

## SWTPC 6800 BLACKJACK PROGRAM BLKJAK-1

This program allows the operator to play the game of BLACKJACK at the serial control terminal. The program uses memory from 0100<sub>16</sub> to 0309<sub>16</sub> and from 1000<sub>16</sub> to 15F7<sub>16</sub> and must be run in a 6K system.

To use the BLACKJACK program load it in step by step using the MIKBUG<sup>R</sup> memory change function or through cassette or paper tape. The program counter addresses A048<sub>16</sub> and A049<sub>16</sub> must then be set to 10 and 00 respectively. The BLACKJACK program can now be initiated as described in the "Go to User's Program" section of Engineering Note 100. If the program was loaded correctly the computer should respond with "THIS IS SWTPC 6800 BLACKJACK.....TRY YOUR LUCK...!" The computer will then give some instructions. When you want the shuffle to end type in any character and the computer will respond with a scoreboard and the dealt cards. Typing an "H" will deal you another card while an "S" will not. After the game is over and the winner decided the program will lock up until any character is entered. After the character is loaded a new scoreboard will print and a new game will start. If in the middle of a game the SHUFFLE function appears wait several seconds and enter any character.

The original source listing of this program is contained in the Motorola M6800 User Library, however, the program was slightly modified to enable it to work with the SWTPC 6800 Mikbug<sup>R</sup> firmware and CT-1024 terminal system. These modifications did not change the internal workings of the program or its ability to run on TTY's or other type terminals.

The program sends out control character commands to home-up and erase the screen on those CT-1024 terminal systems having the CT-CA computer controlled cursor option. You should program the jumpers on your CT-CA option so a control P (10<sub>16</sub>) generates a Home-Up and Control V (16<sub>16</sub>) generates an Erase to End of Frame (EOF).

If after loading your BLACKJACK program it fails to work properly go back and re-check each memory location from 1000<sub>16</sub> to 15F7<sub>16</sub> to be sure that the program was loaded correctly. If it was and the program still does not work properly run the two memory diagnostics described in the Software Section of the System Documentation Notebook on the memory being used to verify that the memory being used is operational. Running the diagnostics of course will cause whatever was stored in the memory being tested to be erased, so the BLACKJACK program should be re-entered.

Mikbug<sup>R</sup> is a registered trademark of Motorola Inc.

1000 8E	1039 7F	1072 86	10AF B4
1001 0F	103A 03	1073 0D	10AC 8D
1002 FO	103E 05	1074 BD	10AD 01
1003 CE	103C 7F	1075 F1	10AE 39
1004 13	103D 03	1076 D1	10AF A6
1005 EA	103E 06	1077 7C	10B0 01
1006 BD	103F CE	1078 03	10E1 E6
1007 15	1040 15	1079 04	10B2 00
1008 69	1041 84	107A E6	10B3 84
1009 CE	1042 BD	107E 03	10B4 0F
100A 30	1043 15	107C 04	10B5 C4
100B 30	1044 69	107D 81	10B6 0F
100C FF	1045 BD	107E 02	10B7 58
100D 15	1046 12	107F 26	10B8 58
100E B4	1047 26	1080 C4	10B9 58
100F FF	1048 BD	1081 E6	10BA 58
1010 15	1049 11	1082 03	10BE 1B
1011 C7	104A 78	1083 06	10EC 8E
1012 7F	104B BD	1084 81	10ED 01
1013 03	104C 12	1085 15	10EE 19
1014 09	104D 42	1086 26	10BF 16
1015 7F	104E BD	1087 54	10C0 C4
1016 03	104F 11	1088 CE	10C1 0F
1017 0A	1050 D2	1089 13	10C2 CB
1018 BD	1051 CE	108A 05	10C3 30
1019 13	1052 12	108B BD	10C4 E7
101A 85	1053 5E	108C 15	10C5 01
101B BD	1054 BD	108D 69	10C6 44
101C 15	1055 15	108E 7C	10C7 44
101D E0	1056 69	108F 03	10C8 44
101E 01	1057 BD	1090 0A	10C9 44
101F 01	1058 12	1091 7E	10CA 8B
1020 01	1059 26	1092 15	10CB 30
1021 01	105A BD	1093 F2	10CC A7
1022 01	105B 11	1094 7D	10CD 00
1023 01	105C 78	1095 03	10CE 39
1024 CE	105D BD	1096 09	10CF CE
1025 01	105E 12	1097 27	10D0 00
1026 05	105F 50	1098 08	10D1 00
1027 FF	1060 F6	1099 7F	10D2 4F
1028 03	1061 03	109A 03	10D3 08
1029 02	1062 04	109B 09	10D4 26
102A 7F	1063 27	109C CE	10D5 FD
102B 03	1064 05	109D 15	10D6 4C
102C 04	1065 E7	109E C7	10D7 81
102D BD	1066 01	109F 8D	10D8 01
102E 10	1067 04	10A0 0E	10D9 26
102F CF	1068 20	10A1 7D	10DA F8
1030 BD	1069 03	10A2 03	10DB 39
1031 10	106A BD	10A3 0A	10DC B6
1032 94	106B 11	10A4 27	10DD 03
1033 7F	106C D2	10A5 08	10DE 05
1034 03	106D 86	10A6 7F	10DF 81
1035 07	106E 0A	10A7 03	10E0 15
1036 7F	106F BD	10A8 0A	10E1 26
1037 03	1070 E1	10A9 CE	10E2 19
1038 08	1071 D1	10AA 15	10E3 CE

