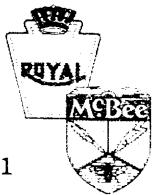


# LGP-30

Program D1-139.1



## MATRIX INVERSION CONTROL

### REVISION NOTICE

This description replaces previous descriptions of "Matrix Inversion Control" program D1-139.1. Program references have been changed to current designations.

### FUNCTION

"Matrix Inversion Control" enables the interpretive routine to input, invert, and print an  $n \times n$  matrix, using program D1-139.0.

### INPUT

The rank of the matrix in decimal,  $nn'$ , and the  $N^2$  elements of the matrix are stored in consecutive memory locations in standard double precision floating point format.

### OUTPUT

The  $n^2$  elements of the inverted matrix are stored in consecutive memory locations in standard double precision floating point format.

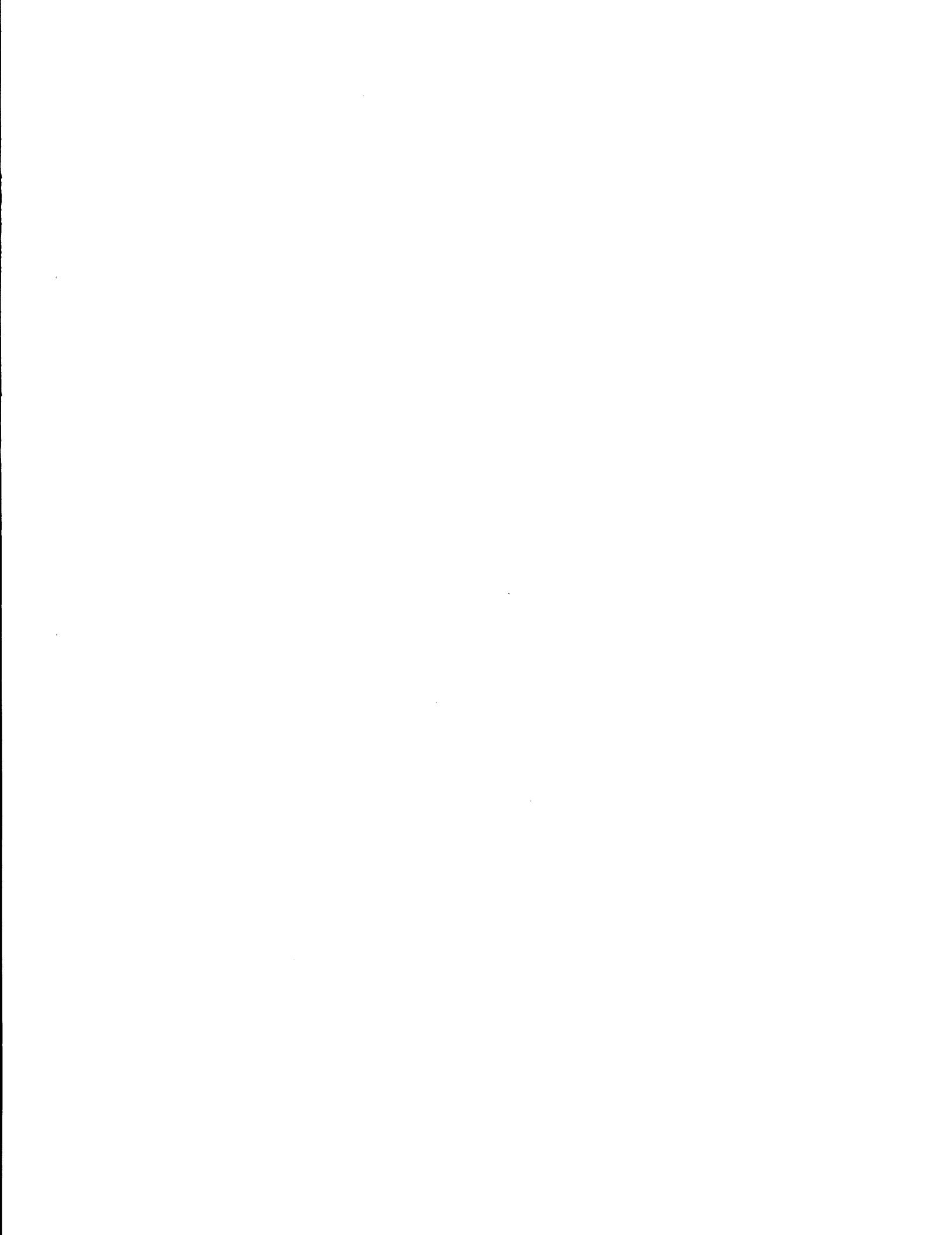
### STORAGE

54 sectors are required in memory for instructions and constants.  $3(n^2 + n)$  locations immediately following this routine are used for data storage.

