Title:

Introduction to the UCSD Pascal
System for the RC700 Microcomputer

Keywords:

RC700, UCSD Pascal, Introduction

Abstract:

The manual gives a short introduction to the UCSD Pascal System
used on the RC700 Microcomputer.

(18 printed pages)

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1. INTRODUCTION 1.

This document is intended as an introduction to the UCSD PASCAL system running on the RC700 microcomputer.

Only details specific to the RC700 implementation of UCSD PASCAL is covered.

For detailed information about the UCSD Pascal system and the PASCAL language please refer to the references in appendix A.

The system delivered from A/S Regnecentralen af 1979, is a CP/M adaptable UCSD PASCAL system from SofTech Microsystems configured to run on the RC700 microcomputer. The only configuration to be done by the user is to choose a suitable interpreter module (see section 3).

If you have any problems with the system please contact your RC700 Support Center.

2.　　　LOADING THE SYSTEM　　　　　　　　　　　　　　　　　　　2.

The UCSD PASCAL system is loaded in the following way:

1) Insert the diskette marked 'PASCAL LOADER' into drive 1 and
   press the 'RESET'-button.

   The following text will be printed:

   　　RC700 PASCAL LOADER vers. XX
   　　INSERT PASCAL DISK - TYPE <RETURN>

2) Insert the PASCAL system disk into drive 1, and type <return>.
   After several disk accesses, the PASCAL prompt line will
   appear, and the system is ready for use.

   NOTE: The system needs 64 k bytes of memory!

The PASCAL disk to be bootstrapped must contain a secondary
bootstrap on track zero and the following files:

   　　SYSTEM.PASCAL　　(the operating system)
   　　SYSTEM.INTERP　　(the PASCAL interpreter)
   　　SYSTEM.MISCINFO (information about terminal handling)

3.   RECONFIGURING THE PASCAL INTERPRETER   3.

The initial configuration of the PASCAL interpreter (the file
SYSTEM.INTERP) is able to handle 1 floppy disk drive and has no
floating point capabilities.

Three more interpreter module files exist:
   CMP2.INTERP
      2 drives supported -
      no floating point capabilities. ·
   CPM1.FP.INTERP
      1 drive supported
      floating point included
   CPM2.FP.INTERP
      2 drives supported
      floating point included ·

The INTERP modules occupies much less memory space than the
FP.INTERP modules.

To install a new interpreter, enter the F)iler by typing F, and
R)emove the file SYSTEM.INTERP. Then T)ransfer the appropriate
interpreter file to the system disk, naming it SYSTEM.INTERP. The
system may now be re-booted, thus including the new interpreter
module.

NOTE: if a two disk version is used, a diskette must be in both
drives in order to prevent the system from hanging on a read to
the second drive.

4.   DISKETTE FORMATS   4.

The diskettes used have the following format:

5 1/4" floppy:

Double-sided, 128 bytes per sector - 16 sectors per track - 36
tracks. Thus it can hold 280 PASCAL blocks (512 bytes per block).

The disk is formatted with 2 to 1 interleaved sectors and zero
track to track skew, and the first PASCAL track is track one.

8" floppy:

Single-sided, 128 bytes per sector - 26 sectors per track - 77
tracks. Thus it can hold 494 PASCAL blocks (512 bytes per block).

The disk is formatted with 4 to 1 interleaved sectors and zero
track to track skew, and the first PASCAL track is track one.

Disks not having the proper interleaving ratio and track to track
skew must be reformatted using the DISKCHANGE program (see
ref. [1]) before it can be used by the system.

4.1   Formatting   4.1

When you buy 5 1/4" diskettes, they are normally not formatted.
Thus they have to be formatted before they can be used in the
system. See chapter 5 for a description of the formatting
program.

5.   SYSTEM UTILITIES   5.

The RC700 PASCAL system is supplied with some utility programs,
which are not part of the standard UCSD PASCAL system. They are
described in this section.

5.1   Utilities on the Loader Disk   5.1

If you in response to the prompt 'INSERT PASCAL DISK - TYPE
<RETURN>' type <esc> instead of <return>, the system will reply
with the prompt 'PROGRAM?'.

You have three choises to answer this question:

1) 'PASCAL' returns to the PASCAL Loader.