10E4 13	111D 22	1156 E1	118F B1
10E5 5E	111E 02	1157 D1	1190 03
10E6 BD	111F 20	1158 86	1191 06
10E7 15	1120 DE	1159 0D	1192 22
10E8 69	1121 E6	115A BD	1193 0D
10E9 B6	1122 03	115B E1	1194 27
10EA 01	1123 07	115C D1	1195 31
10EB 04	1124 27	115D B6	1196 CE
10EC BD	1125 0D	115E 03	1197 12
10ED 11	1126 7A	115F 05	1198 E7
10EE D2	1127 03	1160 81	1199 BD
10EF CE	1128 07	1161 10	119A 15
10FO 13	1129 B6	1162 22	119B 69
10F1 2E	112A 03	1163 27	119C 7C
10F2 BD	112B 06	1164 CE	119D 03
10F3 15	112C 80	1165 12	119E 0A
10F4 69	112D 0A	1166 D2	119F 20
10F5 7C	112E B7	1167 BD	11A0 09
10F6 03	112F 03	1168 15	11A1 CE
10F7 09	1130 06	1169 69	11A2 12
10F8 01	1131 20	116A BD	11A3 F4
10F9 7E	1132 C9	116B 12	11A4 BD
10FA 15	1133 CE	116C 26	11A5 15
10FB F2	1134 13	116D BD	11A6 69
10FC CE	1135 5E	116E 11	11A7 7C
10FD 12	1136 BD	116F 78	11A8 03
10FE C4	1137 15	1170 ED	11A9 09
10FF BD	1138 69	1171 12	11AA 7E
1100 15	1139 B6	1172 50	11AB 15
1101 69	113A 01	1173 BD	11AC F2
1102 BD	113B 04	1174 11	11AD B6
1103 13	113C BD	1175 D2	11AE 03
1104 73	113D 11	1176 20	11AF 08
1105 81	113E D2	1177 E5	11B0 27
1106 48	113F CE	1178 16	11B1 0D
1107 27	1140 12	1179 C4	11B2 7A
1108 03	1141 C9	117A 0F	11B3 03
1109 7E	1142 BD	117B 5C	11B4 08
110A 11	1143 15	117C C1	11B5 B6
110B 47	1144 69	117D 01	11B6 03
110C BD	1145 20	117E 27	11B7 05
110D 12	1146 5A	117F 05	11B8 80
110E 26	1147 CE	1180 C1	11E9 0A
110F BD	1148 13	1181 0A	11BA E7
1110 11	1149 5E	1182 22	11BB 03
1111 78	114A BD	1183 04	11BC 05
1112 BD	114B 15	1184 39	11BD 20
1113 12	114C 69	1185 C6	11BE 9E
1114 42	114D B6	1186 0B	11BF CE
1115 ED	114E 01	1187 39	11C0 12
1116 11	114F 04	1188 C6	11C1 C9
1117 D2	1150 BD	1189 0A	11C2 BD
1118 B6	1151 11	118A 39	11C3 15
1119 03	1152 D2	118B 81	11C4 69
111A 06	1153 86	118C 15	11C5 20
111B 81	1154 0A	118D 22	11C6 CF
111C 15	1155 BD	118E 1E	11C7 CE

