

HP-41C Special Version of M1-M5 for MIO/RRM Routines  
PPC Calculator Journal Volume 8 Number 3 P9 May 1981

```
01 LBL "M2" ;Matrix, Multiply Row by Constant - XROM 20,31
02 XEQ 00
03 X<>Y
04 LBL 01
05 ST* IND Y
06 ISG Y
07 GTO 01
08 RTN
09 LBL "M3" ;Matrix, Add Multiple of Row to Another - XROM 20,32
10 STO M
11 RDN
12 XEQ 00
13 X<>Y
14 XEQ 00
15 RCL M
16 SIGN
17 LBL 02
18 RDN
19 RCL IND Y
20 LASTX
21 *
22 ST+ IND Y
23 ISG Y
24 "" ;F0=null string (NOP)
25 ISG Z
26 GTO 02
27 RTN
28 LBL "M1" ;Matrix, Interchange Two Rows - XROM 20,33
29 XEQ 00
30 X<>Y
31 XEQ 00
32 LBL "BE" ;Block Exchange - XROM 20,34
33 RCL IND Y
34 X<> IND Y
35 STO IND Z
36 RDN
37 ISG X
38 "" ;F0=null string (NOP)
39 ISG Y
40 GTO "BE" ;Block Exchange (Line 32)
41 RTN
42 LBL 00
43 RCL 08
44 *
45 RCL 07
46 +
47 RCL X
48 RCL 08
49 ST- Z
50 SIGN
51 -
52 E3
53 /
54 +
55 RTN
56 LBL "M4" ;Matrix, Register Address to (i, j) - XROM 20,35
57 RCL 07
58 -
59 RCL 08
60 X<>Y ;Inline QR - Quotient to Remainder Routine - XROM 10,54
61 STO O
62 X<>Y
63 MOD
64 ST- O
65 LASTX
66 ST/ O
67 CLX
```

```

68 X<> O
69 X<>Y      ;End of inline QR
70 ISG Y
71 ""        ;F0=null string (NOP)
72 ISG X
73 ""        ;F0=null string (NOP)
74 RTN
75 LBL "M5"  ;Matrix, (i,j) to Register Address - XROM 20,36
76 X<> 08
77 ST- 08
78 *
79 ST+ 08
80 X<> L
81 X<> 08
82 1
83 -
84 RCL 07
85 +
86 RTN
87 LBL 03
88 RCL 07
89 RCL 08
90 RCL Z
91 *
92 +
93 STO Y
94 RCL 09
95 R^
96 -
97 RCL 08
98 RTN
99 LBL "BX"  ;Block Extrema - XROM 20,41
100 STO M
101 STO N
102 STO O
103 RCL IND X
104 FS? 10
105 ABS
106 ENTER
107 ENTER
108 RDN
109 LBL 08
110 CLX
111 RCL IND Z
112 FS? 10
113 ABS
114 X>Y?
115 GTO 10
116 R^
117 X>Y?
118 GTO 11
119 RDN
120 LBL 09
121 ISG Z
122 GTO 08
123 X<>Y
124 R^
125 RTN
126 LBL 10
127 X<>Y
128 CLX
129 RCL Z
130 STO M
131 GTO 09
132 LBL 11
133 CLX
134 RCL T
135 STO N
136 X<>Y
137 RDN

```

138 GTO 09  
139 END

00EDC000F3004D32E00000710294F29672B20085C000F3004D  
33917575E0000071E0000090757A037590F2764292F29672F0  
9671B30085C000F3004D31E0000071E00000C000F300424590  
F2CEF291F1759673F096721DF2424585012842274090732893  
717A411B13434085C000F3004D34274128719177714B937776  
957777CE77719672F09673F085C000F3004D35CE0893084292  
08CE74CE0811412740850427289071424091722974412885C0  
00F300425891759176917790F3AC0A61838375097790F1AC0A  
6145BB007445BC00750A9671B9007174850B717790719175BA  
000C77907091767175BA00C0000DA1

237 BYTES

## HP-41C Matrix Routines for MIO/RRM PPC Journal V8 N3 P9 May 1981

Program Registers Needed: 34

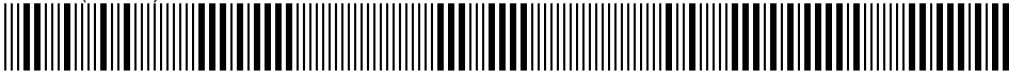
Row 1 (1 - 5)



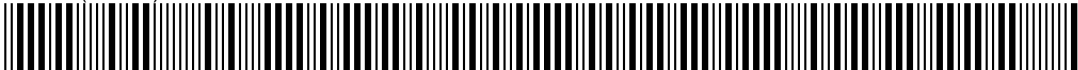
Row 2 (6 - 10)



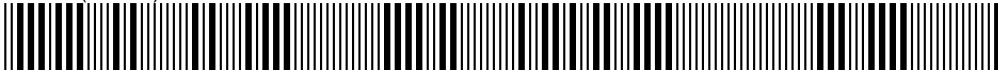
Row 3 (11 - 18)



Row 4 (19 - 26)



Row 5 (27 - 31)



Row 6 (31 - 35)



Row 7 (36 - 43)



Row 8 (44 - 53)



Row 9 (54 - 61)



Row 10 (61 - 70)



Row 11 (70 - 76)



# HP-41C Matrix Routines for MIO/RRM PPC Journal V8 N3 P9 May 1981

Row 12 (76 - 84)



Row 13 (85 - 95)



Row 14 (96 - 101)



Row 15 (102 - 111)



Row 16 (111 - 120)



Row 17 (121 - 130)



Row 18 (130 - 138)



Row 19 ( 139 )

