

HP-41C Checkers Game V3.0 by Valentin Albillo
PPC Calculator Journal V8 N1 P31 Jan-Feb 1981
Includes suggested changes PPC V8 N2 P2-3 NOP

```
01 LBL "CHKR" ;Initialize Checkers 3.0 Game
02 CF 12 ;Cut title: 756 Bytes/108 Regs
03 FIX 0 ;Data requirement 84 registers
04 CF 29 ;All fits into 41C + 2 modules
05 CLRG ;Edwin J. Borreback NOP V8N2P2
06 1
07 STO 20
08 STO 36
09 STO 52
10 STO 68
11 STO 29
12 STO 45
13 STO 61
14 STO 77
15 STO 22
16 STO 38
17 STO 54
18 STO 70
19 CHS
20 STO 33
21 STO 49
22 STO 65
23 STO 81
24 STO 26
25 STO 42
26 STO 58
27 STO 74
28 STO 35
29 STO 51
30 STO 67
31 STO 83
32 -99
33 STO 09
34 FS? 55
35 XEQ "P" ;Checkers 3.0 Printing Program (Line 1)
36 CF 23
37 "HP 1ST?"
38 AON
39 PROMPT
40 AOFF
41 FS?C 23
42 GTO 46
43 LBL 20
44 "I MOVE"
45 AVIEW
46 7 E-3
47 STO 00
48 LBL 09
49 7 E-3
50 STO 01
51 LBL 10
52 -1
53 RCL 00
54 RCL 01
55 XEQ 13
56 STO 15
57 X>Y?
58 GTO 00
59 X=Y?
60 XEQ 01
61 RCL 15
62 -2
63 X=Y?
64 XEQ 02
65 LBL 00
66 ISG 01
```

67 GTO 10
68 ISG 00
69 GTO 09
70 GTO 38
71 LBL 01
72 STO 02
73 XEQ 00
74 1
75 STO 02
76 RCL 03
77 XEQ 00
78 RTN
79 LBL 02
80 -1
81 STO 02
82 XEQ 00
83 1
84 XEQ 00
85 1
86 STO 02
87 CHS
88 XEQ 00
89 1
90 XEQ 00
91 RTN
92 LBL 00
93 STO 03
94 RCL 00
95 INT
96 RCL 02
97 +
98 STO 04
99 RCL 01
100 INT
101 RCL 03
102 +
103 STO 05
104 X<0?
105 RTN
106 7
107 X<Y?
108 RTN
109 RCL 04
110 X>Y?
111 RTN
112 X<0?
113 RTN
114 RCL 05
115 XEQ 13
116 X=0?
117 GTO 27
118 X<0?
119 RTN
120 RCL 02
121 ST+ 04
122 RCL 03
123 ST+ 05
124 RCL 05
125 X<0?
126 RTN
127 7
128 X<Y?
129 RTN
130 RCL 04
131 X>Y?
132 RTN
133 X<0?
134 RTN
135 RCL 05
136 XEQ 13

137 X=0?
138 XEQ 28
139 RTN
140 LBL 27
141 XEQ 28
142 RTN
143 LBL 28
144 RCL 05
145 X#0?
146 GTO 00
147 RCL 00
148 RCL 01
149 XEQ 13
150 -1
151 X#Y?
152 GTO 00
153 2
154 ST+ 06
155 LBL 00
156 RCL 01
157 INT
158 RCL 05
159 -
160 ABS
161 2
162 X#Y?
163 GTO 00
164 5
165 ST+ 06
166 LBL 00
167 7
168 RCL 01
169 INT
170 X#Y?
171 GTO 00
172 2
173 ST- 06
174 LBL 00
175 RCL 01
176 INT
177 X=0?
178 ISG 06
179 X=0?
180 GTO 03
181 7
182 RCL 04
183 X=Y?
184 ISG 06
185 LBL 03
186 -1
187 XEQ 04
188 1
189 XEQ 04
190 CLX
191 X<> 06
192 RCL 09
193 X=Y?
194 RTN
195 X>Y?
196 RTN
197 X<>Y
198 STO 09
199 RCL 00
200 INT
201 STO 10
202 RCL 01
203 INT
204 STO 11
205 RCL 04
206 STO 12