11C8 13	1201 12	123A 03	1273 46
11C9 56	1202 A4	123B 02	1274 4F
11CA ED	1203 5F	123C A6	1275 55
11CB 15	1204 FF	123D 00	1276 52
11CC 69	1205 03	123E 7C	1277 20
11CD 20	1206 00	123F 03	1278 46
11CE DE	1207 BB	1240 03	1279 49
11CF 7E	1208 03	1241 39	127A 56
11D0 15	1209 01	1242 C1	127B 45
11D1 F2	120A F9	1243 0E	127C 20
11D2 36	120B 03	1244 26	127D 20
11D3 84	120C 00	1245 03	127E 53
11D4 0F	120D B7	1246 7C	127F 49
11D5 16	120E 03	1247 03	1280 58
11D6 1B	120F 01	1248 07	1281 53
11D7 1B	1210 F7	1249 FB	1282 45
11D8 1B	1211 03	124A 03	1283 56
11D9 1B	1212 00	124B 06	1284 45
11DA 5F	1213 FE	124C F7	1285 4E
11DB CE	1214 03	124D 03	1286 45
11DC 12	1215 00	124E 06	1287 49
11DD 63	1216 C6	124F 39	1288 47
11DE FF	1217 08	1250 C1	1289 48
11DF 03	1218 BD	1251 0B	128A 54
11E0 00	1219 12	1252 26	128B 20
11E1 BB	121A 1C	1253 03	128C 4E
11E2 03	121B 39	1254 7C	128D 49
11E3 01	121C A6	1255 03	128E 4E
11E4 F9	121D 00	1256 08	128F 45
11E5 03	121E BD	1257 FB	1290 20
11E6 00	121F E1	1258 03	1291 20
11E7 B7	1220 D1	1259 05	1292 54
11E8 03	1221 08	125A F7	1293 45
11E9 01	1222 5A	125B 03	1294 4E
11EA F7	1223 26	125C 05	1295 20
11EB 03	1224 F7	125D 39	1296 4A
11EC 00	1225 39	125E 20	1297 41
11ED BD	1226 FE	125F 20	1298 43
11EE 10	1227 03	1260 20	1299 4B
11EF CF	1228 02	1261 00	129A 51
11F0 FE	1229 8C	1262 04	129B 55
11F1 03	122A 01	1263 20	129C 45
11F2 00	122B 39	1264 20	129D 45
11F3 C6	122C 26	1265 41	129E 4E
11F4 05	122D 0B	1266 43	129F 20
11F5 8D	122E CE	1267 45	12A0 4B
11F6 25	122F 15	1268 20	12A1 49
11F7 86	1230 19	1269 20	12A2 4E
11F8 2F	1231 BD	126A 54	12A3 47
11F9 BD	1232 15	126B 57	12A4 53
11FA E1	1233 69	126C 4F	12A5 50
11FB D1	1234 31	126D 54	12A6 41
11FC 32	1235 31	126E 48	12A7 44
11FD 84	1236 7E	126F 52	12A8 45
11FE 30	1237 10	1270 45	12A9 53
11FF 44	1238 18	1271 45	12AA 20
1200 CE	1239 FE	1272 20	12AB 20

