



# DECUS

## PROGRAM LIBRARY

DECUS NO.	12-42
TITLE	CALCO 12
AUTHOR	Richard Reeder
COMPANY	State University of New York Stony Brook, New York
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SOURCE LANGUAGE	DIAL

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## CALCO 12

DECUS Program Library Write-up

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### DESCRIPTION

CALCO 12 is a plotting program designed for the Model 565 CalComp Plotter. The impetus for writing a program of this kind was the need to plot large volumes of data generated by programs like Catacal, in a short period of time. The features of the program include drawing of axes, user defined origin, and specification of the number of points to be plotted. To use the program the operator specifies the tape block where the data is stored, the tape unit, and the number of points to be plotted.

The main program resides in instruction field 2 and page 2 of core. The data to be plotted is stored in data field 3. Two DEC subroutines were used in the program. They are QANDA, and the Incremental Plot Subroutine.

### HARDWARE REQUIREMENTS

A PDP-12 computer with a MODEL 565 CalComp Plotter and at least one LINCtape unit is necessary to operate the program. The extended memory is not used. EAE is needed.

### OPERATING INSTRUCTIONS

CALCO 12 can be loaded using DIAL-V2 or DIAL-MS by typing `—>LO CALCO 12, (UNIT) J.` It is a load and go program. However, if a manual start is desired, simply press I/O PRESET, in the LINC MODE, and the start 20 key. The program starts with a title display frame and directions to the operator to press return to continue to the next display. The next frame appears as shown below:

```
DATA AT BLOCK _ _ _ _  
UNIT _  
NUMBER OF POINTS. _ _ _ _
```

After entering the tape block number, press RETURN on the teletype. This takes you to the next line which asks for the unit number of the data. This line is also terminated by pressing RETURN. The last line asks for the number of points to be plotted. This number must be entered in "OCTAL." After entering the number of points the operator must press LINEFEED to exit from the frame. Please note that leading zeroes are read by the program so they must be included in the answer. Wrong entries may be deleted by pressing RUBOUT or the entire question field may be reinitialized by pressing Alt Mode. Again remember that block number one is entered as follows: DATA AT BLOCK 0 0 1.

The third frame appears on the display as follows:

IF NO AXES ARE DESIRED SET SENSE SWITCH 1  
PRESS RETURN

If sense switch 01 is not set to the 1 (on) position, the axes will be drawn on the plotter.  
The RETURN key terminates this display and advances to the following display:

POSITION PEN  
PRESS LINEFEED

At this time the operator should position the pen along the y-axis to the place where the graph should start. After this is done press LINEFEED to plot the graph. The graph will be plotted in approximately 10 seconds and the pen will return to the beginning of the trace. The final display is now on the screen. This is a sense switch option which will return control back to DIAL-MS or restart the program depending on the state of sense switch 00. Sense switch 00 in the set position will return to CALCO 12. If it is not set DIAL-MS will be reloaded into core.