207 RCL 05
208 STO 13
209 RTN
210 LBL 04
211 STO 08
212 7
213 RCL 04
214 RCL 08
215 +
216 X<0?
217 RTN
218 X>Y?
219 RTN
220 RCL 05
221 1
222 -
223 X<0?
224 RTN
225 XEQ 13
226 X<0?
227 GTO 05
228 RCL 04
229 RCL 08
230 -
231 STO 18
232 X<0?
233 RTN
234 7
235 X<Y?
236 RTN
237 RCL 05
238 1
239 +
240 STO 07
241 X>Y?
242 RTN
243 RCL IND 19
244 X<=0?
245 RTN
246 RCL 18
247 RCL 07
248 XEQ 13
249 X=0?
250 GTO 00
251 RCL 00
252 INT
253 RCL 18
254 X#Y?
255 RTN
256 RCL 01
257 INT
258 RCL 07
259 X#Y?
260 RTN
261 LBL 00
262 2
263 ST- 06
264 RTN
265 LBL 05
266 1
267 ST+ 06
268 RTN
269 LBL 38
270 RCL 09
271 -99
272 "YOU WIN"
273 X=Y?
274 PROMPT
275 "FROM "
276 ARCL 10

277 ARCL 11
278 LBL 39
279 STO 09
280 >" TO "
281 ARCL 12
282 ARCL 13
283 AVIEW
284 BEEP
285 PSE
286 RCL 13
287 X=0?
288 GTO 07
289 RCL 10
290 RCL 11
291 XEQ 13
292 LBL 40
293 STO 16
294 RCL 12
295 RCL 13
296 XEQ 12
297 0
298 RCL 10
299 RCL 11
300 XEQ 12
301 RCL 10
302 RCL 12
303 -
304 ABS
305 2
306 X#Y?
307 GTO 45
308 0
309 RCL 10
310 RCL 12
311 STO 00
312 +
313 2
314 /
315 RCL 11
316 RCL 13
317 STO 01
318 +
319 2
320 /
321 XEQ 12
322 RCL 16
323 -1
324 X#Y?
325 GTO 00
326 ST+ X
327 STO 02
328 XEQ 06
329 2
330 STO 02
331 RCL 03
332 XEQ 06
333 LBL 00
334 RCL 16
335 -2
336 X#Y?
337 GTO 00
338 STO 02
339 XEQ 06
340 2
341 XEQ 06
342 2
343 STO 02
344 CHS
345 XEQ 06
346 2

347 XEQ 06
348 LBL 00
349 RCL 09
350 -99
351 X=Y?
352 GTO 45
353 CLA
354 GTO 39
355 LBL 07
356 -2
357 GTO 40
358 LBL 06
359 STO 03
360 RCL 00
361 INT
362 RCL 02
363 +
364 STO 04
365 RCL 01
366 INT
367 RCL 03
368 +
369 STO 05
370 X<0?
371 RTN
372 7
373 X<Y?
374 RTN
375 RCL 04
376 X>Y?
377 RTN
378 X<0?
379 RTN
380 RCL 05
381 XEQ 13
382 X#0?
383 RTN
384 RCL 02
385 2
386 /
387 RCL 00
388 +
389 RCL 03
390 2
391 /
392 RCL 01
393 +
394 XEQ 13
395 X>0?
396 GTO 28
397 RTN
398 LBL 45
399 FS? 55
400 XEQ "P"
401 LBL 46
402 "FROM?"
403 PROMPT
404 10
405 /
406 INT
407 STO 14
408 LASTX
409 FRC
410 10
411 *
412 STO 15
413 "TO?"
414 PROMPT
415 10
416 /

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417 INT
418 STO 00
419 STO 02
420 LASTX
421 FRC
422 10
423 *
424 STO 03
425 STO 01
426 RCL 14
427 RCL 15
428 LBL 08
429 XEQ 13
430 RCL 02
431 RCL 03
432 XEQ 12
433 0
434 STO IND 19
435 RCL 03      ;Begin NOP V8N2P3 changes
436 7          ;Courtesy of Fred Wheeler
437 X#Y?       ;These changes make black
438 GTO 00     ;a king on double capture
439 2          ;as was correct for white
440 RCL 02
441 RCL 03
442 XEQ 12
443 LBL 00
444 RCL 14
445 RCL 02
446 -
447 ABS
448 2
449 X#Y?
450 GTO 20
451 0
452 RCL 14
453 RCL 02
454 +
455 2
456 /
457 RCL 15
458 RCL 03
459 +
460 2
461 /
462 XEQ 12
463 "+TO?"
464 PROMPT
465 X<0?
466 GTO 20
467 10
468 /
469 INT
470 LASTX
471 FRC
472 10
473 *
474 X<> 03
475 STO 15
476 X<>Y
477 X<> 02
478 STO 14
479 X<>Y
480 GTO 08      ;End NOP V8N2P3 changes
481 LBL 13
482 X<>Y
483 8
484 *
485 +
486 20