### NOTES

A  $30 \times 30$  matrix can be handled if the following programs are stored as shown

Program Input 4, program J1-10.4	Lo 0000
Floating Point Interpretive System, program H1-24.3	Lo 0300
Matrix Inversion 4, program D1-139.0	Lo 1722
Matrix Inversion Control	Lo 1936



D1-0153

D1-139.1

Royal McBee Corporation  
ELECTRONIC COMPUTER DEPARTMENT

DOUBLE PRECISION FLOATING POINT MATRIX INVERSION CONTROL

FUNCTION

To input, invert, and print an  $n \times n$  matrix, using DPFP interpretive routine ( ) and DPFP inversion routine ( ).

INPUT

$nn'$ , the rank of the matrix in decimal, and the  $n^2$  elements of the matrix in standard DPFP format.

OUTPUT

The  $n^2$  elements of the inverted matrix in standard DPFP.

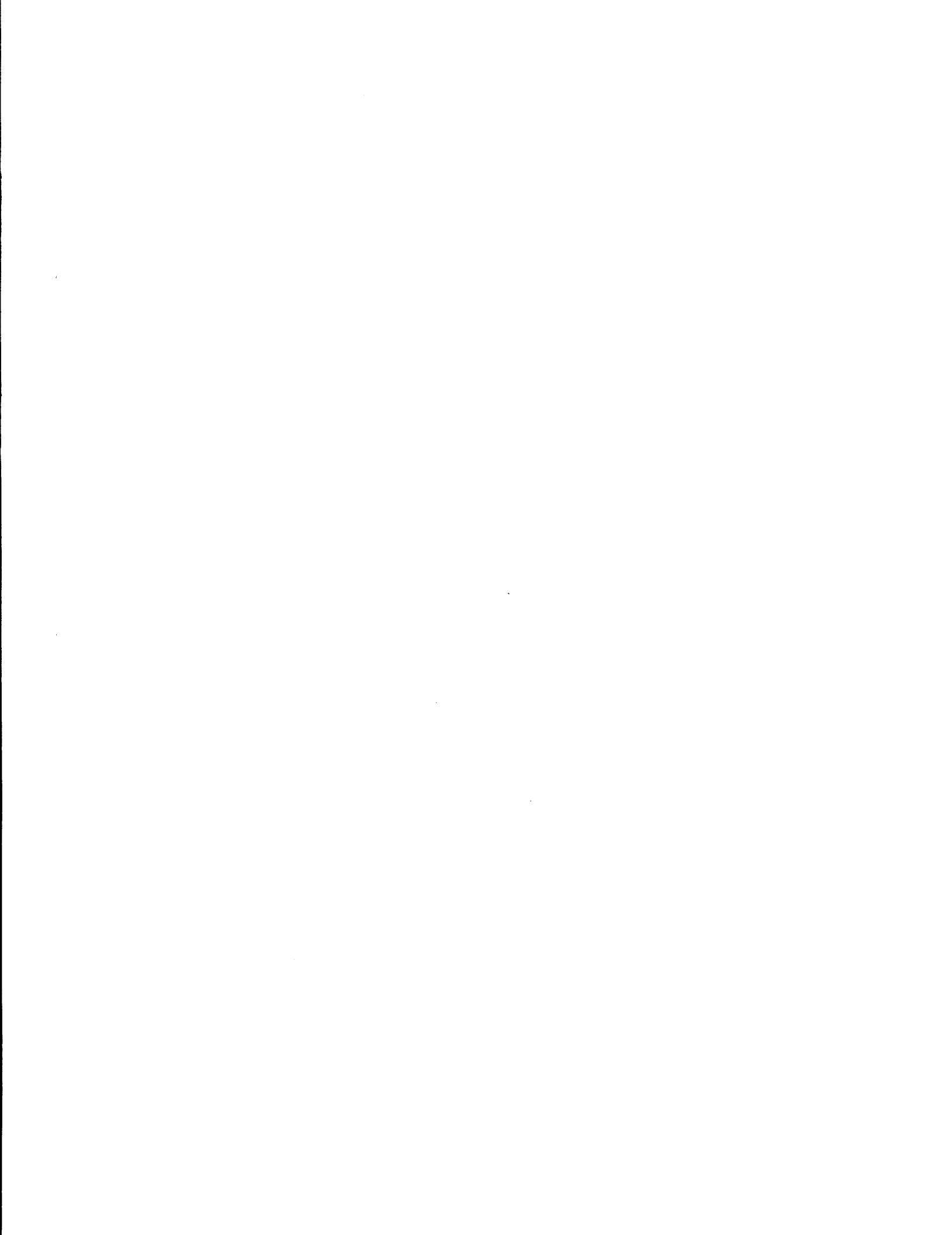
STORAGE

54 locations for instructions and constants.  $3(n^2 + n)$  locations immediately following this routine are used for data storage.

NOTES

A  $30 \times 30$  matrix can be handled if the following programs are stored as shown:

10.4 P.I.R.	Lo = 0000
DPFP	Lo = 0300
DPFP MATRIX INVERSION	Lo = 1722
MATRIX INVERSION CONTROL	Lo = 1936





## LGP-30 CODING SHEET

PREPARED FOR

PAGE OF

JOB NO.

PROGRAM NO.

PROGRAM PREPARED BY

PROGRAM CHECKED BY

2 2

DATE  
1-26-60  
TRACK

PROBLEM