2) 'FORMAT' prompts you with 'INSERT DISK - TYPE <RETURN>'. The
   disk inserted is formatted according to the format given in
   chapter 4.

NOTE: This is only relevant for 5 1/4" diskettes. 8" diskettes
cannot be formatted in this way.

3) 'SYSTEM' generates a new load disk. It can also be generated
   by copying the disk, but this is a faster way. Just insert a
   disk, when the prompt 'INSERT DISK - TYPE <RETURN>' appears.

NOTE: A Pascal System disk cannot be generated in this way.

5.2   BACKUP Utility   5.2

The backup program BACKUP.CODE copies a whole disk. It asks for
the source and destination unitnumbers for the transfer. The
program will work on both one and two drive systems. On a one
drive system it is a little more tedious, as you have to
interchange the source and destination disks a number of times.

To execute the backup program, type X and BACKUP at the Command level (the disk containing BACKUP.CODE must be on-line).

This chapter describes the control keys used in the RC700
implementation of UCSD PASCAL.

For details about the function of the keys please refer to ref.
[1].

	RC702	RC701
EDITOR ACCEPT KEY:	CTRL-E or ←|	CTRL-E
EDITOR ESCAPE KEY:	ESC	CTRL-Æ
CURSOR DOWN:	↓	CTRL-J
CURSOR LEFT:	←	←
CURSOR RIGHT:	→	CTRL-X
CURSOR UP:	↑	CTRL-Z
KEY TO DELETE CHAR:	←	←
KEY FOR FLUSH:	CTRL-F	CTRL-F
KEY FOR STOP:	CTRL-S	CTRL-S
KEY FOR BREAK:	CTRL-B	CTRL-B
TAB:	→|	CTRL-I

7.   CONTENTS OF DISKETTES   7.

The system is distributed on three 8" disks or four 5 1/4" disks.
Disk No 1 is the Pascal Loader and disk No 2 is the PASCAL System
Disk (volume id: SYS:). The rest of the files are located on one
8" disk (SYS1:) or two 5 1/4" disks (SYS1: and SYS2:).

The following is a list of the files on the distribution disks
with references to the appropriate documentation.

SYS:

SYSTEM.PASCAL	User's Manual (ref. [1]) p.5
SYSTEM.INTERP	This document, chapter 3
SYSTEM.MISCINFO	User's Manual p.259
SYSTEM.FILER	— p.7
SYSTEM.EDITOR	— p.31
SYSTEM.COMPILER	— p.69
SYSTEM.SYNTAX	— p.70
DISKCHANGE.CODE	— p.I-9, I-15
DISKSIZE.CODE	— p.I-11
BOOTER.CODE	— p.293

SYS1:

YALOE.CODE	User's Manual p.57
SYSTEM.LINKER	— p.77
SYSTEM.ASSEMBLER	— p.129
Z80.OPCODES	— p.129
Z80.ERRORS	— p.129
8080.ASSEMBLER	— p.129
8080.OPCODES	— p.129
8080.ERRORS	— p.129
LIBRARY.CODE	— p.249
LIBMAP.CODE	— p.309
PATCH.CODE	See next file
PATCH.DOC.TEXT	Replaces section 4.4 in User's Manual.
BACKUP.CODE	This document, section 5.2.

SYS2: (5 1/4") - rest of SYS1: (8")

CPM1.INTERP
CPM2.INTERP
CPM1.FP.INTERP   This document, chapter 3
CPM2.FP.INTERP

MARKDUPDIR.CODE
COPYDUPDIR.CODE   User's Manual p.301

DISASM.II.CODE
OPCODES.II.0   User's Manual p.303

RELOC.CODE   See RELOC.DOC.TEXT
RELOC.DOC.TEXT

FLIPCODE.CODE
FLIPDIR.CODE   See FLIP.DOC.TEXT

FLIP.DOC.TEXT

A.   <u>REFERENCES</u>   A.

[1]   UCSD PASCAL
      User's Manual
      SofTech Microsystems/RC Computer, 1980.

[2]   Beginner's Manual for the UCSD PASCAL System
      Kenneth L. Bowles
      Byte Books (McGraw-Hill), 1979.

[3]   PASCAL User Manual and Report
      Kathleen Jensen and Niklaus Wirth
      Springer-Verlag, New York, 1975.

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