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487 +
488 STO 19
489 RDN
490 RCL IND T
491 RTN
492 LBL 12
493 X<>Y
494 8
495 *
496 +
497 20
498 +
499 RDN
500 STO IND T
501 END

02F4C000F50043484B52A90C9C00A91D8A1191149124913491
44911D912D913D914D911169126913691465491219131914191
51911A912A913A914A91239133914391531C191939AC371EF1
50A917F74850203153543F8C8E8BAA17D0002ECF14F649204D
4F56457E171B1C13300A171B1C13310B1C112021E0000D3F45
B10078E000012F1C1278E00002019601BB009600BA00D00026
0232E00000113223E0000085031C1132E0000011E000001132
54E0000011E000008501332068224034216823403566851744
85244585668525E0000D67D0001B6685229204239205256685
174485244585668525E0000D67E0001C85CF1BE0001C85CF1C
2563B1002021E0000D1C1179B1001292060121682541611279
B1001592060117216879B10012930601216867960667B40017
24789606041C11E0000411E0000477CE062978854585713920
683A21683B243C253D85053817242840668545852511416685
E0000D66B6002428419112668517448525114037458590937B
85901227E0000D67B100206890127985216827798501129306
850611920685CF26291C1919F7594F552057494E788EF54652
4F4D209B0A9B0BCF2739F57F20544F209B0C9B0D7E86892D67
B8002A2BE0000DCF2891102C2DE0000C102A2BE0000C2A2C41
611279D0002D102A2C304012432B2D31401243E0000C90101C
1179B100927332E00006123223E000060190101C1279B10032
E0000612E00006123254E0000612E0000601291C191978D000
2D87D00027081C12D000280733206822403421682340356685
174485244585668525E0000D638522124320402312432140E0
000D64D0001C85CF2DAC371EF150CF2EF546524F4D3F8E1110
43683E76691110423FF3544F3F8E1110436830327669111042
33312E2F09E0000D2223E0000C109193231779B100122223E0
000C012E2241611279D00014102E224012432F23401243E000
0CF42B544F3F8E66D00014111043687669111042CE033F71CE
023E71B9000E7118424012104091137590F0850D7118424012
10407591F0C0000D88

