

USER MANUAL

UCSD Pascal

THE CHOICE OF
PROFESSIONALS

PECAN

TABLE OF CONTENTS

Identifiers	26
Definition	27
Uniqueness	27
Predeclared Identifiers	28
Comments	28
Token Boundaries	30
Indentation and Legibility	30
CHAPTER 5: DATA TYPES AND OPERATIONS	33
Introduction	33
Constants, Variables, and Expressions	33
Assignment	35
Evaluating Expressions	35
The Use of Data Types	36
Simple Data Types	37
Integer	37
Real	40
Long Integer	44
Boolean	46
Characters	47
Special-Purpose Types	48
Compatibility	49
Conversion Routines	49
Scalars and Subranges	51
Scalars	51
Subranges	52
Simple Types Declared as Scalars or Subranges	53
Scalar and Subrange Routines	53
Structured Types	54
Arrays	55
Strings	60
Sets	63
Records	66
Dynamic Types	70
Files	70
Pointers	74
Space Allocation for Data Types	78
Packed Data	78
Simple Types	79
Scalars and Subranges	81
Structured Types	81

The Sizeof Intrinsic	82
CHAPTER 6: OVERALL PROGRAM SYNTAX	85
The Outline of a Program	85
Program Heading	86
Label Declarations	86
Constant Declarations	87
Type Declarations	87
Variable Declarations	88
Routine Declarations	88
The Main Body	89
Structure and Scope	89
Limitations	91
Forward Declarations	91
Size Limits	92
Segment Routines	92
Units and Separate Compilations	92
The Uses Declaration	93
The Format of a Unit	93
Selective Uses	95
Initialization and Termination Code	98
The Implementation of Units	99
CHAPTER 7: PROCEDURES AND FUNCTIONS	101
Procedure and Function Declarations	101
Value Parameters	103
Variable Parameters	103
Conformant Arrays	104
Interface Conformant Arrays	107
Procedures and Functions as Parameters	108
Calling Procedures and Functions	110
Exit Code	111
The PMACHINE Intrinsic	112
External Routines	115
CHAPTER 8: CONTROL STATEMENTS	117
Compound Statements	117
Conditional Statements	118
The If Statement	118
The Case Statement	120

TABLE OF CONTENTS

Repetition	121
The While Statement	122
The Repeat Statement	123
The For Statement	124
Branching	125
The Goto Statement	125
Exit	126
Halt	126
CHAPTER 9: INPUT AND OUTPUT	129
Textfile I/O	129
Read and Readln	129
Write and Writeln	131
Page	132
Handling External Files	133
Opening and Closing Files	133
Untyped Files	135
Power System I/O	137
Keyboard	137
Device I/O	138
The Time Procedure	140
Iosresult	140
Screen I/O	141
CHAPTER 10: MEMORY MANAGEMENT	143
Runtime Environment	143
Segmentation	144
Code Segments	144
Controlling Segment Residence	145
Free Space	146
Heap Management	147
CHAPTER 11: CONCURRENCY	149
Concurrent Execution	149
Processes	149
Initiating a Process	151
Process Synchronization	152
Semaphores	152
Signal and Wait	153
Interrupts	153

Pecan's UCSD Pascal development system

The Pascal chosen by knowledgeable programmers.

One of the most requested languages, UCSD Pascal offers the ability to write structured programs, making them easy to write, maintain and understand. Pecan Software Systems gives you all these sophisticated features:

- o Native code generation
- o Separate compilation of units
- o Segmentation feature that allows dynamic code swapping; better than overlays.
- o Conditional compilation of parts of your program
- o Include file capabilities
- o Supports string data types and string manipulation routines
- o Extended precision and BCD arithmetic
- o Event-driven multi-tasking and process synchronization
- o Dynamic allocation of memory
- o Standard Pascal I/O and random access files
- o Conformant arrays
- o Procedural parameters
- o IEEE 64-bit floating point format with full 8087 support
- o Very compatible with Apple Pascal
- o Generates very compact code files
- o Supports up to 16MB of addressable memory for code space

Develop UCSD Pascal programs quickly and easily on most microcomputers, minicomputers (including IBM, Apple, Macintosh, Atari ST, Amiga, DEC, Zenith Kaypro, Stride and Tandy) and operating systems.

Works with Pecan's powerful, integrated development environment.

The logo for Pecan Software Systems, featuring the word "PECAN" in a bold, italicized, sans-serif font. The letters are black with a white outline, and the entire word is set against a white background.