



DECUS

PROGRAM LIBRARY

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TITLE	CALENDAR
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CALENDAR

DECUS Program Library Write-up

DECUS NO. 8-388

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1. Abstract

This program will print the calendar for any year between 1 A.D. and 9999 A.D. inclusive. The Julian Calendar is used before 1752 and the Gregorian Calendar is used after 1752. Output is on the Teletype or high speed punch.

2. Requirements

2.1 Hardware

The minimum hardware required is a 4K PDP-8, 8/S, 8/I or 8/L with an ASR-33 teletype.

2.2 Storage

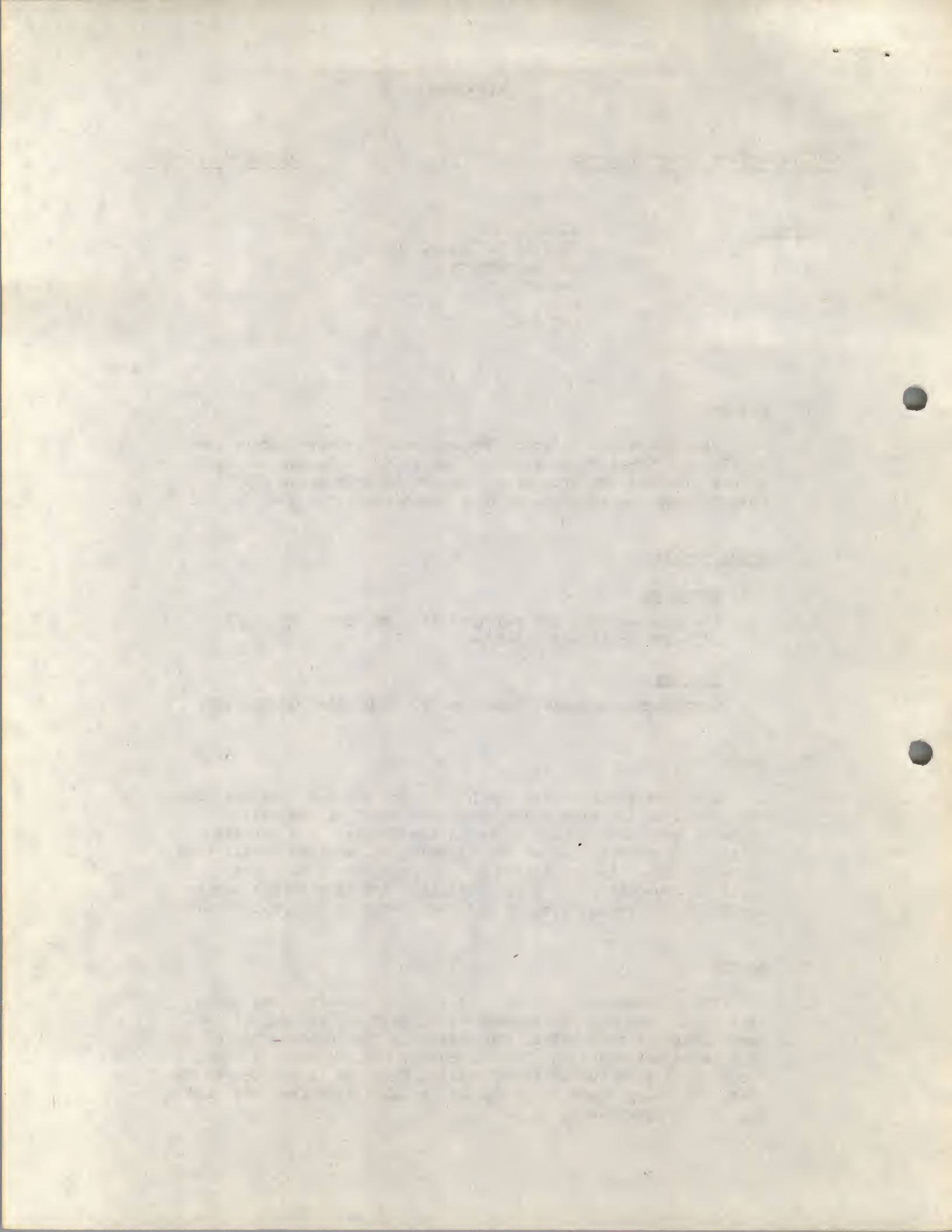
The program occupies locations 20 to 60 and 200 to 1537.

3. Usage

Load the program with the BIN loader and load address 200. For output on the high speed punch set bit 0 of the switch register and turn on LSP. Turn on the Teletype and depress Start. The year for which the calendar is required should then be typed, input is terminated by any character other than a digit or "rubout" or by a fifth digit. Typing mistakes may be corrected by typing "rubout" and then retyping the year required.

4. Method

The calendar printed by this program is output one month at a time. The day of the week on which the first day of the month falls is calculated, and stored in the location "dmin" as an integer between 1 and 7 (i.e. Sunday = 1, Monday = 2 etc). For January this number is calculated from the year typed by the user, for every other month "dmin" is calculated from the last day of the previous month.



Before printing, the month to be output is set up in the computer store. To do this 42 locations (1466 to 1537) are cleared and then numbered in sequence starting with the location corresponding to the first day of the month and finishing when the number of locations filled is equal to the number of days in the month, for example, if a 30 day month begins on Wednesday the fourth location will be numbered 1 and the 33rd location will be numbered 30.

To print the month, the name of the month is printed followed by the title "Sunday". Every 7th location starting with the first is then inspected and if the location contains a zero, spaces are printed, otherwise the contents of the location are typed. The title "Monday" is then output and the locations inspected starting with the second. This is continued until the seven days of the week have been typed.

The computer then repeats this process for the next month.