756 BYTES

HP-41C Checkers 3.0 Printing by Valentin Albillo
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```
01 LBL "P" ;Checkers 3.0 Printing Program
02 ADV
03 31
04 STO 03
05 35
06 STO 04
07 45
08 STO 02
09 79
10 STO 01
11 16
12 STO 00
13 48.055
14 CF 12
15 25
16 GTO 00
17 LBL 01
18 11
19 LBL 00
20 XROM 29,23 ;SKPCOL
21 X<>Y
22 XROM 29,02 ;ACCHR
23 ISG X
24 GTO 01
25 XROM 29,10 ;PRBUF
26 27.08308
27 STO 05
28 8
29 LBL 02
30 1
31 -
32 STO 14
33 XROM 29,05 ;ACX
34 SF 12
35 2
36 XROM 29,23 ;SKPCOL
37 LBL 10
38 2
39 XROM 29,23 ;SKPCOL
40 RCL IND 05
41 +
42 RCL IND X
43 XROM 29,02 ;ACCHR
44 ISG 05
45 GTO 10
46 XROM 29,10 ;PRBUF
47 65
48 ST- 05
49 CF 12
50 RCL 14
51 X#0?
52 GTO 02
53 ADV
54 ADV
55 ADV
56 END
```

0066C000F200508F131113313153414153217193111116301418
1A101515A90C1215B10002111101A75771A7429673B200A74A
12171A101813101835180311413EA745A80C12A7570B12A757
90854090F3A7429605BB00A74A16159305A90C2E63B3008F8F
8FC0000D82

102 BYTES

HP-41C Checkers V3.0 by Valentin Albillo PPC V8 N1 P31 Jan-Feb 1981

Program Registers Needed: 108

Row 1 (1 - 4)



Row 2 (4 - 11)



Row 3 (12 - 18)



Row 4 (18 - 25)



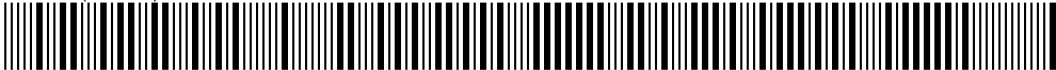
Row 5 (25 - 31)



Row 6 (32 - 37)



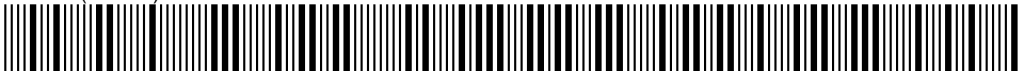
Row 7 (37 - 42)



Row 8 (42 - 46)



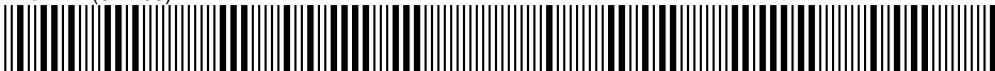
Row 9 (46 - 53)



Row 10 (54 - 61)



Row 11 (62 - 68)



Row 12 (69 - 76)



Row 13 (77 - 84)



Row 14 (84 - 91)



Row 15 (92 - 104)



Row 16 (105 - 115)



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Row 17 (116 - 124)



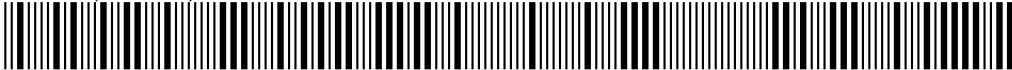
Row 18 (125 - 136)



Row 19 (136 - 143)



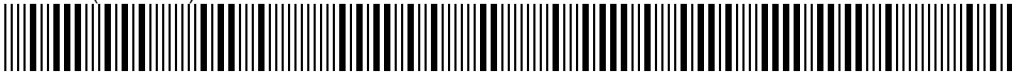
Row 20 (143 - 151)



Row 21 (152 - 162)



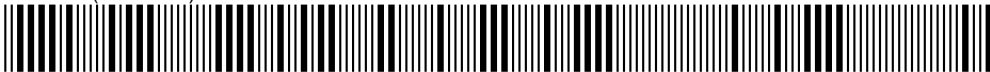
Row 22 (163 - 172)



Row 23 (173 - 182)



Row 24 (183 - 189)



Row 25 (190 - 201)



Row 26 (202 - 214)



Row 27 (215 - 225)



Row 28 (226 - 236)



Row 29 (237 - 247)



Row 30 (248 - 256)



Row 31 (257 - 267)



Row 32 (268 - 272)



Row 33 (272 - 277)



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Row 34 (277 - 282)



Row 35 (282 - 291)



Row 36 (292 - 300)



Row 37 (300 - 309)



Row 38 (310 - 321)



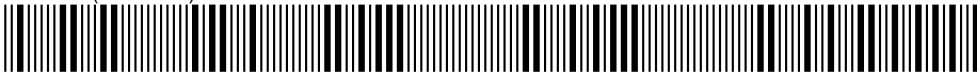
Row 39 (321 - 328)



Row 40 (328 - 336)



Row 41 (337 - 344)



Row 42 (345 - 351)



Row 43 (352 - 357)



Row 44 (358 - 370)



Row 45 (371 - 381)



Row 46 (382 - 394)



Row 47 (394 - 400)



Row 48 (400 - 405)



Row 49 (406 - 414)



Row 50 (415 - 425)



HP-41C Checkers V3.0 by Valentin Albillo PPC V8 N1 P31 Jan-Feb 1981

Row 51 (426 - 434)



Row 52 (434 - 443)



Row 53 (444 - 454)



Row 54 (455 - 463)



Row 55 (463 - 471)



Row 56 (472 - 480)



Row 57 (481 - 490)



Row 58 (491 - 501)



Row 59 (501)



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Program Registers Needed: 15

Row 1 (1 - 7)



Row 2 (7 - 13)



Row 3 (13 - 20)



Row 4 (21 - 26)



Row 5 (26 - 34)



Row 6 (34 - 42)



Row 7 (43 - 49)



Row 8 (49 - 56)

