage control character. For example:

```
FTN4,L
        PROGRAM T2631
        DATA ICRLF/006412B/
        ICODE=7
        CALL LPCON (6,ICODE,0)
        DO 10 I=1,20
10      WRITE (6,11) I,ICRLF
11      FORMAT("*LINE ",I3,A2)
        END
```

READER COMMENT SHEET

2631A/2635A PRINTER UTILITY SUBROUTINE
Reference Manual

92062-90003   February 1980

Update No. _____

(If Applicable)

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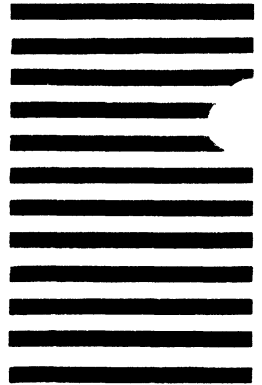Address   _____

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