12AC 48	12E5 20	131E 4F	1357 0D
12AD 45	12E6 04	131F 20	1358 07
12AE 41	12E7 0A	1320 55	1359 50
12AF 52	12E8 0D	1321 20	135A 55
12B0 54	12E9 07	1322 20	135B 53
12B1 53	12EA 59	1323 20	135C 48
12B2 20	12EB 4F	1324 57	135D 04
12B3 20	12EC 55	1325 20	135E 0A
12B4 43	12ED 20	1326 49	135F 0D
12B5 4C	12EE 57	1327 20	1360 4D
12B6 55	12EF 49	1328 4E	1361 59
12B7 42	12F0 4E	1329 20	1362 20
12B8 53	12F1 0A	132A 21	1363 44
12B9 20	12F2 0D	132B 20	1364 4F
12BA 20	12F3 04	132C 20	1365 57
12BB 20	12F4 0A	132D 04	1366 4E
12BC 44	12F5 0D	132E 0A	1367 20
12BD 49	12F6 07	132F 0D	1368 43
12BE 41	12F7 44	1330 42	1369 41
12BF 4D	12F8 45	1331 20	136A 52
12C0 4F	12F9 41	1332 4C	136B 44
12C1 4E	12FA 4C	1333 20	136C 20
12C2 44	12FB 45	1334 41	136D 57
12C3 53	12FC 52	1335 20	136E 41
12C4 0A	12FD 20	1336 43	136F 53
12C5 0D	12FE 57	1337 20	1370 20
12C6 3F	12FF 49	1338 4E	1371 20
12C7 08	1300 4E	1339 20	1372 04
12C8 04	1301 53	133A 4A	1373 B6
12C9 0A	1302 0A	133B 20	1374 80
12CA 0D	1303 0D	133C 41	1375 04
12CB 07	1304 04	133D 20	1376 01
12CC 42	1305 0A	133E 43	1377 2B
12CD 55	1306 0D	133F 20	1378 FA
12CE 53	1307 42	1340 4E	1379 BD
12CF 54	1308 20	1341 20	137A E1
12D0 00	1309 4C	1342 2C	137B AC
12D1 04	130A 20	1343 20	137C 01
12D2 0A	130B 41	1344 20	137D 01
12D3 0D	130C 20	1345 49	137E 39
12D4 44	130D 43	1346 20	137F CE
12D5 45	130E 20	1347 20	1380 15
12D6 41	130F 4E	1348 20	1381 19
12D7 4C	1310 20	1349 20	1382 BD
12D8 45	1311 4A	134A 57	1383 15
12D9 52	1312 20	134B 20	1384 69
12DA 20	1313 41	134C 49	1385 BD
12DB 44	1314 20	134D 20	1386 15
12DC 52	1315 43	134E 4E	1387 76
12DD 41	1316 20	134F 20	1388 BD
12DE 57	1317 4E	1350 21	1389 13
12DF 53	1318 20	1351 20	138A 94
12E0 20	1319 20	1352 21	138B BD
12E1 41	131A 20	1353 20	138C 13
12E2 20	131B 20	1354 20	138D BD
12E3 20	131C 59	1355 04	138E BD
12E4 20	131D 20	1356 0A	138F 13

1390 CD  
1391 24  
1392 F5  
1393 39  
1394 B6  
1395 01  
1396 03  
1397 BA  
1398 01  
1399 02  
139A EA  
139B 01  
139C 01  
139D BA  
139E 01  
139F 00  
13A0 26  
13A1 03  
13A2 73  
13A3 01  
13A4 03  
13A5 B6  
13A6 01  
13A7 03  
13A8 44  
13A9 44  
13AA 44  
13AB B8  
13AC 01  
13AD 03  
13AE 47  
13AF 47  
13B0 76  
13B1 01  
13B2 00  
13B3 76  
13B4 01  
13B5 01  
13B6 76  
13B7 01  
13B8 02  
13B9 76  
13BA 01  
13BB 03  
13BC 39  
13BD B6  
13BE 01  
13BF 00  
13C0 16  
13C1 84  
13C2 0F  
13C3 81  
13C4 0C  
13C5 2F  
13C6 02  
13C7 80  
13C8 0D