D-4772 Dimension Control

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
1 1 1 + 1 1 1	1						
1 1 1 + 1 1 1	1						
1 1 1 + 1 1 1	1	(0 1 3 1 2	B 0 0 2 9	1			
1 1 1 + 1 1 1	1	1 3 1 3	A 0 0 3 7	1	3 0 2 9		
1 1 1 + 1 1 1	1	1 3 1 4	Y 0 0 2 9	1			
1 1 1 + 1 1 1	1	1 3 1 5	R 0 0 5 2	1	X	ctr	
1 1 1 + 1 1 1	1	1 3 1 6	S 0 0 2 3	1	1 0 2 9		
1 1 1 + 1 1 1	1	1 3 1 7	X 2 0 0 0 3	1			
1 1 1 + 1 1 1	1	1 3 1 8	T 0 0 4 1	1			
1 1 1 + 1 1 1	1	1 3 1 9	C 0 0 5 2	1	X	ctr	
1 1 1 + 1 1 1	1	1 4 1 0	U 0 0 3 7	1			
1 1 1 + 1 1 1	1	1 4 1 1	X P 1 6 2 7	1			
1 1 1 + 1 1 1	1	1 4 1 2	R 0 0 5 3	1	1 1 2		
1 1 1 + 1 1 1	1	1 4 1 3	S 0 0 2 3	1	X	1 0 2 9	
1 1 1 + 1 1 1	1	1 4 1 4	X 2 0 2 4 8	1	X	ctr	
1 1 1 + 1 1 1	1	1 4 1 5	T 0 0 4 9	1			
1 1 1 + 1 1 1	1	1 4 1 6	C 0 0 5 3	1	X	ctr	
1 1 1 + 1 1 1	1	1 4 1 7	R 0 0 4 9	1	X	ctr	
1 1 1 + 1 1 1	1	1 4 1 8	U 0 0 3 9	1			
1 1 1 + 1 1 1	1	1 4 1 9	C	1	X	ctr	
1 1 1 + 1 1 1	1	1 5 0	U 0 0 1 3	1			
1 0 0 0 0 0 0 0 3	1	1 5 1	K 0 0 0 0 0 0 0 0	1	X		
1 1 1 + 1 1 1	1	1 5 2		1	X	ctr	
1 1 1 + 1 1 1	1	1 5 3		1	X	ctr	
1 1 1 + 1 1 1	1	1 5 4		1			
1 1 1 + 1 1 1	1	1 5 5		1	X		
1 1 1 + 1 1 1	1	1 5 6		1			
1 1 1 + 1 1 1	1	1 5 7		1			
1 1 1 + 1 1 1	1	1 5 8		1			
1 1 1 + 1 1 1	1	1 5 9		1	X		
1 1 1 + 1 1 1	1	1 6 0		1			
1 1 1 + 1 1 1	1	1 6 1		1			
1 1 1 + 1 1 1	1	1 6 2		1	X		
	6 3				1		