13C9 C4  
13CA 30  
13CB 1E  
13CC 39  
13CD CE  
13CE 01  
13CF 05  
13D0 E6  
13D1 0C  
13D2 2B  
13D3 0B  
13D4 11  
13D5 27  
13D6 0A  
13D7 08  
13D8 8C  
13D9 01  
13DA 39  
13DB 27  
13DC 0B  
13DD 20  
13DE F1  
13DF A7  
13E0 0C  
13E1 8C  
13E2 01  
13E3 38  
13E4 27  
13E5 02  
13E6 0C  
13E7 39  
13E8 0D  
13E9 39  
13EA 10  
13EB 16  
13EC 00  
13ED 54  
13EE 48  
13EF 49  
13F0 53  
13F1 20  
13F2 49  
13F3 53  
13F4 20  
13F5 53  
13F6 57  
13F7 54  
13F8 50  
13F9 43  
13FA 20  
13FB 36  
13FC 38  
13FD 30  
13FE 30  
13FF 20  
1400 42  
1401 4C

1402 41  
1403 43  
1404 4E  
1405 4A  
1406 41  
1407 43  
1408 4B  
1409 2E  
140A 2E  
140B 2E  
140C 2E  
140D 2E  
140E 2E  
140F 2E  
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1411 2E  
1412 2E  
1413 2E  
1414 2E  
1415 2E  
1416 54  
1417 52  
1418 59  
1419 20  
141A 59  
141B 4F  
141C 55  
141D 52  
141E 20  
141F 4C  
1420 55  
1421 43  
1422 4B  
1423 2E  
1424 2E  
1425 2E  
1426 2E  
1427 2E  
1428 21  
1429 0D  
142A 0A  
142B 44  
142C 45  
142D 41  
142E 4C  
142F 45  
1430 52  
1431 20  
1432 4D  
1433 55  
1434 53  
1435 54  
1436 20  
1437 48  
1438 49  
1439 54  
143A 20

143B 4F  
143C 4E  
143D 20  
143E 31  
143F 36  
1440 20  
1441 4F  
1442 52  
1443 20  
1444 4C  
1445 45  
1446 53  
1447 53  
1448 0D  
1449 0A  
144A 00  
144B 41  
144C 4E  
144D 44  
144E 20  
144F 53  
1450 54  
1451 41  
1452 4E  
1453 44  
1454 20  
1455 4F  
1456 4E  
1457 20  
1458 31  
1459 37  
145A 2E  
145B 0D  
145C 0A  
145D 00  
145E 00  
145F 00  
1460 41  
1461 43  
1462 45  
1463 53  
1464 20  
1465 43  
1466 4F  
1467 55  
1468 4E  
1469 54  
146A 20  
146B 31  
146C 20  
146D 4F  
146E 52  
146F 20  
1470 31  
1471 31  
1472 20  
1473 2C

1474 20	14AD 41	14E6 00	151F 00
1475 46	14AE 43	14E7 44	1520 53
1476 41	14AF 45	14E8 55	1521 48
1477 43	14B0 20	14E9 52	1522 55
1478 45	14B1 43	14EA 49	1523 46
1479 20	14B2 41	14EB 4E	1524 46
147A 43	14B3 52	14EC 47	1525 4C
147E 41	14B4 44	14ED 20	1526 45
147C 52	14B5 20	14EE 50	1527 20
147D 44	14B6 4F	14EF 4C	1528 4E
147E 53	14B7 52	14F0 41	1529 4F
147F 20	14B8 20	14F1 59	152A 57
1480 43	14D9 54	14F2 20	152B 20
1481 4F	14BA 45	14F3 54	152C 49
1482 55	14BE 4E	14F4 59	152D 4E
1483 4E	14BC 0D	14F5 50	152E 20
1484 54	14BD 0A	14F6 45	152F 50
1485 20	14BE 00	14F7 20	1530 52
1486 54	14BF 00	14F8 48	1531 4F
1487 45	14C0 00	14F9 20	1532 47
1488 4E	14C1 54	14FA 46	1533 52
1489 2E	14C2 49	14FB 4F	1534 45
148A 0D	14C3 45	14FC 52	1535 53
148B 0A	14C4 53	14FD 20	1536 53
148C 00	14C5 20	14FE 41	1537 2E
148D 00	14C6 43	14FF 20	1538 2E
148E 00	14C7 4F	1500 48	1539 2E
148F 00	14C8 55	1501 49	153A 2E
1490 00	14C9 4E	1502 54	153B 2E
1491 42	14CA 54	1503 2C	153C 2E
1492 4C	14CB 20	1504 20	153D 2E
1493 41	14CC 41	1505 53	153E 2E
1494 43	14CD 53	1506 20	153F 2E
1495 4B	14CE 20	1507 54	1540 2E
1496 4A	14CF 41	1508 4F	1541 2E
1497 41	14D0 20	1509 20	1542 2E
1498 43	14D1 50	150A 53	1543 00
1499 4B	14D2 55	150B 54	1544 54
149A 20	14D3 53	150C 41	1545 59
149B 57	14D4 48	150D 4E	1546 50
149C 49	14D5 20	150E 44	1547 45
149D 54	14D6 4E	150F 20	1548 20
149E 48	14D7 4F	1510 50	1549 41
149F 20	14D8 20	1511 41	154A 4E
14A0 41	14D9 57	1512 54	154B 59
14A1 43	14DA 49	1513 0D	154C 20
14A2 45	14DB 4E	1514 0A	154D 4B
14A3 20	14DC 4E	1515 0A	154E 45
14A4 41	14DD 45	1516 00	154F 59
14A5 4E	14DE 52	1517 00	1550 20
14A6 44	14DF 2E	1518 00	1551 54
14A7 0D	14E0 0D	1519 00	1552 4F
14A8 0A	14E1 0A	151A 00	1553 20
14A9 00	14E2 00	151B 00	1554 48
14AA 41	14E3 00	151C 00	1555 41
14AB 20	14E4 00	151D 00	1556 4C
14AC 46	14E5 00	151E 00	1557 54

1558 20	1591 4C	15CA 0A
1559 41	1592 41	15CB 0A
155A 4E	1593 59	15CC 04
155B 44	1594 45	15CD FE
155C 20	1595 52	15CE DE
155D 44	1596 20	15CF FE
155E 45	1597 20	15D0 DB
155F 41	1598 20	15D1 FA
1560 4C	1599 20	15D2 DE
1561 0D	159A 20	15D3 FE
1562 0A	159B 20	15D4 EF
1563 00	159C 20	15D5 F6
1564 00	159D 20	15D6 DE
1565 00	159E 20	15D7 FA
1566 00	159F 20	15D8 FE
1567 00	15A0 20	15D9 FA
1568 04	15A1 20	15DA CE
1569 A6	15A2 20	15DB 72
156A 00	15A3 44	15DC DE
156B 81	15A4 45	15DD FE
156C 04	15A5 41	15DE DF
156D 26	15A6 4C	15DF FF
156E 01	15A7 45	15E0 ED
156F 39	15A8 52	15E1 15
1570 BD	15A9 0D	15E2 76
1571 E1	15AA 0A	15E3 BD
1572 D1	15AB 0A	15E4 13
1573 08	15AC 00	15E5 94
1574 20	15AD 00	15E6 BD
1575 F3	15AE 20	15E7 13
1576 CE	15AF 20	15E8 BD
1577 01	15B0 20	15E9 B6
1578 05	15B1 20	15EA 80
1579 86	15B2 20	15EB 04
157A FF	15B3 20	15EC 2B
157B A7	15B4 30	15ED F5
157C 00	15B5 30	15EE BD
157D 08	15B6 20	15EF 13
157E 8C	15B7 20	15F0 85
157F 01	15B8 20	15F1 39
1580 39	15B9 20	15F2 BD
1581 26	15BA 20	15F3 E1
1582 F8	15BB 20	15F4 AC
1583 39	15BC 20	15F5 7E
1584 18	15BD 20	15F6 10
1585 0D	15BE 20	15F7 2A
1586 0A	15BF 20	
1587 10	15C0 20	
1588 16	15C1 20	
1589 00	15C2 20	
158A 00	15C3 20	
158B 00	15C4 20	
158C 20	15C5 20	
158D 20	15C6 20	
158E 20	15C7 30	
158F 20	15C8 31	
1590 50	15C9 0D	